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The Effects of Principal's Transformational Leadership Behaviors on Teacher Leadership Development and Teacher Self Efficacy

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THE EFFECTS OF PRINCIPAL'S TRANSFORMATIONAL LEADERSHIP BEHAVIORS ON TEACHER LEADERSHIP DEVELOPMENT AND TEACHER SELF EFFICACY

A Dissertation

by

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ABSTRACT

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Leadership has been identified as an essential ingredient of educational reform aiming to ensure that every student gets the education they need to succeed in an era of high accountability. Transformational leadership in the educational context is conceptualized as a process of building commitment to meet the challenges faced by professionals in education everyday while empowering teachers to become leaders in the process of educating our children. The purpose of this study was to examine how much of the total variance of teacher leadership development and teacher efficacy can be accounted for or explained by their principal's transformational leadership behaviors as perceived by teachers from a South Texas school district and to examine the difference between elementary and secondary teachers' perceptions with regards to their principals' transformational leadership behaviors. Two hundred eighty-three teachers completed surveys for this quantitative study. Confirmatory factor analysis revealed that setting directions, redesigning the organization, and developing people were the transformational leadership practices recognized by participants in this study. Multiple regression analyses revealed that principal's transformational leadership behaviors have a significant effect on three distinguishable dimensions or support characteristics that foster teacher leadership development: developmental focus, recognition, and environment. Principals' transformational leadership

behaviors also explained a statistical significant amount of the variance of teachers' classroom management and instructional strategies as sources of self efficacy. A two-way factorial analysis found no significant differences between the perceptions of elementary and secondary teachers with regards to their principals' transformational leadership behaviors. These findings suggest that principals' transformational leadership behaviors have a statistically significant effect on teachers' leadership development and sense of self efficacy both at the elementary and secondary levels.

DEDICATION

It was through the grace and love of God that I was able to complete this personal and educational milestone. I give honor and glory to Him for giving me the strength and talents to fulfill my professional call. This endeavor would not have been possible without the unconditional and continuous love and support of my family.

To my husband, who has been my pillar, constant source of encouragement and support. I am truly blessed to have him as my rock and strength to achieve my goals and pursue my dreams. I thank him for his patience, prayers, and faith in me. Words can never express the love and admiration I have for him.

To my children Tania and Albert who have always been my motivation and spiritual role models, who's love has sustained me at the most critical times of my life. I thank them for always believing in me and for their unconditional love. It is my desire that through my continuous learning journey and perseverance I inspire them to always pursue their dreams. Above all, it is my hope that they always serve and honor God through the use of their talents and skills.

To my mother, my first role model of hard work, dedication, and perseverance. Her strength and positive attitude against all odds are gifts I treasure and value. My "suegros" for the many times they have volunteered their time to take care of tasks I was not able to complete while pursuing my career. To my brothers and sisters who have always expected excellence and guidance from me.

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TABLE OF CONTENTS

	Page
ABSTRACT……..	iii
DEDICATION……..……..……..	v
ACKNOWLEDGMENTS……..……..…….	vi
TABLE OF CONTENTS……...……..……..	viii
LIST OF TABLES……..……..……	xi
CHAPTER I. INTRODUCTION……..……..…..	1
Statement of the Problem……..……..…..	4
Need for the Study……..……..…….	7
Purpose of the Study……..……..……..	8
Research Questions……..……..……	9
Significance of the Study……..……..…...	10
Limitations of the Study....……..…….	11
Assumptions……..……..……..	11
Definition of Terms……..……..……...	11
Summary……..……..……	12
CHAPTER II. REVIEW OF LITERATURE……..……..	14
Theoretical Framework……..……..……..	14
Leadership as a Concept……..……..……	16
Historical Evolvement of Leadership……..…….	18

Transformational Leadership…….…….. 21

Transformational Leadership in an Educational Context……. 23

Transformational Leadership and Teacher Leadership Practices…….. 27

Teacher Leadership……..……. 27

Conceptions of Teacher Leaders……..…… 29

Identifying Roles and Functions of Teacher Leadership…….. 34

Fostering Teacher Leadership……..…… 37

The Role of the Principal in Teacher Leadership Development…….. 39

Transformational Leadership Practices and Self-Efficacy…… 43

Self-Efficacy in an Educational Framework……..…….. 44

Summary……..……..…… 48

CHAPTER III. METHODOLOGY.……..……..…. 50

Research Questions and Null Hypotheses……..……... 50

Research Design and Methodology……..……. 51

Population and Sample……..……..…….. 52

Instrumentation……..……..…….. 53

Data Collection Procedures……... 57

Data Analysis……..……..……. 59

Summary……..……..…… 61

CHAPTER IV. RESEARCH FINDINGS AND RESULTS……..……... 62

Demographic Information……..……..…..... 63

Exploratory Data Analysis……..……..…… 64

Confirmatory Data Analysis……..……..……..... 65

Answering the Research Questions……..……..... 70

Summary……..……..…….. 84

CHAPTER V. DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS. 86

Discussion of Findings……..……..……. 87

Conclusions……..……..…….. 94

Implications and Recommendations……..…….. 96

REFERENCES……..……..…….. 99

APPENDIX……..……..……... 113

BIOGRAPHICAL SKETCH……..…….. 130

LIST OF TABLES

Page

Table 1: Transformational Leadership Dimension…….. 55

Table 2: Teacher Leadership School Survey Dimension…… 56

Table 3: Teachers' Sense of Efficacy Scale (Long Form) ……. 58

Table 4: Number and Percentage of Teacher Surveys Distributed and Returned... 59

Table 5: Demographic Information for All Participants: Gender, Teaching Level Assignment, and Years of Experience…….. 64

Table 6: Descriptive Statistics for Variables……... 65

Table 7: Scale Constructs Eigenvalues and Percentage of Variance…….. 66

Table 8: Final Factors, Items, and Reliabilities……... 69

Table 9: Descriptive Statistics (Two-way Factorial Analysis of Variance)……... 70

Table 10: Regression Analysis of Full Model Between Developmental Focus and Transformational Leadership…… 71

Table 11: Standardized Beta Coefficients Between Developmental Focus and Transformational Leadership…… 72

Table 12: Regression Analysis of Model of Best Fit Between Developmental Focus and Transformational Leadership……... 72

Table 13: Regression Analysis of Full Model Between Recognition and Transformational Leadership…….…….. 73

Table 14: Standardized Beta Coefficients Between Recognition and Transformational Leadership…… 74

Table 15: Regression Analysis of Model of Best Fit Between Recognition and Transformational Leadership…… 74

Table 16: Regression Analysis of Full Model Between Environment and Transformational Leadership…… 75

Table 17: Standardized Beta Coefficients Between Environment and Transformational Leadership…… 75

Table 18: Regression Analysis of Model of Best Fit Between Environment and Transformational Leadership…… 76

Table 19: Regression Analysis of Full Model Between Classroom Management and Transformational Leadership……. 77

Table 20: Standardized Beta Coefficients Between Classroom Management and Transformational Leadership…… 78

Table 21: Regression Analysis of Model of Best Fit Between Classroom Management and Transformational Leadership…… 78

Table 22: Regression Analysis of Full Model Between Instructional Strategies and Transformational Leadership……. 79

Table 23: Standardized Beta Coefficients Between Instructional Strategies and Transformational Leadership…… 80

Table 24: Regression Analysis of Model of Best Fit Between Instructional Strategies and Transformational Leadership……. 80

Table 25: Summary Table of Variation……. 81

Table 26: Summary of Analyses……..……. 83

CHAPTER I

INTRODUCTION

Education in The United States in the 20th century has been characterized by multiple efforts of school reform. The publication of a *Nation at Risk* in 1983 by the National Commission on Excellence in Education marked the beginning of these efforts. A national summit on education summoned by President George H. W. Bush in 1989 lead to the declaration of ambitious goals to be achieved by American schools by the year 2000 (Dufour & Marzano, 2011). Unfortunately, by the end of the century there was no evidence that these ambitious goals were achieved. The most ambitious federal educational initiative in American history of education known as No Child Left Behind (NCLB) was launched by President George W. Bush when he took office in the year 2000.

According to the NCLB Act of 2001, schools must show improvement in the performance of all students on standardized test until not a single student failed to meet performance standards. It also outlined sanctions for schools not meeting these goals (Dufour & Marzano, 2011). Through the Reauthorization of the Elementary and Secondary Act (2010), President Obama established the goal of ensuring every high school graduate is *"college and career ready"* and offered a proposal for amending the NCLB Act.

With these increasing levels of accountability in education, the idea of the top down leadership paradigm is no longer an option or an effective way to improve instruction (Steel & Craig, 2006; Grubb & Tredway, 2010). The theories of distributed and shared educational

leadership have been identified as a key element to respond to the current demands of our educational system. Specifically the concept of teacher leadership has emerged in the last decades as a response to school reform initiatives (Wasley, 1991; Foster, 2004; Lieberman & Miller, 2004). The Carnegie report (1986) *A Nation Prepared: Teachers for the 21st Century* highlighted the crucial role played by teachers in any school reform efforts. Thus, as stated by Katzenmeyer & Moller (2001), "by using the energy of teacher leaders as agents of school change, the reform of public education will stand a better chance of building momentum" (p. 2).

With the current trends in school reform and the demands on school leaders for accountability in student achievement, it is undeniable that an avenue to meet these challenges is through teacher leadership where teachers take active roles in decision making and responsibility for student achievement, traditionally intended for principals (Conley & Muncey, 1999). Recent research have suggested that principals today cannot afford to serve as sole decision makers and power holders (Barth, 2001; Frost & Harris, 2003; Firestone & Martinez, 2007; Hallinger & Heck, 2010). Empirical research studies have reported that successful school leaders create conditions that support teacher leadership and build capacity for professional learning and change (Hallinger & Heck, 2010). It is necessary for school principals to share responsibility for the success of their schools by fostering the development of teacher leadership as well as sustaining a culture that empowers others to lead (Harris, 2002).

The importance of leadership and the central role it plays on contributing to school improvement and more specifically to student learning have been documented over the last three decades (Leithwood, 1994; Heck & Hallinger, 2005; Leithwood & Jantzi, 2006; Jacobson, 2011). Several of the leadership theories and theoretical guidelines on which educational leaders based their leadership style and practices have also been investigated (Leithwood & Jantzi, 2006;

Firestone & Martinez, 2007; Beck & Murphy, 1993). Many of these theories have been influential in guiding schools (Marzano, Waters, & McNulty, 2005); however, transformational leadership has been highlighted as one of the favorites because it is assumed to be a leadership practice that produces results beyond expectations (Bass, 1985; Burns, 1978). According to Leithwood (1994), transformational leadership practices promote high level of commitment and foster personal and professional growth in school staff.

Bass & Riggio (2006) have suggested that transformational leaders tend to have more committed and satisfied followers. Transformational leaders have the ability to motivate followers to exceed expected performance by setting more challenging expectations, empowering their followers, and paying attention to their individual needs and personal development. Through transformational leadership practices, leaders assist their followers to develop their own leadership potential by using behaviors such as coaching, mentoring, challenge, and support (Bass, 1985; Bass & Riggio, 2006). These behaviors represent the essential elements for teacher leadership development.

The transformational leadership practices in the context of school leadership are relatively new. Kenneth Leithwood (1994), building on the work of Burns (1978), Bass (1985), and Bass and Avolio (1994), developed a transformational model of school leadership, which was utilized as the framework for this study. Leithwood (1994) stated that transformational leadership skills are crucial for principals if they are to meet the educational challenges of the 21st century. Several scholars have reported research findings that support those school administrators who demonstrate a transformational leadership style have teachers who are more likely to become teacher leaders (Robinson, Lloyd, & Rowe, 2008), have increased job satisfaction (Griffith, 2004), have a greater sense of teacher efficacy (Ross & Gray, 2006; Demir,

2008), demonstrate higher levels of organizational commitment, and have less staff turnover (Leithwood & Jantzi, 1999, 2000, 2005, 2006).

Statement of the Problem

Given the current demands and challenges faced by contemporary educators, it is crucial to investigate and clearly identify the specific leadership behaviors that foster and promote teacher leadership development and teacher efficacy. This is necessary in order to maximize the skills, talents and contributions of principals as well as teachers to meet the unprecedented challenge to raise academic standards to the highest level in history.

A survey of the 50 states revealed a considerable gap between the standards students are required to meet to earn a high school diploma and the knowledge and skills they need to be successful in college or a career (Achieve, Inc., 2008). Thus, educators are faced with the most challenging task in the history of public schools in the United States. They are entrusted to raise academic standards to the highest level in history with common core standards that are very rigorous and include challenging cognitive demands aligned with the highest international benchmarks. Educators, including teachers and administrators, are expected to provide leadership for students to meet these rigorous standards "while serving an increasing number of students who historically have struggled to find success in traditional schools" (Dufour & Marzano, 2011, p. 5). The racial gaps existing in American schools in relation to graduation rates, test scores, and advanced proficiency amplify the challenge faced by educators. Emphasizing the annual economic cost of these gaps, McKinsey (2009) stated that "the annual output cost of the racial, income, and regional or systems achievement gap is larger than the US

recession of 1981-82" (p. 6). He furthers elaborated that, if not addressed, these gaps will have a detrimental effect on the educational and economic performance of the US in the near future.

Thus, it is undeniable that the demands of our current educational system represent new challenges and as Linda Darling Hammond (2010) noted, "the new mission of schools is to prepare students to work at jobs that do not yet exist, creating ideas and solutions for products and problems that have not yet been identified, using technologies that have not yet been invented" (p. 2). Meeting these challenges requires a new paradigm of school leadership. As Leithwood and Riehl (2005) suggested "the changing needs of the educational system can only be met, at least in part, by improvements in leadership capacity and practice" (p. 6). Teacher leadership provides a tool for such improvement in leadership capacity and practice (Katzenmeyer & Moller, 2001). There is an imminent need for teachers to assume a more active role in the decision making process to effectively improve student learning (Crowther, Kaagan, Ferguson, & Hann, 2002; Katzenmeyer & Moller, 2001).

The proliferation of research, literature, and training opportunities are evidence that there has been some progress in the development of teacher leadership (Frost & Harris, 2003; York-Barr & Duke, 2004; Moller & Pankake, 2006; Blasé & Blasé, 2000). However, there is still a lot of work to be done. Little research has focused on discovery of the effect of complex relationships surrounding teacher leadership practices. Empirical evidence on the effects of teacher leadership is limited and the reported results offered mixed conclusions (Leithwood, Jantzi, & Steinbach, 1999). Wasley (1991) reported 20 years of research that "demonstrate that teachers too long silent and isolated in the classrooms must take more leadership in the restructuring of public education" (p. 211). Teachers can be empowered to lead and support the school change required to meet our current educational challenges. Fessler and Ungaretti (1994)

stated that “meaningful school reform will not occur until teachers are recognized as full partners in leading, defining, and implementing school improvements efforts” (p. 211). Katzenmeyer and Moller (2001) noted, “Within every school there is a sleeping giant of teacher leadership, which can be a strong catalyst for making change” (p. 2).

Up until the last two decades teachers in public schools perceived themselves as part of a large system in which they had none or little capacity to influence its operation. As Steel and Craig (2006) pointed out, for many decades public schools have functioned under the industrial production model. Under this model, the teacher was associated with an assembly-line worker adding educational “parts” to the final product represented by the student, while the principal was the technical expert in charge of “fixing” problems as they arose. The conclusion seems to be that school cultures where these traditional practices exist inhibit the development of teacher leadership (Lieberman & Miller, 2004).

Transformational school leadership practices have been identified as important key elements of school improvement. Transformational leadership behaviors foster the optimal environment for the creation of *enabling structures* that facilitate teacher leadership practices and distributed leadership (Hoy & Sweetland, 2001). Current research has provided several examples of the positive impact a principal’s transformational leadership behaviors can have on teacher based outcomes (e.g., Leithwood & Jantzi, 2000; Nguni, Sleegers, & Denessen, 2006; Ross & Gray, 2006; Demir, 2008). This study explored the effects of principals’ transformational leadership behaviors on teacher leadership and teacher efficacy.

Need for the Study

There is a compelling, although still modest body of empirical evidence that demonstrates the effects of transformational leadership on teachers' motivation, sense of self-efficacy, classroom practices, and gains in student achievement (Hallinger & Heck, 1996, 1998, 2010; Leithwood & Jantzi, 2000). Considerable evidence have suggested that transformational leadership practices do contribute to the development of capacity and commitment, as they play an important role in promoting school improvement by influencing teachers both directly and indirectly (Yammarino, Dubinsky, & Spangler, 1998; Demir, 2008). These studies have reported that factors of teacher efficacy and organizational commitment are positively influenced by school leaders who demonstrate a transformational leadership style. Less evidence, however, is found to specifically demonstrate the effects of transformational school leadership practices on the development of teacher leadership. Teachers' own perception of several school factors are powerfully influenced by the transformational behaviors displayed by their principals (Jantzi & Leithwood, 1996). In spite of the abundant discussion, both supportive and critical, about transformational leadership practices, empirical evidence about its effects in school context is still very limited (Leithwood & Jantzi, 2006).

Achievement gaps among student groups, growing numbers of limited English speaking students, poverty, high drop outs, teen pregnancy, drugs and violence in schools, global competitiveness, and reduced funding due to current economic crisis highlight the challenges faced by public schools today and the need for great teaching and great leadership. The idea that teachers could and should be a leader was relatively uncommon in American public schools before the school reform age of the 1980's (Crowther, Kaagan, Ferguson, & Hann, 2002). To this date, although some progress has been made, the empirical research on the topic of teacher

leadership and the leadership practices necessary to promote teacher leadership in schools remains limited (York-Barr & Duke, 2004).

Purpose of the Study

Teacher leadership has been described as its own unique form of leadership in schools and a required approach to school reform (York-Barr & Duke, 2004). As such, it is important to study and identify, through empirical research, the leadership school practices perceived by teachers as necessary for their own leadership development. The purpose of this study was to examine how much of the total variance of teacher leadership and teacher efficacy was accounted for or explained by the Principal's transformational leadership behaviors as perceived by teachers in a South Texas school district. Since Leithwood (1994) introduced the transformational leadership theory into the context of school leadership, there have been several studies conducted that examined the relationship of this theoretical approach to leadership factors such as job satisfaction, self-efficacy, organizational commitment, and student performance (Leithwood & Jantzi, 1999, 2006; Ross & Gray, 2006). However, few research studies, specific to the effects of transformational leadership practices on the development of teacher leadership, were found during the review of literature for this study.

Transformational school leaders play a critical role in fostering teacher leadership and develop an increased sense of teacher efficacy by helping teachers to understand and believe in their capacity as agents of change (Leithwood, Jantzi, & Steinback, 1999). Teachers who experience a greater sense of teaching efficacy are more resilient and confident in their ability to solve problems, and more importantly, to learn from their experience (Bangs & Frost, 2012). As Bangs and Frost stated (2012) "the argument is essentially about enabling teachers to develop

themselves and their practice rather than be defeated by the challenges of their working lives" (p. 4). Thus, the quality of leadership makes a difference in determining the motivation of teachers and the quality of teaching, which subsequently effect student performance (Fullan, 2001; Lieberman & Miller, 2004; Marzano et al., 2005*;* Sergiovanni, 2000).

By focusing on specific leadership behaviors rather than on leadership as a unitary concept, this model recognized that the leader's impact on teacher leadership practices and teacher efficacy, which ultimately have a positive effect on student outcomes, depend on the extent to which the leader engages in the particular leadership behaviors or practices outlined by the transformational leadership model introduced by Leithwood (1994). It is this model of transformational leadership in schools that framed the current study. Based upon this model, this study examined the teachers' perceived relationships of transformational leadership behaviors to teacher leadership and teacher efficacy in a public school district in South Texas.

Research Questions

The following research questions guided and defined the research for this study:

1. How much of the total variance of teacher leadership development is accounted for or explained by the principal's transformational leadership behaviors as perceived by teachers?
2. How much of the total variance of teacher efficacy is accounted for or explained by the principal's transformational leadership behaviors as perceived by teachers?
3. What are the differences in teachers' perceptions of principals' transformational leadership behaviors in elementary and secondary schools?

Significance of the Study

Teacher leadership has emerged as an important component of many school reform efforts and as a result of principals being transformational leaders. The relationship between schools where teachers take responsibility for school reform efforts is well documented in the literature (York-Barr & Duke, 2004; Mascall, Leithwood, Straus, & Sacks, 2008; Jacobson, 2011; Dufour & Eaker, 1998). Schools, however, continue to struggle with a top-down approach to leadership. The complexities of public education require a new model of school leadership in which teachers play a crucial role. It requires collaboration and leadership, and especially it requires a paradigm shift away from the culture of isolation prevalent in education for years (Spillane, 2006; York-Barr & Duke, 2004). As asserted by Beachum and Dentith (2004) "research into teacher leadership contributes to the practical knowledge of work on new theories of leadership in education" (p. 283).

In spite of the lack of a singular pathway to develop teacher leadership, transformational leadership behaviors are anchored in both theory and practical expertise of scholars and practitioners in leading public school reform efforts. Transformational school leadership practices have been correlated with organization building, developing shared vision, distributing leadership and building school culture necessary to current restructuring efforts in schools (Leithwood & Jantzi, 2006; Fullan, 2009). Findings from this study identified specific transformational leadership practices that foster and promote teacher leadership and teacher efficacy. This information can be incorporated into the formal and informal professional development of school principals as transformational leaders to be better equipped and able to respond to the current demands of our educational system. The findings may also allow principals to gain understanding of how transformational leadership practices may impact school

performance. More importantly, the findings encourage principals to embrace transformational leadership practices as a component of school reform and set aside anxieties they might have with regards to distributed leadership. By empirically researching the practices that develop teacher leaders and teacher efficacy, principals can incorporate effective leadership practices in schools. Thus, findings of this study further educators' understanding regarding the effects of transformational leadership behaviors on teacher leadership development and teacher efficacy.

Limitations of the Study

One of the limitations of this study is that a convenient sample was derived from a population of approximately 1,600 teachers employed by a South Texas school district serving 33 schools. Thus, the results could be influenced by the current structures and initiatives within the district restricting the ability to generalize the results to other educational entities and geographical locations.

Assumptions

This study was based on the assumption that teachers participating responded truthfully and honestly to the questionnaire administered.

Definition of Terms

The following definitions were used in this study:

Accountability Rating Categories: The four ratings that the state of Texas uses for campus and district state accountability. These categories include: Exemplary, Recognized, Academically Acceptable, and Academically Unacceptable (Texas education Agency, 2012).

Distributed Leadership. A leadership practice that is dispersed and performed by several people including the formal leader (Spillane, Halverson, & Diamond, 2001).

Self-Efficacy: Self-efficacy is defined as "people's judgment of their capabilities to organize courses of actions required to attain designated types of performances" (Bandura, 1986, p. 391).

Teacher Efficacy: Defined as a "teacher's belief in his or her capability to organize and execute courses of actions required to successfully accomplish a specific task in a particular context" (Tschannen-Moran, Hoy & Hoy, 1998, p. 232).

Teacher Leadership: "The process by which teachers, individually or collectively, influence their colleagues, principals, and other members of school communities to improve teaching and learning practices with the aim of increased student learning and achievement" (York-Barr & Duke, 2004, pp. 287-288).

Transformational Leadership**:** "A style of leadership that inspires followers to commit to a shared vision and goals for an organization or unit, challenging them to be innovative problem solvers, and developing followers' leadership capacity via coaching, mentoring, and provision of both challenge and support" (Bass & Riggio, 2006, p. 4).

Summary

Given the current demands of state and federal accountability systems in addition to the challenge of raising academic standards to the highest levels in history, educators must recognize that in order to accomplish these goals every person in the field of education, especially teachers and principals, have not only an opportunity but also an obligation to lead.

The purpose of this study was to examine teachers' perceptions of principals' transformational leadership behaviors and its effects on teacher leadership development and teacher efficacy. Transformational leadership, which is relatively new to the field of education, guided the theoretical framework of this study.

Chapter I includes an introduction, need for the study, purpose of the study, research questions, significance of the study, limitations of the study, delimitations, assumptions and definition of terms. The following chapter presents an in depth review of literature as it relates to the concepts of leadership, specifically transformational leadership and teacher leadership as well as teacher efficacy.

CHAPTER II

REVIEW OF LITERATURE

This chapter includes an overview of literature relevant to this study. The chapter begins with a discussion of the theoretical framework used for this study and the review of leadership as a concept, followed by a discussion of the evolvement of leadership from the traditional paradigm to the most modern transformational approach to leadership. Transformational leadership is discussed in terms of a conceptual model as well as its approach and inclusion into the educational field. An in depth discussion of supporting literature and research studies illustrating the crucial role of teacher leadership as well as the influence of transformational leadership behaviors on teacher leadership development and teacher efficacy is also provided.

Theoretical Framework

The theoretical framework for this study was the result of an in depth review of literature examining the theoretical basis of transformational leadership and its evolvement into the educational context. Transformational leadership greatly differs from traditional leadership theories as it focuses on the perceived needs of the follower, not the leader. It also places a high moral standing on the leader and expects him or her to encourage followers to think for themselves and to work cooperatively (Bass & Avolio, 1994; Bass & Riggio, 2006). Under this innovative and collaborative process, teachers theoretically will develop teacher leadership qualities and skills and a greater sense of self-efficacy. With the development of these factors,

schools are more likely to raise academic standards and be better equipped to respond to the challenges of public schooling. As stated by Dufour & Marzano, 2011, "Every educator confronts a moral imperative to seek the most promising strategies for helping every student achieve at high levels" (p. 11).

All transformational approaches to leadership have in common the emphasis on fostering capacity development and higher levels of commitment to the organizational goals which results in extra effort and greater productivity (Yukl, 1994). Recent evidence suggested that practices associated with transformational leadership may be widely distributed throughout the organization (Leithwood & Jantzi, 2006).

The theoretical framework of this study was based on the transformational leadership model developed specifically for research in schools by Leithwood (1994). This model encompassed three broad categories of leadership practices, including a total of eight more specific dimensions of practice. The *Setting Direction* category included the dimensions of building school vision, developing specific goals and priorities, and holding high expectations. In the *Developing People* category the dimensions of providing intellectual stimulation, offering individual support, and modeling desirable professional practice and values were included. The third category, *Redesigning the Organization* included the dimensions of developing a collaborative school culture, and creating collaborative structures to foster participation in school decisions. A diagram of this framework is illustrated in a conceptual representation in Figure1 and an explanation of the specific dimensions is provided later in this chapter.

For the purpose of this study, a discussion of the historical evolvement of leadership and the theoretical paradigms in which leadership has been studied from traditional leadership

theories of the mid 1800's to the modern paradigm of transformational leadership theory was provided.

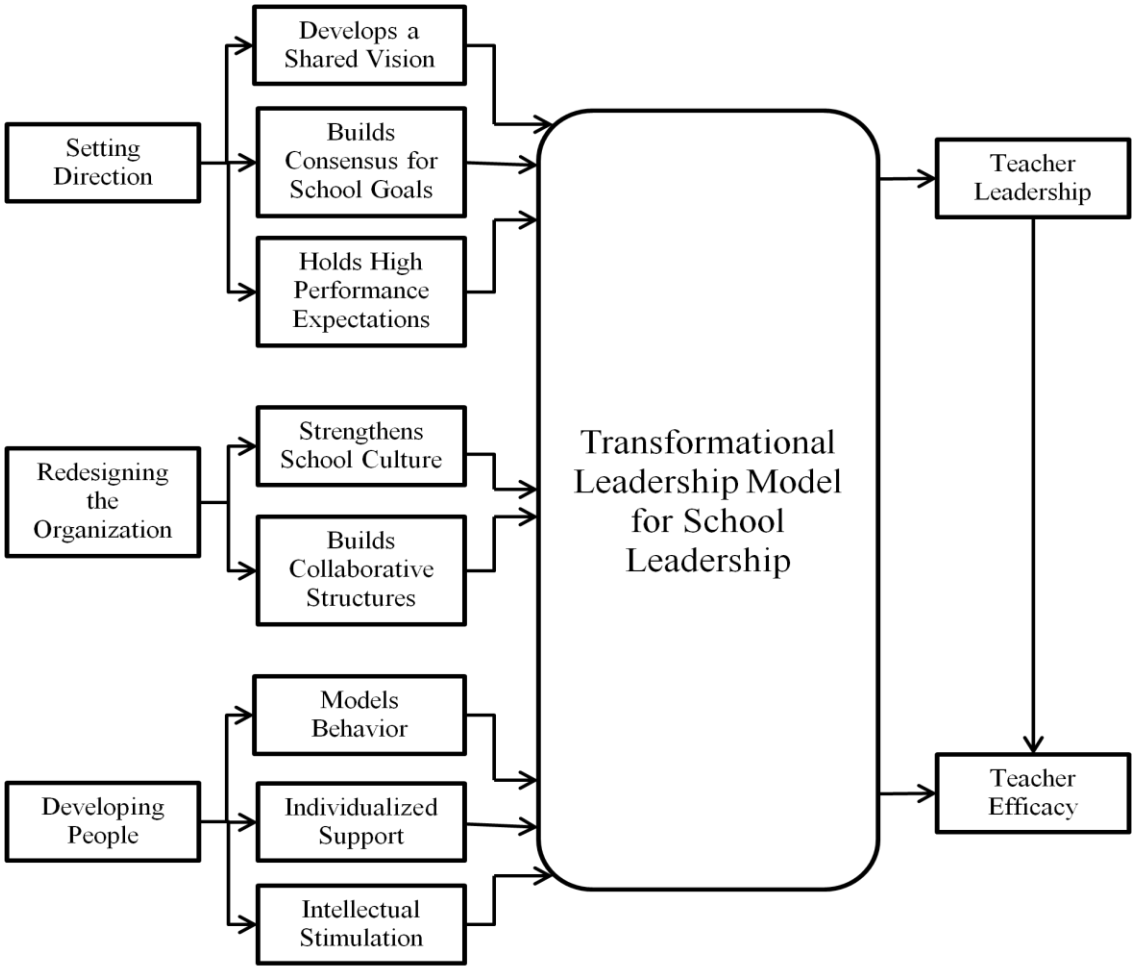

Figure 1. Conceptual representation of theoretical framework for study (Espinoza, 2012).

Leadership as a Concept

Leadership has been an idea since the beginning of humanity, yet as Warren Bennis (1994) stated when attempting to define it "leadership is like beauty: it's hard to define, but you know it when you see it" (p. 1). Bennis & Nannus (1985) found more than 350 different definitions while reviewing more than 1000 studies on leadership. The commonalities found in the definitions included aspects such as who is influencing who, the group context, and the

nature of the relationship between the follower and the leader. Leadership as a concept and a set of practices has been investigated and documented in a vast amount of popular and academic literature (Leithwood, Jantzi, & Steinbach, 1999). According to Hoyle (2007), "definitions of leadership have gradually changed from the emphasis on having others to comply with the leaders' vision to modeling the way for others through empowerment, persuasion, professional development, and encouragement" (p. 170).

Leadership has been identified as an essential ingredient of educational reform aiming to ensure that every student acquire the education they need to succeed. Over the last 50 years many researchers and theorists (Hallinger & Heck, 1996; Heck & Hallinger, 2009, Leithwood & Jantzi, 1999; Printy & Marks 2006; Robinson, Lloyd, & Rowe, 2008; Leithwood, Jantzi, & Steinbach, 1999), have tried to understand and explain how leadership contributed to school improvement and more specifically to student learning (Hallinger & Heck, 2010). To emphasize the pivotal role of effective leadership in school reform, Leithwood, Aitken, and Jantzi (2006) stated, "We are unaware… of a single documented instance of a failing school being "turned around" in the absence of good leadership" (p. 59). Hallinger and Heck (2010), reported findings from a series of empirical analyses that assessed the positive effects of collaborative leadership on school improvement capacity and student learning in a large sample of elementary schools over a four year period. Their findings emphasized the positive effect of collaborative leadership on student learning and school improvement.

Leithwood, Jantzi, and Steinbach, (1999) conducted an extensive review of contemporary international literature concerning leadership in school and reported that the most frequently mentioned specific concepts of leadership were instructional leadership and transformational leadership. In spite of the lack of a clear definition of leadership, most researchers agreed that

the idea of *intentional influence* is present and it is exercised by one person or a group of individuals over other people (Leithwood, Jantzi, & Steinbach, 1999). Gardner (2007), for instance, stated that "leadership is the process of persuasion or example by which an individual (or leadership team) induces a group to pursue objectives held by the leader or shared by the leader and his or her followers" (p. 17).

Relationships, context, and leaders' characteristics as they relate to leadership are concepts commonly found in studies of effective leadership in schools. Emphasizing the importance of the relationship between the leader and the followers, Sergiovanni (1990) stated, "The successful leader is one who builds-up the relationship with others and who strives to become a leader of leaders" (p. 27). Empirical research has reported that successful school leaders create conditions that support effective teaching and learning and build capacity for professional learning and change (Fullan, 2001; Hallinger & Heck, 1996; Marks & Printy, 2003; Silins, 1994; Leithwood & Jantzi, 2005). The context in which leadership occurs also plays an important role and determines the specific enactment of effective transformational behaviors in schools (Leithwood & Jantzi, 2005).

Historical Evolvement of Leadership

During the early 1800's to the early 20th century, the concept of leadership was studied in terms of leadership characteristics or traits (Creighton, 2005). This approach operated on the premise that leaders were born with certain characteristics or traits such as extreme intelligence, good memory, and unlimited amounts of energy. Due to the lack of reliability, the trait theory was disputed by researchers who shifted their focus to the observable leadership behaviors, known as behavioral leadership theory (Amoroso, 2002).

The mid 1900s were dominated with behavioral leadership theories. Behavioral theories focused on the action of the leader. The Behavioral theory identified what leaders do and how their actions were directly linked to their leadership style. During this era the research studies conducted focused on observable leadership behaviors. Creighton (2005) reported findings of two major studies conducted during this time. Both studies, one from the University of Michigan and the other one from Ohio State, focused on observable leadership behaviors and reported similar results. In both studies, employees were asked to identify how often their leader exhibited two specific behaviors: (1) production oriented, and (2) employee oriented. When these leadership behaviors were present, it was established that the leader provided structure for the employees and that the leader cared about his followers.

Similarly, Elton Mayo, a Harvard professor, conducted research during the early 1930s on human relations, which led to the human relations movement (Jazzar & Algozzine, 2007). Abraham Maslow (1943) and his development of the hierarchy of needs also supported the human relations movement. As Hoyle (2007) stated the "giants in the human relations movement provided insights into the relationships among formal and informal groups and the importance of linking the role of the jobs and the personalities, and the needs of people doing the jobs" (p. 69).

In the 1970s a new leadership paradigm began to emerge shifting the focus on management to the focus on leadership. James MacGregor Burns (1978) generally considered the founder of modern leadership (Marzano, Waters, & McNulty, 2005), first conceptualized leadership as either transactional or transformational. Transactional leadership was based on an exchange between leaders and followers but in which participants' motivation remained unchanged. In transactional leadership one person took initiative in making contact with others for the purpose of an exchange either economic, political, or psychological (Leithwood, Jantzi, &

Steinbach, 1999). In the business world, transactional leaders offered rewards for productivity (Bass & Riggio, 2006). Transaction, or social exchange, characterized the majority of the relationships among leaders and followers (Burns, 1978).

The Transactional Theory was followed by the Transforming Leadership. Burns (1978) was credited with introducing both concepts. He stated that while transactional theory was based on the principle of a valued exchange, transforming theory created significant change in the life of people and the organizations. Transformational leadership was characterized by a combination of purpose and vision between leaders and followers (Bass & Riggio, 2006). In his book *Leadership* (1978), Burns defined transformational leadership as dynamic, two-way relationship between leaders and followers. A transformational leader, according to Burns (1978), connected with the needs and wants of his or her followers and established motivation to accomplish collective goals that satisfied the needs of both the leader and the followers. Transforming leaders had the ability to seek possibilities and innovation and to share the vision with others. Bennis (1994) stressed the importance of transformational leaders to communicate "a compelling vision that empowers others to excel" (p. 70). Transformational leaders overcame obstacles and changed how the rest act, think, and live. Burns theorized that both theories are mutually exclusive styles. He also recognized the difficulty differentiating management and leadership. He stated that the difference between management and leadership lay in the characteristics and behaviors of the individual. The work of Burns was accepted as seminal work in the realm of transformational leadership (Kirby & Paradise, 1992; Leithwood & Duke, 1999)

Bernard Bass (1985) expanded the work of Burns and changed the term Transforming Theory to Transformational Theory. He explained how transformational leadership could be measured in terms of the leader's influence on the followers. The followers of a transformational

leader felt trust, admiration, loyalty, and respect of the leader and because of the qualities of the leader they were willing to work harder. Transformational leaders motivated followers through their charisma, intellectual stimulation, and individual consideration. Bass (1985) also distinguished between transformational leadership and pseudo transformational leadership. In contrast with Burns, Bass suggested that leaders can display transactional and transformational leadership simultaneously. Both Burns and Bass based their work on political leaders, army officers, or business executives rather than in schools (Bass, 1985).

Transformational Leadership

Burns' work provided a solid conceptual distinction between transactional and transformational leadership, but failed however, to provide a testable model of leadership and empirical evidence of its effects (Leithwood, Jantzi, & Steinbach, 1999). The efforts of Bass and his associates responded to these limitations. In his book *Leadership and Performance Beyond Expectations,* Bass (1985), provided extensive research evidence about the effects of transformational leadership. Bass' model of transformational leadership contained the dimensions of leadership practice and the interrelated relationship among them. These components included charisma or idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration.

Idealized influence. The transformational leader served as a role model. Followers admired, respected, trusted and wanted to emulate their leader. Followers viewed their leaders as having persistence, determination, and extraordinary capabilities (Bass & Riggio, 2006).

Inspirational motivation. Transformational leaders displayed behaviors that inspired those around them by providing meaning and challenging their followers' work while clearly communicating and articulating a compelling vision of the future (Bass & Riggio, 2006).

Individual consideration. It occurred when the transformational leader paid special attention to each follower's needs for achievement and growth and created new learning opportunities while providing a supportive climate. The leader assigned tasks as a means of developing followers while monitoring and determining whether additional help or support was needed (Bass & Riggio, 2006).

Intellectual stimulation. Transformational leaders encouraged innovation and creativity by questioning assumptions, reframing problems, and approaching situations in a new way. When mistakes happened, the transformational leader did not publicly criticize the individuals or their ideas (Bass & Riggio, 2006).

Bass's model also included three transactional dimensions including contingent reward, active management-by exception, and passive management-by exception. These transactional dimensions were considered to be necessary but not sufficient for successful leadership (Leithwood, 1994).

Transformational leadership was recognized as a powerful model of leadership in the military, political, and industrial organizational environments (Bass, 1985, Bass & Riggio, 2006). In addition, there was evidence from compelling research that showed that transformational leadership was important and was a powerful tool for promoting positive changes in the educational field, especially in this era of a much needed school reform (Leithwood & Jantzi 1999, 2005, 2006; Hallinger & Heck, 2010; Firestone & Martinez 2007; Marks & Printy, 2003). The most fully developed conceptualization of transformational leadership in schools was developed by Leithwood in 1994. Since it was designed for schools from his own qualitative and quantitative studies, this model included dimensions of leadership

not found on other models of transformational leadership. These distinctions and significance are the reason why this model of transformational leadership was chosen for this study

Transformational Leadership in an Educational Context

The late 1980's and early 1990's were characterized by a strong emphasis in school reform. During these years the instructional leadership paradigm was considered the most popular model of educational leadership (Marzano, et al., 2005), yet as Hallinger (2005) noted in a recent review of literature, instructional leadership has been poorly defined. The instructional leadership model was based on the idea of a strong, hands-on leadership assumed to be the responsibility of the principal (Robinson, Lloyd, & Rowe, 2008). This approach, a concept uniquely popular in the United States, unfortunately focused only on the heroic figure of the principal and neglected the contribution of other staff members (Hallinger & Murphy, 1985). This limited view of instructional leadership was one of the reasons why, even Hallinger, one of the most important contributors to this model, recently supported the need of moving from instructional to transformational approaches to school leadership (Hallinger, 2003). Leithwood, Jantzi, and Steinbach (1999) also recognized that although instructional leadership was necessary to lead schools into the twenty first century, it was not sufficient.

In contrast with the instructional leadership emphasis on a single figure as the hero responsible for school improvement, transformational leadership in the educational context focused on the key role that leadership played in promoting and managing school development and change and in developing and sustaining schools as communities of learners (Leithwood, Jantzi, & Steinback, 1999; Sergiovanni, 2000). The emphasis was on building the collective capacity of educators to conquer the challenges they face.

By the late 1990's, although the study of transformational leadership in the educational field was relatively new, many educational leaders had begun to embrace and put into practice a school model of transformational leaders because as stated by Leithwood, Jantzi, and Steinback, (1999) it "aspires, more generally, to increase members' efforts on behalf of the organization, as well as to develop more skilled practice" (p. 20). Thus, transformational leadership was conceptualized as a process of building commitment to organizational objectives and empowering followers to accomplish those objectives. School leaders, who acted as transformational leaders, empowered teachers to rise above their own expectations and self-interest to the level of common interest creating a most collectivist belief about their capabilities as co-leaders (Demir, 2008). In addition, there was enough evidence that supported the assertion that teacher job satisfaction positively correlated to transformational leadership behaviors (Griffith, 2004; Nguni, Sleegers, & Denessen, 2006; Bass & Riggio 2006). Bogler (1999) also reported that principal's transformational leadership behaviors affected teachers' satisfaction both directly and indirectly through their occupation perceptions.

Expanding on the work of Burns (1978), Bass (1985), and Bass an Avolio (1994), Leithwood with co-researchers introduced an eight dimension paradigm of transformational leadership as a model for school leadership. This model was credited as the most fully developed transformational leadership model for school leaders (Leithwood, Jantzi, & Steinbach, 1999). The following were the eight dimensions of leadership incorporated in this model: (1) identifying and articulating a vision, (2) fostering the acceptance of group goals, (3) providing individualized support, (4) intellectual stimulation, (5) providing an appropriate model, (6) high performance expectations, (7) strengthens school culture, and (8) builds collaborative structures (p. 39). By focusing on specific leadership behaviors rather than on leadership as a unitary

concept, this model recognized that the leader's impact on student outcomes depended on the extent to which the leader engaged in the particular leadership behaviors or practice outlined by the model. In this bottom-up rather than top-down approach, leadership was shared by teachers as well as principals. It was this model of transformational leadership in schools that framed the current study. A brief description of these dimensions as defined by Leithwood, Jantzi, & Steinbach, (1999) follows:

Identifying and articulating a vision. Behaviors on the part of the leader aimed at identifying new opportunities for their school, and developing, articulating, and inspiring others with a vision of the future.

Fostering the acceptance of group goals. Behaviors on the part of the leader aimed at promoting cooperation among staff and assisting them to work together toward common goals.

Providing individualized support. Behaviors on the part of the leader that indicates respect for individual members of staff and concern about their personal feelings and needs.

Intellectual stimulation. Behaviors on the part of the leader that challenges the staff to reexamine some of the assumptions about their work and to rethink how it can be performed.

Providing an appropriate model. Behaviors on the part of the leader that set the example for staff members to follow consistent with the values the leader espouses.

High-performance expectations. Behaviors that demonstrate the leader's high expectations for excellence, quality, and high performance on the part of the staff.

Strengthens school culture. Behaviors that demonstrate the leader's expectations for staff participation, the sharing of power and responsibility of others, promotes an atmosphere of caring and trust among staff, frequent and direct communication, and clarification of school's vision and norms of excellence.

Builds collaborative structures. Behaviors that demonstrate the willingness of the leader to share in responsibility, power, and decision making, which includes staff's opinions when making decisions. In addition, the leader ensured effective group problem-solving, provided autonomy for teachers in their decisions, and altered working conditions to ensure that staff had collaborative planning times.

By the early 2000's, there was a small but compelling body of empirical evidence concerning the effects of transformational leadership in school contexts. Leithwood & Jantzi (2006) reported positive effects of transformational school leadership on students, teachers, and classroom practices. In a large four year evaluation study including 2,290 teachers, Leithwood & Jantzi (2006) found that transformational leadership had a very strong direct effect on teachers' work setting and motivation and weaker but still significant effects on teachers' capacities. In a review of transformational school leadership research from 1996 to 2005, the authors also found significant, primarily indirect effects of transformational leadership on both student achievement and engagement in school. These effects were mediated by school culture, teachers' commitment, and job satisfaction, and a small number of other variables (Leithwood & Jantzi, 2005). Geijsel and her colleagues (2003) also tested the effects of transformational leadership on teachers' levels of effort and commitment.

Day, Harris, and Hadfield (2001) reported on the role that principals' values play while engaging in transformational leadership concluding that the most effective leadership behaviors emphasized the importance of values, vision, high expectations, and individualized support, which were all central behaviors found in transformational leadership. These studies contributed to the empirical evidence of the effect that transformational leadership behaviors had

on teachers' psychological states such as teacher efficacy, job satisfaction, and organizational commitment (Bass & Riggio, 2006; Leithwood, Jantzi & Steinbach, 1999).

All transformational approaches to school leadership emphasized the importance of fostering teacher development, specifically developing teacher leaders which positively impacted school conditions and student learning. In this bottom-up rather than top-down approach, leadership was shared by teachers as well as principals. Relevant literature and research based studies reported of the effects of transformational leadership behaviors on the construct of teacher leadership and teacher efficacy included in the next section of this chapter.

Transformational Leadership and Teacher Leadership Practices

Principals are faced with the challenge of building and sustaining a school culture that focuses on continual improvement of educational programs, teachers' skills and capabilities, and student achievement. The principal's leadership is not sufficient to meet these demands, and as a result several scholars have advocated for the need to develop teachers as leaders in schools. Transformational leadership is a desirable style for school leaders because it involves a process of building commitment to the organizational objectives and empowering followers to accomplish these objectives (Burns, 1978).

Teacher Leadership

The concept of teacher leadership has gained momentum in the last two decades (Lieberman & Miller, 2004). As stated by Smylie, Conley, & Marks (2002), "During the past 20 years, teacher leadership has become an established feature of education reform in the United States (p. 162). However, in spite of the progress made in relation to teacher leadership in the last

twenty years, the definition of the term "teacher leadership" continues to be a work in progress (Foster, 2004; York-Barr & Duke 2004).

Based on an extensive review of literature about teacher leadership, York-Barr and Duke (2004) defined teacher leadership as "the process by which teachers, individually or collectively, influence their colleagues, principals, and other members of school communities to improve teaching and learning practices with the aim of increased student learning and achievement" (pp. 287-288). This definition implied that leadership in teachers was based on a particular type of relationship characterized by the influence of the leader on mobilizing others to improve practice. As such teacher leadership was a necessary ingredient for school improvement (Sinha, Hanuscin, Rebello, Muslu, & Cheng, 2012)

Katzenmeyer and Moller (2001) proposed that teachers are leaders when they are contributing to school reform or students learning whether inside or outside the classroom, influencing others to improve their professional practice, or identifying and contributing to a community of leaders. Harrison and Lembeck (1996), defined teacher leaders as "individuals who are actively involved in promoting change, effectively communicate with multiple constituents, possess a global understanding of school and district organization, and continue to grow professionally" (p. 22).

According to Childs-Bowen, Moller, & Scrivener (2000), teachers become leaders when they function effectively in professional learning communities to impact student learning, contribute to school improvement, inspire excellence in practice, and empower stakeholders to participate in educational improvement. Lambert (2003) described teacher leadership by stating that teacher leaders may be characterized "as a person in which the dream of making a difference has been kept alive, or has been reawakened by engaging colleagues and a professional culture"

(p. 422). Harris and Mujis (2005) perceived teacher leaders as master teachers who spent most of their time in the classroom but took on different leadership roles at the campus level, usually of an informal nature.

It was evident through an extensive review of literature that the teacher leadership paradigm responded to the undeniable need to recognize the immense potential that teacher leaders provided to the new forms of leadership in schools and communities needed for school revitalization and reform (Crowther, Kaagan, Ferguson, & Hann, 2002). In order for schools to become better at improving students learning, they nurtured opportunities for teachers to innovate, develop, and learn (Jacobson, 2011). This study will focus on a definition of teacher leadership that emphasizes the teacher's ability to collaborate effectively with colleagues for the purpose of influencing change, increasing expertise, and improving student and teacher learning. This definition assumes that all teachers have the opportunity to be leaders within their school when their principals display transformational leadership behaviors.

Conceptions of Teacher Leaders

Over the years there have been many conceptions about teacher leadership which originated during the reform initiatives of the 1980's. Specifically, the concept of teacher leadership as stated by York-Barr & Duke (2004) "suggests that teachers rightly and importantly hold a central position in the ways schools operate and in the core functions of teaching and learning" (p. 255). However, the lack of clarity on the definition of teacher leadership and its effects on student outcomes may be related to the extensive territory encompassed under the term of "teacher leadership" (York-Bark & Duke, 2004) and its transformation during the last three decades. In addition, much of the research conducted in teacher leadership was descriptive and policy driven, with a focus on program descriptions, roles, and implementation (Jackson, Burrus,

Bassett, & Roberts, 2010). According to York-Barr & Duke (2004), the available research tended to be segmented which made it difficult to empirically study the effectiveness of teacher leadership.

The term teacher leadership evolved over time during the last 30 years. Silva, Gimbert, and Nolan (2000) identified three main waves to describe this evolution. The first wave took place before the 1980's when teacher leaders were charged with maintaining efficient and effective educational programs in schools. Teacher leaders were usually assigned the role of department chair, head teacher, master teacher, or union representative and were always subordinated to those with formal leadership position such as the principal or assistant principal. Under this approach, teacher leaders were perceived as managers charged with improving the efficiency of school operations and supporters of the status quo (Argyris & Schon, 1974). This model was based on principles of stability, predictability, and control which contributed to its sustainability as it continued to operate in thousands of schools across the nation.

The second model of teacher leadership emerged during the educational reform movement during the 1980's. The focus shifted from organizational efficiencies and system to student academic performance as a result of our educational system being bombarded with the new "high stake accountability" movement. It was under this model that teacher leadership became synonymous with instructional leadership to assist in responding to the accountability challenges (Little, 2003). Teacher leaders were appointed to roles such as curriculum leaders, staff developers, or mentors.

Over the past ten years, a third model of teacher leadership emerged. In this model, teacher leadership was envisioned as part of the teacher's work. Teacher leadership, in this model, was a widely distributed professional activity that was anti-hierarchical, valued

collegiality and professionalism, and was mainly concerned with promoting systemic culture change (Lieberman, 1992; Silva, Gimbert, & Nolan, 2000). Teacher leaders were perceived as key agents in re-culturing schools. This study as well as the teacher leadership conceptualization of most researchers and scholars included in this section was framed under the third model of teacher leadership.

Murphy (2005) conceptualized teacher leadership in terms of essential to change and school improvement. Similarly, Smylie (1992) considered teacher leadership crucial to school improvement but also cautioned that although the teacher leadership perspective was promising, it could not fully address the gaps in our understanding of the relationship between leadership and school improvement. He further suggested that school improvement required teacher leadership that did not act alone but rather was a part of a broad system of leadership involving administrators, parents, and students.

Katzenmeyer and Moller (2001) emphasized the concept of teacher leaders based on the notion of influence. Under this approach teacher leaders were part of a community of learners and leaders influencing others to improve educational practice. Thus, teachers were not only educators in the classroom, but also educators among their peers (Cowdery, 2004). Teachers joined other leaders in school reform efforts because they were at the center of the learning process and they directly influenced what happened in school. Barth (2001) characterized teacher leadership as an attribute inherent to every teacher. He not only asserted that all teachers can lead, but he also proposed that all teachers must lead school improvement efforts. He further elaborated that the notion that “some teachers” or “few teachers” can lead was as destructive as the idea that only some children could learn.

York-Barr and Duke (2004) conceptualized teacher leaders as a crucial component on the development of professional learning communities in schools. They emphasized the importance of professional communities in schools as a vehicle for teachers to exercise leadership. Teacher leaders developed supportive interactions with colleagues which enabled them to assume various leadership roles such as mentor, coaches, advisors, or facilitators (Louis, Dretzke, & Wahlstrom, 2010).

Fullan (1994) described teacher leadership as a combination of "inter-related domains of commitment and knowledge" (p. 246). This conception assumed that leadership could and should come from a variety of sources in the school including teacher leadership. Through collaboration, teachers were empowered to understand and to lead change (Fullan & Hargreaves, 1996). According to Harris and Mujis (2005), teacher's main function was to assist their colleagues "to explore and try out new ideas, then offer critical but constructive feedback to ensure improvement in teaching and learning are achieved" (p. 1).

Distributed leadership (Frost & Harris, 2003; Spillane, 2006), shared leadership (Murphy, 2005; Printy & Marks, 2006), and intentional leadership (Moller & Pankake, 2006) are concepts that have been coined with effective teacher leadership models. In contrast with traditional notions of leadership, these approaches to leadership emphasized collective responsibility and collaborative working. A brief description of each approach follows.

Distributed Leadership. Key to the idea of distributed leadership, for instance, included the view of leadership as not reserved only for the person on top, but rather as a practice that could exercised by anyone in the organization. Thus, distributed leadership emphasized the importance of building capacity within the organization by maximizing intellectual and social capital (Hargreaves, 2001). The distributed leadership paradigm assumed that all teachers have

the potential to contribute to the organization's development and change (Frost & Harris, 2003). A distributed leadership perspective highlighted the contribution and practices of multiple leaders and focused on the interaction of formal and informal leadership roles (Spillane, Halverson, & Diamond, 2001). According to Bangs and Frost (2012) distributed leadership "foster collaborative professional cultures within schools which can unlock untapped potential in teachers, and in doing so, increases the capacity of schools to meet the needs of pupils and to enhance educational achievement" (p. 6). The collaborative structures domain included in the transformational leadership model proposed by Leithwood and colleagues (Leithwood, Jantzi, & Steinbach, 1999) was based on this distributed leadership concept.

Most examinations of distributed leadership in schools focused on the leadership among the teachers and the principals without exploring the role of the district. Firestone & Martinez (2007) conducted an exploratory study to analyze the relationship between district and teacher leaders. Their findings suggested that teacher leaders complemented the district efforts. They reported that teacher leaders and districts contributed to the same leadership task but they did so in a different manner. These tasks included procuring and distributing materials, monitoring the improvement efforts, and developing people.

Shared Leadership. The shared leadership approach focused on leadership within a process of learning, emphasizing the importance of individual skill development, group process, and relational skills (Printy & Marks, 2006). Spillane (2006) was one of the few authors who offered a distinction between distributed and shared leadership. He asserted that shared leadership involved formal leader plus other leaders, while distributed leadership was about "the many and not just the few. It is about practice, not simply role and positions. And leadership practice is about interactions, not just the actions of heroes" (p. 4). In spite of Spillane's noted

distinction between distributed and shared leadership, the literature often applied the same issues and attributes to both concepts. In addition, the potential for shared leadership in schools was largely untested (Lindahl, 2008).

Intentional Leadership. In order to foster effective teacher leadership, principals must be intentional in developing teacher leaders that improve student teaching. As stated by Moller & Pankake (2006), "Building positive relationships, authentically distributing power and authority, and aligning teacher leadership with teaching and learning cannot happen without principals intentionally leading the process" (p.13). The success of teacher leadership depended on the school culture, relationships, and structures in which it took place. Thus, the role of the principal was crucial in developing teacher leadership.

The aforementioned conceptions of teacher leadership recognized the crucial role that teacher leadership played on school reform, the improvement of school culture and student learning, and the personal and professional development of teachers. Through the exercise of their roles and functions, teacher leaders made a difference in school improvement and especially in students learning.

Identifying Roles and Functions of Teacher Leadership

Educational theorists reported the crucial role that teacher leadership played in school improvement efforts (Barth, 2001; Fullan & Hargreaves, 1996; Sergiovanni, 1990; Lieberman & Miller, 2004; Katzenmeyer & Moller, 2001; Crowther, Kaagan, Ferguson, & Hann, 2002; Moller & Pankake, 2006). However, there were few models for developing teacher leaders which clearly identified and delineated the roles and functions of teacher leaders. Teacher leadership roles can be formal or informal, and they vary from one school to another. Each school context defined teachers' opportunities for leadership roles (Katzenmeyer & Moller, 2001). As Lieberman (1992)

stated, “teacher leadership roles are proliferating in greater variety than many thought possible” (p. 161). Thus an attempt to generate an inclusive and universal list of qualities and skills possessed by teacher leaders would be difficult and presumptuous. However, an examination of the roles and functions of teacher leaders documented by researchers and scholars was an attainable task.

Using teachers’ feedback resulting from data of 10 in-depth studies, Snell and Swanson (2000) described a framework which captured the leadership qualities of four dimensions: expertise, collaboration, reflection, and empowerment. Crowther, Kaagan, Ferguson, and Hann (2002) based on their extensive research in diverse school settings provided a framework of teachers as leaders including the following teacher leaders’ functions: teacher leaders convey conviction about a better world, strive for authenticity, facilitate communities of learning, confront barriers, translate ideas into actions, and nurture a culture of success.

According to Katzenmeyer and Moller (2001), “teacher leadership roles may be (a) focused on the classroom, the school, the school district, the state, or the national level, (b) closely related to a specific discipline or defined as generalist, (c) an individual contributor or may be a team member, (d) highly formalized or simply one-time contribution, and (e) chosen by election of peers, by administrative appointment, or by self-selection” (p. 11). Three leadership functions emerge from these leadership roles: Teachers influenced their peers as they performed their responsibilities, teacher leaders function contributed to daily operations within and outside the school, and teacher leaders served in governance positions or decision making roles within and outside the school. Harris and Mujis (2005) suggested that there were two key dimensions of teacher leadership: the first one focused in improving learning outcomes through

developmental tasks that were central to teaching and learning while the second one emphasized collaborative professional activity.

Jackson, Burrus, Basset, and Roberts (2010), through the process of developing and validating assessment of teacher leadership, identified coaching and learning facilitator as the key roles of teacher leaders. They also organized teacher leaders' skills by construct in order to be able to assess such skills. The skills discussed by the authors included: work ethic, teamwork, leadership, openness, vision, positive effect, risk taking, and teaching related skills. Frost and Harris (2003), organized the teacher leadership functions under a general category of "personal capacity" that could be explained in terms of authority, knowledge, situational understanding, and interpersonal skills.

Over time, research evolved and improved the understanding of teacher leadership roles and functions. Dozier (2007), conducted a survey of teachers engaged in many leadership roles. The survey indicated that 97% conducted professional development for colleagues; 83% engaged in curriculum development; 84% served as department chairs, team leaders, or grade level chairs, and 84% mentored new teachers. These data validated the idea that schools are already using teacher leaders in a variety of ways.

As cited and summarized by Leithwood, Jantzi, Ryan, and Steinback (1997), the functions of formal teacher leadership included: representing the school in district level decision making (Fullan, 1991); stimulating professional growth with colleagues (Wasley, 1991); being an advocate for teachers' work; and improving the school's decision making process. Sometimes formal teacher leaders were also expected to positively influence the willingness and capacity of other teachers to implement change in schools (Fullan & Hargreaves, 1996). Informal teacher leader functions, on the other hand, were characterized by sharing expertise, by volunteering for

a new project, by being innovative and bringing new ideas to school, and by modeling and encouraging other teachers to engage in more powerful instructional techniques (Harrison & Lembeck, 1996; Wasley, 1991; Smylie & Denny, 1990).

Fostering Teacher Leadership

Katzenmeyer and Moller (2001), avid proponents of teacher leadership, have concluded through their extensive research with over 5,000 teachers that, "schools vary in the degree to which they support the leadership of teachers" (p. 136). They identified seven distinguishable dimensions or support characteristics of school cultures that foster leadership, which they call "dimensions of teacher leadership": developmental focus, recognition, autonomy, collegiality, participation, open communication, and positive environment (Katzenmeyer & Moller 2001, p. 136). Based on their research of these seven dimensions, Katzenmeyer and Moller (2001) developed the Teacher Leadership School Survey (TLSS). The seven teacher leadership dimensions are incorporated in the survey, each having seven areas that support teacher leadership.

Developmental Focus. Teachers were supported in learning new knowledge and skills and encouraged to help others learn. They received assistance, guidance, and coaching. Through a developmental focus, teachers had the opportunity to develop skills and knowledge that contributed to their leadership development.

Recognition. Teachers were respected and recognized for the professional roles they took and the contributions they made. There were systems in place to recognize effective work. As reported by Blasé and Blasé (2000), teachers identified praise, respect, and recognition as influential to their professional performance.

Autonomy. Teachers were encouraged to take initiative in making improvements and innovations. Barriers were removed and resources were allotted to support teachers' efforts.

Collegiality. Teachers collaborated focusing on student-centered instruction. Sharing materials, observing each other, and discussing strategies were examples of collegiality. As Harris and Mujis (2005) asserted, "teacher leadership is premised upon the creation of collegial norms in schools that contribute directly to school effectiveness, improvement, and development" (p. 2).

Participation. Teachers were actively involved in making decisions and had input in important matters. The selection of department chairpersons or team leaders was done with the participation of the teachers.

Open Communication. The communication teachers sent and received was open and honest. Teachers felt informed about what was going on in the school and opinions and feelings were openly and easily shared. When things went wrong, teachers were not blamed.

Positive Environment. Teachers were viewed and treated as professionals. Teachers perceived the school as having effective administrative leaders.

In addition to school culture that fostered teacher leadership in schools, the organizational structure built by the school was also crucial as it determined the extent to which teacher leadership was fostered and developed. There were systems that allowed teachers to teach half day and serve as leaders the other half while other structures allowed teacher to remain in their classroom while keeping their ability to exercise leadership throughout the school community (Katzenmeyer & Moller, 2001). Teachers' effective use of time was definitely a factor to consider when designing effective leadership models (Steel & Craig, 2006; Stone, Horejs, & Lomas, 1997). The allocation of time was critical for teacher leadership to emerge. Moller and

Pankake (2006) asserted that, "time for people to work together is an essential resource for getting things accomplished" (p. 109). As cited by Raffanti (2008) "the unavailability of support structures, such as release time, and role clarity are prevalent obstacles that teacher leaders encounter" (p. 59).

Colleagues also represented one of the greatest obstacles to teacher leadership development (Barth, 2001). Teachers did not easily accept their colleagues in positions of leadership, regardless of their skill (Little, 2003). Thus, as stated by Moller and Katzenmeyer (1996), "teachers must be willing to face rejection from peers when they become leaders" (p. 7). Teacher beliefs might also act as barriers to their growth as leaders and willingness to lead. Sinha, Hanuscin, Rebello, Muslu, and Cheng (2012) investigated teachers' ideas about activities they considered falling in the realm of leadership, and how they perceived themselves as leaders within their classrooms and schools. Their findings revealed teachers held several myths about leadership that prevented them from viewing themselves as leaders. These myths include: 1) leadership required a formal role or position; 2) not everyone could be a leader; and 3) leadership took place outside of the day-to-day activities of teaching. In the past it was believed that if you were a teacher and wanted to become a leader, you needed to leave the classroom and maybe even the school. Thus, a common myth was that a teacher leader's responsibility was completely different from a teacher's responsibility.

The Role of the Principal in Teacher Leadership Development

The demands of the school reform prevalent in the last decade highlighted principals as the leaders of change within the organization they lead. To emphasize the crucial role of the principal in facilitating the development of teacher leaders, Barth (2001) stated "Good principals are more hero-makers than heroes" (p. 448). Principals create "working conditions that

encourage positive relationships, reduce risks, and provide leadership development" (Pankake & Moller, 2007, p. 32). Fullan (1991) stated that "all major research in innovation and school effectiveness shows that the principal strongly influences the likelihood of change" (p. 76). However, as Katzenmeyer and Moller (2001) stated, "although progress has been made in recognizing that the principal's job is about creating a culture in which principals and teachers lead together, our experience is that this perspective is not widespread" (p. 84). A self-report survey including a sample of 330 elementary, middle school, high school, and alternative school principals in Texas reported that teacher involvement was very important and should be happening more than it was (Gates & Siskin, 2001). It was important to recognize that for many principals, especially those who have been in the profession for a long time, supporting distributed leadership required a transformation in their perception of leadership and in the ways they practiced their leadership role (Murphy, Smylie, Mayrowetz, & Louis, 2009).

A traditional top down approach to school leadership inhibited the development of teacher leadership. As schools replaced the traditional hierarchical structures, they created new structures that supported teacher leadership (Darling-Hammond, Bullmaster & Cobb, 1995). Smylie and Brownlee-Conyers (1992) also addressed the impact principals had in establishing school cultures that developed principal-teacher leader working relationships.

The impact that principal leadership behaviors had on school based outcomes was documented by several scholars (Hallinger & Heck, 1998; Katzenmeyer & Moller, 2001; Pankake & Moller, 2007; Barth, 2001; Lambert, 2003). The initial research, in an attempt to measure principal effectiveness, focused on identifying a direct link between principal effectiveness and students' achievement (Hallinger & Heck, 1998).

The impact of principals' transformational leadership behaviors on school based outcomes has been documented by several researchers. The initial research on principal effectiveness attempted to demonstrate a direct link between principal effectiveness and student achievement (Hallinger & Heck, 1998). However, these initial research attempts were not helpful in identifying the complex dynamics and mechanisms of principal's influence in student learning (Heck, 1992).

Cuban (1984) was probably one of the first researchers to understand the complexity of the influence of the principal. He criticized the focus of researchers on student achievement as the only measure used to determine principal effectiveness and urged them to consider other variables and factors influencing principal effectiveness.

Throughout the last three decades research has evolved and improved the understanding of the relationship between principal behaviors and student achievement as well as several factors of school improvement. Pitner (1988), however, pointed out that dependent variables such as academic achievement and organizational factors lacked empirical and theoretical significance as effects of effective principal leadership. He advocated for multidimensional approaches to the study of effects and effectiveness as well as longitudinal research to capture the complexity of factors that affect educational goals.

The summary of several research studies on leader effects on school outcomes indicated that leadership practices contributed to several school-based factors, but that these effects were most of the times mediated by other people, events, and organizational factors (Hallinger & Heck, 1998, Leithwood, 1994). Leithwood and Jantzi (1999) found a compelling body of empirical evidence with regards to the effects of effective leadership on a variety of student and organizational outcomes including a positive relationship between transformational leadership

and teacher commitment. In a study to examine the effects of transformational leadership on teachers, Kirby and Paradise (1992) also reported that principals who displayed transformational behaviors related with the individualized consideration and intellectual stimulation factors, had positive effects on teacher morale and commitment. In addition, Blasé and Blasé (2000) concluded that principals' behaviors had a direct effect on teachers and classroom instructional practices.

According to Hoy and Sweetland (2001) principals as transformational leaders fostered the optimal environment for the creation of "enabling structures" under which teacher leaders emerged and developed. The authors described these structures as places in which teachers were empowered and the principal played a crucial role in helping teachers succeed. The relationship established between teacher leaders and their principals was consistently identified as a strong influence on teacher leadership development emphasizing the crucial role of the principal in facilitating and promoting a productive teacher leader-principal relationship (Barth, 2001; Lieberman, 1988; Little, 2003; Katzenmeyer & Moller, 2001). As stated by Moller and Pankake (2006), "Promoting teacher leadership introduces a deliberate, local change in power structure that engages teachers as partners in collective decisions addressing difficult problems facing schools" (p. 39).

A study conducted by Smylie and Brownlee-Conyers (1992) revealed that the principal-teacher relationship was a strong predictor of successful teacher participation in decision making, one of the functions of teacher leaders. Transformational leadership behaviors of principals constituted the optimal avenue for developing teacher leaders since "people effects" were at the core of the transformational leadership model (Leithwood, 1994).

In a study with 3,074 teachers in 218 elementary schools, Ross & Gray (2006) investigated the direct effects of leadership on teacher commitment and indirect effect on teacher efficacy. They reported that transformational leadership had an impact on the collective teacher efficacy of the school; teacher efficacy alone predicted teacher commitment to community partnerships; and transformational leadership had direct and indirect effects on teacher commitment to be part of a professional learning community.

As reported by empirical research, the direct influence principals behaviors had on teachers can result on improved student outcomes. It was then suggested that the principal may have an indirect, yet positive and significant effect on student outcomes, specifically student learning.

Transformational Leadership Practices and Self Efficacy

The term self-efficacy refers to the beliefs that human beings have about their own ability and capacity to take action and succeed (Bangs & Frost, 2012). The concept of self- efficacy was an essential element in Bandura's social learning theory. He defined self-efficacy as "a judgment of how well one can execute courses of action required to deal with prospective situations" (Bandura, 1982, p. 122). Perceived self-efficacy is concerned not with the skills that one has but with the judgment or perception of what that person can do with the skills he or she possesses (Bandura, 1986). Thus, there is a distinctive difference between possessing skills and being able to use them under different circumstances.

Self efficacy beliefs frame how people feel, think, motivate themselves, and behave. Individuals with a strong sense of self-efficacy tend to be highly assured in their capabilities and perceive and respond to difficult tasks as challenges to be overcome. They continuously

challenge themselves and quickly recover their sense of self-efficacy when faced with failure or setbacks (Bandura 1986). When Individuals with a strong sense of efficacy experience failure, they attributed the failure to their lack of knowledge about the subject, but assured themselves that the skills needed to master the task were acquirable. Individuals with this attitude and outlook were able to produce personal accomplishments, reduce stress and were less vulnerable to depression (Bandura, 1996).

In contrast, individuals who displayed lesser levels of self-efficacy experienced doubts about their own capabilities, perceived challenges as personal threats, and tended to avoid difficult tasks. They usually had less commitment to the goals they chose to pursue. They tended to give up quickly when faced with challenges and their efforts to overcome difficulties were minimal. After failures or setbacks, they were slow to recover, dwelt on their personal deficiencies, and easily fell victim to stress and depression (Bandura, 1996).

Self-Efficacy in an Educational Framework

Bandura's theory of perceived self-efficacy can be applied as the theoretical framework in which teacher efficacy was measured to the extent to which teachers believed their efforts would have a positive effect in student achievement. Teacher efficacy was defined by Tschannen-Moran, Hoy & Hoy (1998) as the "teacher's belief in his or her capability to organize and execute courses of action required to successfully accomplish a specific teaching task in a particular context" (p. 232). In this sense, teachers' self-efficacy beliefs influenced and brought desired outcomes of student engagement, motivation, and learning, even among those students who might be difficult or unmotivated (Bangs & Frost, 2012).

Researchers interested in investigating school improvement paid close attention to teacher efficacy because it appeared to be consistently related to teachers' willingness to

implement innovative teaching ideas (Ross & Gray, 2006). High expectations of success motivated classroom experimentation because teachers anticipated they would be able to achieve the benefits of innovation and overcome obstacles that might arise. Teachers with high self-efficacy tried harder and implemented differentiated and individualized instruction designed to stimulate student learning regardless of their ability levels (Ross & Gray, 2006). Efficacious teachers persisted with struggling students and were less critical of student incorrect answers (Gibson & Dembo, 1984). Nir and Kranot (2006)reported studies indicating that teachers with high self-efficacy were better able to cope with stress, had a higher commitment to teaching, and cooperated with parents.

The study of teacher efficacy in the field of education has borne much fruit. Several studies investigated links between principal behavior and teacher efficacy. Empirical studies examining the perceptions of teachers on school leadership and teacher efficacy provided valuable data reporting the effects of principals' behaviors on factors related to teaching and learning in schools (Jantzi & Leithwood, 1996). Hipp (1996) reported results of several studies indicating that principals who adopted transformational practices were more likely to have higher teacher efficacy in their schools.

Hipp (1996) investigated, through a qualitative study, specific leadership behaviors that affected teacher efficacy. From a sample of ten schools, he selected three schools based on aggregated levels of teacher efficacy by building a case study. Structured interviews, observations, and field notes were used to gather data. The total sample interviewed consisted of 34 teachers volunteers representing various grade levels and teaching assignments. The results of this qualitative study revealed a direct relationship between five dimensions of principal's transformational behaviors that directly influenced teachers' performance. The leadership

behaviors that were significantly related to teachers' general teaching efficacy included: school leaders modeled behavior, provided contingent rewards, and inspired group purpose. The leadership behaviors of *modeled behavior* and *provided contingent rewards* were significantly related to teachers' personal teaching efficacy.

Tschannen-Moran, Hoy, and Hoy (1998) investigated the construct of teacher efficacy from a theoretical and empirical point of view. They explored the correlates of teaching efficacy using several instruments in order to provide a better understanding of the construct. As a result, they identified two main conceptual strands. The first strand was based on the extent to which teachers believed they could control the reinforcement of their actions. Thus teachers with a high sense of efficacy believed they could control student motivation and performance. The second strand identified teacher self-efficacy as a cognitive process in which people develop a belief about their capacity to perform to a specific level of success. According to these authors "The existence of these two separate but intertwined conceptual strands has contributed to the lack of clarity about the nature of teacher efficacy." (p. 203).

Tschannen-Moran and Hoy (2001) reported results of several studies that examined the relationship between principal behavior and teacher efficacy showing that principal leadership behaviors and style influenced teachers' sense of efficacy. Teachers who reported higher levels of teacher efficacy perceived their principals as a leader who was influential with district superiors, provided resources to them, buffered them from disruptive factors, modeled appropriate behavior, provided rewards contingent on performance, and allowed them to participate in the decision making process.

Leithwood and Jantzi (2008) reported that high levels of teachers' self efficacy correlate positively with high levels of student achievement, while at the same time he also highlighted the

role of collective self-efficacy. Collective teacher efficacy was a specific belief in collective capacity. Collective teacher efficacy referred to ‘‘the perceptions of teachers in a school that the efforts of the faculty as a whole will have a positive effect on students’’ (Goddard, Hoy, & Hoy, 2000, p. 480). Collective teacher efficacy differed from individual teacher efficacy in that collective teacher efficacy referred to expectations of the effectiveness of the staff to which one belonged, whereas teacher efficacy referred to expectations about one's own teaching ability. Interested in testing the relationship between collective teacher efficacy and student achievement in math and reading, Goddard, Hoy, and Hoy (2000) conducted a study including a sample of 452 teachers from an urban area. Their results indicated that collective teacher efficacy is a strong predictor of student achievement in math and reading. Additionally, the effect of collective teacher efficacy is greater than any of the demographic controls for both achievement levels.

According to Ross and Gray (2006), transformational leadership contributed to collective teacher efficacy. Transformational principals influenced teacher self assessments that contributed to efficacy beliefs by setting feasible goals, clarifying standards, developing a collaborative school culture, and linking actions of teachers to student outcomes (Ross & Gray, 2006). High levels of perceived collective efficacy were positively correlated with a strong sense of purpose that allowed groups to perceive difficulties and setbacks as temporary obstacles to overcome rather than evidence confirming their inefficacy (Goddard & Skrla, 2006).

Demir (2008) investigated the direct relationship of transformational leadership practices with collective teacher efficacy and the indirect relationship of transformational leadership with collective teacher efficacy via the self-efficacy of teachers and collaborative school culture. The sample included 218 elementary teachers. The findings showed that the transformational

leadership behaviors of principals represented 35% of the variance of collective teacher efficacy, 49% the variance of teachers' self-efficacy, and 58% of the variance of collaborative school culture. Teachers' self-efficacy explained 42% of the variance of collective teacher efficacy. These results validated previous research results that have reported similar results of the relationship between transformational leadership practices on behalf of the principal with teachers' self-efficacy.

Several studies investigated links between principal behavior and teacher efficacy. In all of these studies, teacher efficacy was measured at the individual, not the collective level. Nir and Kranot (2006) reported findings identifying a strong and significant relationship between transformational leadership style and personal teacher efficacy stemming from their study with a sample of 755 teachers. In this study, teacher reported higher levels of teacher efficacy in those schools in which higher levels of transformational leadership were found. Thus, based on the theoretical assumptions for transformational leadership, it might be suggested that a transformational leadership style is more likely to increase teachers' performance which is a significant factor in explaining personal teacher efficacy (Nir & Kranot, 2006).

Summary

As supported by the review of literature presented, teacher efficacy is an important factor that has either a direct or indirect relationship with other factors. The presentation of literature also supported the theory that transformational leadership behaviors positively influence teachers' sense of efficacy. However, as mentioned in previous section of this paper, very limited research studies addressing the effects of transformational leadership behaviors on teacher leadership practices were found in this review of literature.

Based on the evidence presented by empirical research in this review of literature, it is realistic to assume that practices of transformational behaviors by school leaders would increase teacher efficacy and the development of teacher leadership behaviors. In Chapter III, the proposed methodology for conducting this study is presented.

CHAPTER III

METHODOLOGY

The primary goal of this study was to examine how much of the total variance of teacher leadership and teacher efficacy was accounted for or explained by the principals' leadership behaviors as perceived by teachers in a South Texas school district. The specific behaviors targeted in this study were those classified as transformational leadership behaviors according to Leithwood (1994). These behaviors include: (1) identifying and articulating a vision, (2) fostering the acceptance of group goals, (3) providing individualized support, (4) providing intellectual stimulation, (5) providing an appropriate model, (6) holding high performance expectations, (7) strengthening school culture, and (8) building collaborative relationships.

This chapter is being organized as follows: Research questions and null hypotheses, research design, population and sample, instrumentation, data collection procedures and, data analysis.

Research Questions and Null Hypotheses

The following research questions and null hypotheses guided this study:

Research Question 1: How much of the total variance of teacher leadership development is a function of the principal's transformational leadership behaviors as perceived by teachers?

H_O1: Teacher leadership development (Y_1) is not a function of the principal's transformational leadership behaviors of developing a share vision, building consensus for school goals, holding high expectations, strengthening school culture, building collaborative

structures, modeling behavior, providing individualized support, and providing intellectual stimulation(X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8, respectively) as perceived by teachers.

Research Question 2: How much of the total variance of teacher efficacy is a function of the principal's transformational leadership behaviors as perceived by teachers?

H_O2: Teacher efficacy (Y_2) is not a function of the principal's transformational leadership behaviors of developing a share vision, building consensus for school goals, holding high expectations, strengthening school culture, building collaborative structures, modeling behavior, providing individualized support, and providing intellectual stimulation(X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8, respectively) as perceived by teachers.

Research Question 3: What are the differences in teachers' perceptions of principals' transformational leadership behaviors in elementary and secondary schools?

H_O3: There are no differences in elementary and secondary teachers' perceptions of principals' transformational leadership behaviors.

Research Design and Methodology

This quantitative survey research included three survey instruments to collect self-reported data from the teachers participating in the study. Survey research consists of collecting data with the purpose of testing hypotheses or to answer questions about people's perceptions of a specific topic or issue (Gay, Mills, & Airasian, 2009). The independent or predictor variables in this study consisted of the eight transformational behaviors (developing a share vision, building consensus for school goals, holding high expectations, strengthening school culture, building collaborative structures, modeling behavior, providing individualized support, and providing intellectual stimulation) identified by Leithwood's (1994) transformational leadership

model developed specifically for research in schools. The construct of teacher leadership and teacher efficacy constituted the dependent or criterion variables.

Multiple regression analyses were used for the purpose of examining how much of the total variance of teacher leadership and teacher efficacy was accounted for or explained by the principals' leadership behaviors as perceived by teachers in a South Texas school district. Multiple regression analysis is a very valuable procedure to analyze data because it does not only determine whether the variables are related but also the degree to which they are related (Gay, Mills, & Airasian, 2009). One goal of multiple regression analysis is to obtain a partition of variance for the dependent variable into variance that can be accounted for or predicted by each of the predictor variables taking into account the overlap or correlation between the predictors (Warner, 2013). In addition, a two-way factorial analysis was used for the purpose of examining the differences between elementary and secondary teacher's perceptions of their principal's transformational leadership behaviors.

Population and Sample

Participants for this study were conveniently selected from a South Texas school district. The sample included teachers from elementary and secondary schools with different academic accountability ratings including Academically Acceptable, Recognized, and Exemplary. The district consists of more than 30 schools with a population of more than 1,600 teachers.

A sample of 290 teachers was used in this study. Of these, 128 were elementary teachers (PK-5th) and 155 were secondary teachers (6th-12th). Of the 290 teachers surveyed, seven were eliminated from the study due to missing data.

Instrumentation

The survey instrument for this study consisted of a combination of three different instruments designed by researchers in the areas of transformational leadership, teacher leadership, and teacher efficacy respectively. The survey was divided into four separate sections and had a total of 93 questions. Section one (items 1 through 6) asked participants to provide basic demographic information about themselves and their job. Sections two, three, and four asked the participants to rate their level of agreement or disagreement with statements regarding leadership practices, teacher leadership, and teacher efficacy.

Section 1. Basic demographic data. This section consisted of six questions and was designed to provide a profile of teachers participating in the study.

Section 2. Transformational Leadership. This section included 34 questions intended to measure teachers' perceptions of their principal's leadership behaviors, based on the transformational leadership model as proposed by Leithwood (1994). Leithwood conducted a four year study of transformational leadership for school restructuring which resulted in the development of the questionnaire by Leithwood and Jantzi entitled, *The Nature of School Leadership Survey*. Leithwood and his co-researchers have used this instrument in several of their studies and have adapted it over several years of study of transformational leadership (Leithwood & Jantzi, 1999, 2000, 2005; Leithwood, Jantzi, Ryan, & Steinbach, 1997; Leithwood, Jantzi, & Steinbach, 1999).

The Nature of School Leadership Survey consists of 50 questions measuring teachers' perceptions of their principal's ability to lead the school of which 34 questions were selected and adapted to the needs of this study. The items are designed in a 6 point Likert-type scale ranging from 1 (strongly disagree) to 6 (strongly agree). The survey was designed to measure eight

dimensions of leadership behaviors which are synonymous with transformational school leadership. These behaviors are as follows: (1) Developing a widely shared vision for the school, (2) buildings consensus about school goals and priorities, (3) holding high performance expectations, (4) modeling behavior, (5) providing individualized support, (6) providing intellectual stimulation, (7) strengthening school culture, and (8) building collaborative structure. The instrument has a high overall reliability coefficient of .967for measuring various aspects of transformational leadership. The validity of the survey is verified both through the recognition of Leithwood's authority in the field of transformational leadership and his numerous studies. Leithwood granted permission to the researcher for the use of this instrument (Appendix A). Table 1 shows the 34 items and their corresponding dimension of leadership behavior.

Section 3. Teacher Leadership. *The Teacher leadership School Survey* (TLSS) by Katzenmeyer and Moller (2001) was used to measure teachers' perceptions of practices supporting teacher leadership development in their schools. The present level of teacher leadership as measured by the raw score in each school is the dependent variable. The TLSS survey was developed by the researchers to measure seven dimensions to determine the support of teacher leaders as they collaborate with their principals and their peers to improve student achievement. The seven dimensions of teacher leadership are: Developmental focus, recognition, autonomy, collegiality, participation, open communication, and positive environment.

To establish the validity of the TLSS survey, Katzenmeyer and Moller (2001) established a panel of experts with extensive knowledge of teacher leadership. Over 300 teachers from different schools completed the survey. The panel of experts conducted a factor analysis of the data to cluster survey items that exhibited internal consistency and were minimally correlated with each other. Factors with low scores were dropped from the survey. The current survey

consists of 49 items, with seven items for each dimension, using a 5-point Likert-type scale of "never," "rarely," "sometimes," "often," and "always."

Table 1
Transformational Leadership Dimensions

Leadership Dimension	N (Items)
Develops a widely shared vision for the school (Items: 1, 10, 19, 28)	4
Builds consensus about school goals and priorities (Items: 2, 8, 20, 33)	4
Holds high performance expectation (Items: 7, 9, 21, 23)	4
Models behavior (Items: 3, 15, 24)	3
Provides individualized support (Items: 4, 11, 25, 31)	4
Provides intellectual stimulation (Items: 5, 13, 17, 22, 27, 29)	6
Strengthens school culture (Items: 6, 12, 16, 18, 26, 32)	6
Builds collaborative structures (Items: 14, 30, 34)	3

To determine the reliability of the TLLS, the panel of experts in collaboration with Katzenmeyer and Moller (2001) utilized Cronbach's Alpha, also referred as internal-consistency reliability, to analyze the data collected from a sample of 312 teachers from 12 schools. The Statistical Analysis System (SAS) was used o complete reliability estimates. The results indicated that the seven dimensions have above average reliability ranging from .83 to .93.

Permission was obtained from the Katzenmeyer and Moller allowing the researcher to use the TLSS for this study (Appendix B).

Table 2 shows the survey items and their corresponding teacher leadership dimensions. The 5-point Likert-type scale had the following values: 1 = never, 2 = rarely, 3 = sometimes, 4 = often, and 5 = always.

Table 2

Teacher Leadership School Survey Dimension

Teacher Leadership Dimensions	N (Items)
Developmental focus (Items: 1 – 7)	7
Recognition (Items: 8 - 14)	7
Autonomy (Items: 15 - 21)	7
Collegiality (Items: 22 - 28)	7
Participation (Items: 29 - 35)	7
Open communication (Items: 36 - 42)	7
Positive environment (Items: 43 - 49)	7

Section 4. Teacher Efficacy. *The Teachers' Sense of Efficacy Scale (TSES)* was used to measure teacher efficacy. The scale was developed by Hoy and Woolfolk (1993) based on the Teacher Efficacy Scale version of Gibson & Dembo (1984). Because this instrument was

developed at the Ohio State University, it is sometimes referred as the Ohio State Teacher Efficacy Scale (OSTES).

The development of the TSES was undertaken by participants in a seminar on self-efficacy in teaching and learning in the College of Education at the Ohio State University and tested in three different studies (Tschannen-Moran & Hoy, 2001). The resulting instrument has two forms, a long one with 24 items and a short form with 12 items. These items were selected because they had the highest factor loading in the earlier research studies. In their several studies in teacher efficacy Tschannen-Moran and Hoy (2001) have consistently found three moderately correlated factors grouped in three subscales: Efficacy in student engagement, efficacy in instructional services, and efficacy in classroom management. Reliabilities for each subscale were 0.91 for instruction, 0.90 for management, and 0.87 for engagement. Construct validity for both, the long and the short forms, were examined by assessing the correlation of the TSES with other measures of teaching efficacy.

This study used the long form of the scale consisting of 24 items. Responses to the 9 point Likert scale items had the following values: 1-2 = Nothing, 3-4 = Very little, 5-6 = Some influence, 7-8 = Quite a bit, 9 = A great deal. Permission to use this instrument was granted to the researcher (Appendix C). Table 3 shows the survey items and their corresponding scales.

Data Collection Procedures

In order to adhere to the ethical guidelines for conducting research with human subjects, the researcher secured permission from the Institute Review Board (IRB) at the University of Texas Pan-American by submitting an application along with all required documentation with information on the purpose and nature of the study. After receiving IRB approval (Appendix D),

the researcher made personal contact with the Superintendent of Schools. In the first meeting, the nature of the study, its purpose, and anticipated results were explained. Based on this initial meeting, an official letter granting permission in writing to conduct the study was obtained (Appendix E).

Table 3

Teachers' Sense of Efficacy Scale (Long Form)

Teacher Sense of Efficacy Subscales	N (Items)
Efficacy and Student Engagement (Items: 1, 2, 4, 6, 9, 12, 14, 22)	8
Efficacy in Instructional Strategies (Items: 7, 10, 11, 17, 18, 20, 23, 24)	8
Efficacy in Classroom Management (Items: 3, 5, 8, 13, 15, 16, 19, 21)	8

After receiving approval from the superintendent and as per his recommendation, the researcher conducted a general meeting with the principals of the schools to review the purpose of the study and the procedure for collecting data as well as the nature of their participation. The researcher followed up by contacting each principal to arrange for a meeting with their staff for the collection of data. Some principals did not respond to the initial request or follow up attempts.

The researcher scheduled meetings with the Principals who did respond and granted their permission to proceed with the study. Data was collected from the teachers at their respective school during a faculty meeting. The researcher personally distributed and administered the instrument.

In addition to the survey, the packets distributed to the teachers included a letter describing the nature of the study and its intended purposes as well as an inform consent form from the participants stating that their participation was completely voluntary and anonymous (Appendix F). The data collection was completed within ten weeks.

A total of 560 surveys were distributed and completed during teachers' faculty meeting. Of these, 290 surveys were returned of which seven were eliminated from the study due to missing data. The total number of surveys used in this study includes 128 surveys completed by elementary teachers with a 64% return rate and 155 surveys completed by secondary with 43% return rate. The total return rate was 51%. Table 4 shows the participating schools, the number of responses received and their corresponding percentage rate return.

Data Analysis

In order to investigate the hypotheses guiding this study, the Statistical Package for the Social Studies (SPSS) software package was utilized to conduct this quantitative data analyses process.

Table 4

Number and Percentage of Teacher Surveys Distributed and Returned

Surveys	Distributed		Returned	
	Schools N	Surveys N	Surveys N	Surveys P
Elementary	8	200	128	64%
Secondary	4	360	155	43%
Total		560	283	51%

Statistical analysis allows the researcher to reduce large amount of data into more manageable and understandable sets that are easier to interpret. This study employed descriptive, exploratory, and confirmatory methods to analyze the data. Descriptive statistics were used to develop a profile of the participants. This procedure is used to generate frequencies, percentages, measures of central tendency, and measures of variation based on information provided by the participants. Factor analysis was used to identify and extract constructs from the participants' responses. Factor analysis serves as a means of reducing data by taking a large number of variables and grouping them into smaller number of clusters called factors. Thus, factor analysis produces a manageable number of factor variables to deal with and analyze (Gay, Mills, & Airasian, 2009). Once the constructs or variables were identified, regression analyses were used to answer two of the research questions.

A full model of regression analyses was used to explain the amount of variance accounted for in the criterion or dependent variables, also known as dependent variables. In addition, to answer the third research question and determine the differences between elementary and secondary teachers' perceptions of their principals' transformational leadership behaviors, a two-way factorial analysis of variance was obtained. Exploratory data analyses include box-and-whisker plots and steam-and leaf displays for both dependent and independent variables. Exploratory analyses were used to identify outliers in the data and to determine the characteristics of the distribution. Thus, both confirmatory data analysis and exploratory data analysis were conducted side by side (Tukey, 1977). Null hypothesis for this study were tested with *t* and *F* distributions at the .05 level of significance.

Summary

This chapter includes a description of the research design and methodology for this study. Included in this chapter is also a description of the intended sample, the survey instrument, the data collection, and data analyses methods. Exploratory and confirmatory data analyses were conducted side by side (Tukey, 1977). Exploratory analyses consisted of box-and-whiskers plots and stem-and-leaf displays, and descriptive statistics including mean, median, variance, standard deviation, skewness, and kurtosis. Confirmatory factor and regression analyses were used to identify variables and to test the null hypotheses. A level of significance of .05 for testing the null hypotheses was established. The discussion also included the reliability and validity coefficients of the surveys used in this study. Chapter IV provides results and description of the data collected as well as the findings and analytical procedures used to test each hypothesis investigated in this study.

CHAPTER IV

RESEARCH FINDINGS AND RESULTS

The purpose of this study was to examine how much of the total variance of teacher leadership and teacher efficacy is accounted for or explained by the Principal's transformational behaviors as perceived by the teachers in a South Texas school district. In addition this study also examined the differences between elementary and secondary teachers' perceptions of their principal transformational leadership behaviors.

This chapter presents the research findings from the analyses of data collected for this study. Data were gathered by survey method and analyzed through quantitative statistical procedures. Exploratory and confirmatory data analyses were conducted side by side (Tukey, 1977). Exploratory analyses consisted of box-and-whiskers plots and stem-and-leaf displays, and descriptive statistics including mean, median, variance, standard deviation, skewness, and kurtosis. Confirmatory factor and regression analyses were used to identify variables and to test the null hypotheses for the first two research questions respectively. To answer the third research question, a two-way factorial analysis was obtained. The null hypotheses for this study were tested with a *t* and *F* distributions at the .05 level of significance.

This chapter is divided into four sections. The first section provides demographic information about the district and a demographic profile of the survey participants. Exploratory data analyses are included in the second section and confirmatory data analyses are explained in section three. Section four includes a summary of the chapter.

Demographic Information

The present study was conducted in a south Texas school district that serves a population of 25,300 students in 33 schools. The student population is composed of 91.9% Hispanics, 65.3% at risk, 67.3% are identified as economically disadvantaged and 27.4% are English Language Learners. The teaching staff is comprised of 1,634 teachers of which 94% are Hispanic.

The first section of the survey includes a demographic section comprised of six items. The items ask teachers to provide information about themselves and their job: grade levels currently teaching, gender, number of years of teaching experience, number of year teaching in current school, number of principals during teaching career, and number of years with current principal. Table 5 shows the profile of the participants extracted from their answers to the demographic questions. As shown in Table 5 of the 283 surveys completed, 128 (45.2%) currently work in an elementary school and 155 (54.8%) work in a secondary school including middle and high school. Regarding gender, the total sample consist of 188 females (66.4 %) and 94 males (33.2%). The number of years of teaching experience indicates that more than half of the participants have been teaching for less than 10 years. 122 (43.1 %) of the participants have been teaching from 0 to 5 years and 75 (26.5%) have been teaching from 6 to 10 years.

Additional descriptive data analyses of each variable in this study including mean, standard error of mean, variance, skewness, kurtosis, and standard error of kurtosis is provided in Table 6.

Exploratory Data Analysis

The purpose for conducting exploratory analyses is to identify atypical data and distributions in the study (Tukey, 1977). Exploratory data analyses in this study include box-and-whiskers plots, stem-and-leaf displays, and descriptive statistics. Box-and-whiskers plots for the dependent and independent variables were obtained in order to identify outliers (Appendix G). The outliers in the present study were not considered extreme and do not require special consideration. Therefore, no nonlinear transformations were used.

Table 5

Demographic Information for All Participants: Gender, Teaching Level Assignment, and Years of Experience

Category	Descriptor	N	Percent	Cumulative %
Gender	Male	95	33.6	33.6
	Female	188	66.4	100.0
Teaching Level Assignment	Elementary	128	45.2	45.2
	Secondary	155	54.8	100.0
Years of Teaching Experience	0 to 5	50	17.7	17.7
	6 to 10	66	23.3	41.0
	11 to 15	43	15.2	56.2
	16 to 20	40	14.1	70.3
	21 to 25	34	12.0	82.3
	26 to 30	28	9.9	92.2
	> 30	22	7.8	100.0

Table 6

Descriptive Statistics for Variables

Variables	Mean	Std Error Mean	Variance	Skewness	Std Error Skew	Kurtosis	Std Error Kurtosis
Dependent Teacher Leadership							
Environment	29.13	.44	54.79	-.46	.15	-.34	.29
Developmental Focus	34.43	.44	55.48	-.67	.15	.53	.29
Recognition	14.60	.24	16.07	-.57	.15	-.32	.29
Teacher Efficacy							
Instructional Strategies	75.56	.57	93.55	-.93	.15	1.62	.29
Classroom Management	35.90	.35	34.23	-.97	.15	2.05	.29
Independent Transformational Leadership							
Redesign Organization-Developing People	38.01	1.20	405.64	.81	.15	-.26	.29
Setting Direction	19.41	.56	90.15	1.29	.15	2.08	.29

Confirmatory Data Analysis

Factor analysis is a statistical procedure commonly used to identify underlying dimensions or constructs in an instrument. Factor analysis produces a manageable number of factor variables to deal with and analyze while retaining as much meaningful information as possible (Gay, Mills, & Airasian, 2009). For this study a Principal Component Analysis with Varimax Rotation was used to identify the constructs from the participants' responses to the survey items. As shown in Table 7, this procedure extracted a total of seven constructs with Eigenvalues of 1.0 or higher.

Table 7

Scale Constructs Eigenvalues Percentage of Variance, and Cumulative Percentage of Variance

Scale Constructs (Factors)	Eigenvalue	Percentage of Variance	Cum Percent of Variance
Teacher Leadership (Dep. Var.)			
Environment	27.27	55.65	55.65
Developmental Focus	2.78	5.68	61.32
Recognition	1.45	2.97	64.29
Teacher Efficacy (Dep. Var.)			
Instructional Strategies	14.50	60.44	60.44
Classroom Management	1.26	5.25	65.69
Transformational Leadership (Ind. Var.)			
Redesign Organization - Developing People	24.53	72.16	72.16
Setting Directions	1.52	4.48	76.64

Two constructs were extracted from the Transformational Leadership Survey section. A fourteen item transformational leadership factor was obtained with behaviors including school culture, building collaborative structures, modeling behavior, and individualized support (Factor 1; Eigenvalue = 24.53). This factor was comprised of seven items pertaining to redesigning organization leadership practices and seven items pertaining to developing people leadership practice. The second factor obtained was comprised of 9 items pertaining to behavioral components of holding high performance expectations and building consensus about goals and priorities under the setting directions leadership practices (Factor 2; Eigenvalues = 1.52).

Together, these two constructs accounted for 76.63% of the total variance explained. Construct one which, for the purpose of this study is called redesigning organization-developing people, was the stronger of the two factors accounting for approximately 72% of the variance. Most of the items in either of the constructs loaded with high correlation equaling or exceeding .70. The existence of both factors was determined by examining the content of the survey items. Thus these two factors appeared both parsimonious and interpretable. Therefore, these two factors are the two independent variables tested in the null hypotheses.

The extraction of two factors from the original eight dimensions identified by Leithwood (1996) as leadership behaviors measured by the *Nature of School Leadership Survey* was unexpected. However, it was in line with previous studies that failed to identify the original eight factors originally reported by Leithwood (Nir & Kranot, 2006; Horn-Turpin, 2009). In addition, the Principal Component analysis provided statistical support for the two constructs of transformational leadership tested in the null hypotheses in this study rather than the eight dimensions.

The same criterion was used to extract the remaining factors in order to delineate the constructs from the Teacher Leadership and the Teacher Efficacy sections. From the Teacher Leadership section, five constructs were extracted compared to the seven dimensions reported by Katzenmeyer & Moller (2001). However, analysis of the factor loadings of items included in each factor led to the identification of only three constructs with factor loadings greater than 0.504. The three factors accounted for 69.33 % of the total variance. Factor one, positive environment (Y_1) accounted for 55.65% of the variance, while factor two, developmental focus (Y_2) accounted for 5.68%, and factor three, recognition accounted (Y_3) for 3%. These three factors represent the dependent variables for teacher leadership tested in the null hypotheses.

In the Teacher Efficacy section, the Principal Component Analysis with varimax rotation of the 24 items, extracted two of the original three factors reported by Tschannen-Moran, Hoy & Hoy (1998). The two factors extracted, instructional strategies and classroom management (Y_1) accounted for 66% of the total variance in the respondents' scores with factor loadings exceeding 0.63. Instructional strategies (Y_2) accounted for 60 % of the total variance with an eigenvalue of 14.5. These two factors are the dependent variables tested to answer the second research question and null hypotheses.

Based on the results of the extraction of constructs from the Principal Component Analysis, seven variables were created in SPSS. Only items with factor loadings exceeding .051 were created into each corresponding construct. Cross loadings or items failing to meet this minimal standard were not including in computing the variables.

After the variables were computed, reliability analyses were conducted. Reliability is the degree to which a test consistently measures whatever is supposed to be measuring. The reliability of an instrument refers to the internal consistency or content sampling error derived with a Cronbach's alpha coefficient through the correlation of every item with every other item (Gay, Mills, & Airasian, 2009). The obtained Cronbach's alpha coefficient ranged from .87 to .97 indicating high reliability for each variable. Table 8 lists the seven variables, the final survey items selected to comprise each variable, and reliability Cronbach's alpha coefficient.

In addition, to determine the differences between elementary and secondary teachers' perceptions of their Principal's transformational leadership behaviors, a two- way factorial analysis of variance was obtained to investigate the interaction between the two independent variables and the two levels of teachers. A factorial analysis is designed to help the researcher determine the effects of the independent variables both separate and in combination on the

dependent variables. This analysis yields a separate *F* ratio for each independent variable and for each interaction (Gay, Mills, & Airasian, 2009). As shown in Table 9 the obtained means for both the elementary and secondary groups with regards to the redesign organization-developing people variable were very close (2.63 for elementary teachers and 2.79 for secondary teachers). Similar results were obtained for the means with regards to setting directions (2.01 for elementary and 2.28 for secondary).

Table 8

Final Factors, Items, and Reliabilities

Scale Factors	Items	Cronbach's Alpha
Teacher Leadership (Dep. Var.)		
Environment	43 - 49, 21	.92
Developmental Focus	1,2,3,5,6,7,22,24,27	.93
Recognition	8,9,12,14	.91
Teacher Efficacy (Dep. Var.)		
Instructional Strategies	2,7,10,11,12,17,18,20,23,24	.94
Classroom Management	1,3,15,19,21	.87
Transformational Leadership (Ind. V.)		
Redesign Organization - Developing People	3,11,12,14,15,16,17,24 25,26,30,31,32,34	.98
Setting Directions	2,5,7,8,9,19,20,21,23	.96

Table 9

Descriptive Statistics (Two-way Factorial Analysis of Variance)

Factors	Mean	Std. Deviation	N
Redesign Organization			
Elementary	2.63	1.46	128
Secondary	2.78	1.41	155
Setting Direction			
Elementary	2.01	.987	128
Secondary	2.28	1.09	155

Answering the Research Questions

The first research question guiding this study and the null hypothesis were further divided into three sub questions and three sub hypothetical constructs or null hypotheses as follows:

Research Question 1: How much of the total variance of teacher leadership development is accounted for or explained by the Principal's transformational leadership behaviors?

This research question was divided into three research sub questions and three hypothetical constructs based on the factors extracted for teacher leadership development: developmental focus (Y_1), recognition (Y_2), and environment (Y_3). Thus, the three research sub questions and null hypotheses tested to answer research question number one are as follows:

Research Sub Question 1a: How much of the total variance of developmental focus (Y_1) as source of teacher leadership development is accounted for or explained by the Principal's transformational leadership behaviors of redesigning organization- developing people (X_1) and setting directions (X_2) as perceived by teachers?

H_O1: Teachers' developmental focus (Y_1) is not a function of the Principal's transformational leadership behaviors of redesigning organization- developing people (X_1) and setting directions (X_2) as perceived by teachers.

The obtained multiple regression value between teachers' developmental focus as leadership practice and principals' transformational leadership behaviors (R= .41) as shown in Table 10 is statistically significant (*df:* 2, 280; $P < .01$). The data reject null hypothesis number one. Thus, the data suggests that teachers' developmental focus as teacher leadership development is a function of principals' transformational leadership behaviors. The R^2 derived in this analysis indicates that the principals' transformational leadership behaviors account for 17% of the teachers' developmental focus.

Table 10

Regression Analysis of Full Model Between Developmental Focus and Transformational Leadership

Model	R	R^2	Adjusted R^2	df	F	P
Developmental Focus	.41	.17	.16	2, 280	28.52	.00

Predictors: (Constant), setting direction, redesign organization
Dependent Variable: developmental focus
P < .05

Table 11 summarizes the standardized regression coefficient between teachers' developmental focus leadership behaviors and the predictor variables of principals' leadership behaviors. The setting directions variable is statistically significant (P =.02).

The derived multiple regression value between the model of best fit and teachers' developmental focus (R = .40) is found to be statistically significant (P = <.05) as shown in Table 12. Setting directions is found to be the most parsimonious factor as it explains almost all

of the variance on teachers' developmental focus. Setting directions explains 16 % of the variance as compared to the full model which explains 17% of the total variance.

Table 11

Standardized Beta Coefficients Between Developmental Focus and Transformational Leadership

Model	Standardized Beta Coefficients	t	P
Redesign Organization - Developing People	-.184	-1.76	.080
Setting Directions	-.243	-2.31	.022

Dependent Variable: developmental focus
P < .05

Table 12

Regression Analysis of Model of Best Fit Between Developmental Focus and Transformational Leadership

Model	R	R^2	Adjusted R^2	F	P
Developmental Focus	.40	.16	.16	53.57	.00

Predictor: (Constant), setting directions
Dependent Variable: developmental focus
P < .05

The second research sub question and corresponding null hypothesis related to the overall research question number one regarding teacher leadership development follows:

Research Sub Question 1b: How much of the total variance of teachers' recognition (Y_2) as source of teacher leadership development is accounted for or explained by the Principal's transformational leadership behaviors of redesigning organization- developing people (X_1) and setting directions (X_2) as perceived by teachers?

H_O2: Teachers' recognition (Y_2) is not a function of the Principal's transformational leadership behaviors of redesigning organization-developing people (X_1) and setting directions

(X_2) as perceived by teachers.

The obtained multiple regression value between teachers' recognition and principals' transformational leadership behaviors (R= .57) as shown in Table 13 is statistically significant (*df*: 2, 280; P < .01). The data reject null hypothesis number two. Thus, the data indicates that teachers' recognition is a function of principals' transformational leadership behaviors. The R^2 derived in this analysis indicates that the principals' transformational leadership behaviors account for 32% of the total variance of teachers' recognition.

Table 14 summarizes the standardized regression coefficient between teachers' recognition and the predictor variables of principals' leadership behaviors. The redesigning the organization-developing people variable is statistically significant (P = <.01).

Table 13

Regression Analysis of Full Model Between Recognition and Transformational Leadership

Model	R	R^2	Adjusted R^2	df	F	P
Recognition	.57	.32	.32	2, 280	66.32	.00

Predictors: (Constant), setting direction, redesign organization
Dependent Variable: recognition
P < .05

The derived multiple regression value between the model of best fit and teachers' recognition (R = .56) is found to be statistically significant (P = <.01) as shown in Table 15. Redesigning organization-developing people is found to be the most parsimonious factor as it explains almost all of the variance on teachers' recognition. Redesigning the organization-developing people explains 31% of the variance as compared to the full model which explains 32% of the variance.

Table 14
Standardized Beta Coefficients Between Recognition and Transformational Leadership

Model	Standardized Beta Coefficients	t	P
Redesign Organization - Developing People	-.71	-7.51	.000
Setting Directions	.18	1.89	.060

Dependent Variable: recognition
P < .05

The third research sub question and corresponding null hypothesis related to the overall research question number one regarding teacher leadership development is as follows:

Research Sub Question 1c: How much of the total variance of teachers' environment (Y_3) as source of teacher leadership development is accounted for or explained by the Principal's transformational leadership behaviors of redesigning organization- developing people (X_1) and setting directions (X_2) as perceived by teachers?

H_O3: Teachers' environment (Y_3) is not a function of the Principal's transformational leadership behaviors of redesigning organization- developing people (X_1) and setting directions (X_2) as perceived by teachers.

Table 15

Regression Analysis of Model of Best Fit Between Recognition and Transformational Leadership

Model	R	R^2	Adjusted R^2	F	P
Recognition	.56	.31	.31	127.90	.00

Predictor: (Constant), redesign organization
Dependent Variable: recognition
P < .05

The obtained multiple regression value between teachers' environment as leadership practice and principals' transformational leadership behaviors (*R*= .58) as shown in Table 16 is

statistically significant (*df:* 2, 280; $P < .01$). The data reject null hypothesis number three. Thus, the data suggests that teachers' environment as leadership behavior is a function of principals' transformational leadership behaviors. The R^2 derived in this analysis suggests that the principals' transformational leadership behaviors account for 37% of the teachers' environment.

Table 16

Regression Analysis of Full Model Between Environment and Transformational Leadership

Model	R	R^2	Adjusted R^2	df	F	P
Environment	.58	.37	.33	2, 280	70.98	.00

Predictors: (Constant), setting direction, redesign organization
Dependent Variable: environment
P < .05

Table 17 summarizes the standardized regression coefficient between teachers' environment and the predictor variables of principals' leadership behaviors. The redesigning the organization-developing people variable is statistically significant ($P = <.01$).

Table 17

Standardized Beta Coefficients Between Environment and Transformational Leadership

Model	Standardized Beta Coefficients	t	P
Redesign Organization - Developing People	-.68	-7.26	.000
Setting Directions	.12	1.31	.193

Dependent Variable: environment
P < .05

The derived multiple regression value between the model of best fit and teachers' environment ($R = .58$) is found to be statistically significant ($P = <.01$) as shown in Table 18. Redesigning organization-developing people is found to be the most parsimonious factor as it

explains almost all of the variance on teachers' developmental focus. Redesigning organization-developing people explains 33% of the variance as compared to the full model which explains 37% of the total variance.

Table 18

Regression Analysis of Model of Best Fit Between Environment and Transformational Leadership

Model	R	R^2	Adjusted R^2	F	P
Environment	.58	.33	.33	139.91	.00

Predictor: (Constant), redesign organization
Dependent Variable: environment
$P < .05$

The second research question guiding this study and the null hypothesis were further divided into two sub questions and two sub hypothetical constructs or null hypotheses as follows:

Research Question 2: How much of the total variance of teacher self-efficacy is accounted for or explained by the Principal's transformational leadership behaviors?

This research question was divided into two research sub questions and two hypothetical constructs based on the factors extracted for teacher self-efficacy: Classroom management (Y_4) and instructional strategies (Y_5). Thus, the sub questions and null hypotheses tested to answer research question number two are as follows:

Research Sub Question 2a: How much of the total variance of teacher's classroom management (Y_4) as a source of teacher self efficacy is accounted for or explained by the Principal's transformational leadership behaviors of redesigning organization- developing people (X_1) and setting directions (X_2) as perceived by teachers?

H_O4: Teachers' classroom management (Y_4) is not a function of the Principal's transformational leadership behaviors of redesigning organization- developing people (X_1) and setting directions (X_2) as perceived by teachers.

The obtained multiple regression value between teachers' classroom management as source of self-efficacy and principals' transformational leadership behaviors (R= .31) as shown in Table 19 is statistically significant (*df: 2, 280; P* < .01). The data reject null hypothesis number four. Thus, the data suggests that teachers' classroom management as a source of self efficacy is a function of principals' transformational leadership behaviors. The R^2 derived in this analysis suggests that the principals' transformational leadership behaviors account for 10% of the teachers' classroom management behaviors.

Table 19

Regression Analysis of Full Model Between Classroom Management and Transformational Leadership

Model	R	R^2	Adjusted R^2	df	F	P
Classroom Management	.31	.10	.09	2, 280	15.13	.00

Predictors: (Constant), setting direction, redesign organization
Dependent Variable: Classroom Management
P < .05

Table 20 summarizes the standardized regression coefficient between teachers' classroom management and the predictor variables of principals' leadership behaviors. The setting directions variable is statistically significant (*P* =.01).

The derived multiple regression value between the model of best fit and teachers' classroom management (R = .31) is found to be statistically significant (P = <.01) as shown in Table 21. Setting directions is found to be the most parsimonious factor as it explains almost all

of the variance on teachers' classroom management. Setting directions explains 9% of the variance as compared to the full model which explains 10% of the variance.

Table 20

Standardized Beta Coefficients Between Classroom Management and Transformational Leadership

Model	Standardized Beta Coefficients	t	P
Redesign Organization - Developing People	.09	.837	.403
Setting Directions	-.39	-3.54	.000

Dependent Variable: Classroom Management
P < .05

Table 21

Regression Analysis of Model of Best Fit Between Classroom Management and Transformational Leadership

Model	R	R^2	Adjusted R^2	F	P
Classroom Management	.31	.09	.09	29.58	.00

Predictor: (Constant), setting directions
Dependent Variable: Classroom Management
P < .05

The second research sub question and corresponding null hypothesis related to the overall research question number two regarding teacher self efficacy is as follows:

Research Sub Question 2b: How much of the total variance of teacher's instructional strategies (Y_5) as a source of teacher self efficacy is accounted for or explained by the Principal's transformational leadership behaviors of redesigning organization- developing people (X_1) and setting directions (X_2) as perceived by teachers?

H_O5: Teachers' instructional strategies (Y_5) is not a function of the Principal's transformational leadership behaviors of redesigning organization- developing people (X_1) and setting directions (X_2) as perceived by teachers.

The obtained multiple regression value between teachers' instructional strategies and principals' transformational leadership behaviors (R= .29) as shown in Table 22 is statistically significant (*df:* 2, 280; P < .01). The data reject null hypothesis number five. Thus, the data indicates that teachers' instructional strategy is a function of principals' transformational leadership behaviors. The R^2 derived in this analysis suggests that the principals' transformational leadership behaviors account for 8% of the teachers' instructional strategies.

Table 22

Regression Analysis of Full Model Between Instructional Strategies and Transformational Leadership

Model	R	R^2	Adjusted R^2	df	F	P
Instructional Strategies	.29	.08	.08	2, 280	12.54	.00

Predictors: (Constant), setting direction, redesign organization
Dependent Variable: Instructional Strategies
P < .05

Table 23 summarizes the standardized regression coefficient between teachers' instructional strategies and the predictor variables of principals' leadership behaviors. The setting directions variable is statistically significant (P = <.01).

The derived multiple regression value between the model of best fit and teachers' instructional strategies (R = .27) is found to be statistically significant (P = <.01) as shown in Table 24. Setting directions is found to be the most parsimonious factor as it explains almost all of the variance on teachers' developmental focus. Setting directions explains 7% of the variance as compared to the full model which explains 8% of the total variance.

Table 23

Standardized Beta Coefficients Between Instructional Strategies and Transformational Leadership

Model	Standardized Beta Coefficients	t	P
Redesign Organization - Developing People	.17	1.574	.117
Setting Directions	-.42	-3.81	.000

Dependent Variable: Instructional Strategies
P < .05

Table 24

Regression Analysis of Model of Best Fit Between Instructional Strategies and Transformational Leadership

Model	R	R^2	Adjusted R^2	F	P
Instructional Strategies	.27	.07	.07	22.48	.00

Predictor: (Constant), setting directions
Dependent Variable: Instructional Strategies
P < .05

The third research question guiding this study is as follows:

Research Question 3. What are the differences in teachers' perceptions of principals' transformational leadership behaviors in elementary and secondary schools?

The null hypothesis tested to answer research question number three is as follows:

Ho6: There are no differences in teachers' perceptions of principals' transformational leadership behaviors in elementary and secondary schools.

This last research question sought to investigate the differences between elementary and secondary teachers' perceptions of their Principal's transformational leadership behaviors. As shown in Table 25 no significant differences were found between the perceptions of elementary

and secondary teachers with regards to their Principal's transformational leadership behaviors (F= 1.79; P = .19).

Table 25

Summary Table of Variation

Summary Variation	SS	df	MS	F	P
Between Subjects	814.61	282			
between groups	6.05	1	6.05	2.10	.15
error between subjects	808.56	281	2.88		
Within Subjects	127.51	283			
between trials	44.64	1	44.64	152.32	.000
groups x trials	.51	1	.51	1.73	.19
"error" within subjects	82.36	281	.29		
Total	942.12	565			

Two-way factorial analysis of variance, one is between subjects and one within subjects on repeated measures.

The data fails to rejects the null hypothesis number six. The data indicates that there is no difference between the perceptions of elementary and secondary teachers about their Principal's transformational leadership behavior. There was however, a difference obtained between the interaction of the two independent variables of transformational leadership behaviors of redesign organization-developing people and setting directions. The data indicated that both elementary and secondary teachers perceive their Principal's transformational leadership behaviors more aligned to the practices of redesign organization-developing people than to the setting directions

practices. The mean difference between the two variables (redesign organization-developing people = 2.7 and setting directions = 2.1) is significant ($P =< .05$).

The summary of analyses addressing each of the research questions and their corresponding null hypothesis guiding this study is presented in Table 26. Five of the six null hypotheses tested in this study are rejected as concluded from the data.

Table 26

Summary of Analyses

Questions/Hypotheses	Decisions
Research Question 1a: How much of the total variance of developmental focus (Y_1) as source of teacher leadership development is accounted for or explained by the Principal's transformational leadership behaviors of redesigning organization- developing people (X_1) and setting directions (X_2) as perceived by teachers?	
H_O1: Teachers' developmental focus (Y_1) is not a function of the Principal's transformational leadership behaviors of redesigning organization- developing people (X_1) and setting directions (X_2) as perceived by teachers.	Reject H_O1
Research Question 1b: How much of the total variance of teachers' recognition (Y_2) as source of teacher leadership development is accounted for or explained by the Principal's transformational leadership behaviors of redesigning organization- developing people (X_1) and setting directions (X_2) as perceived by teachers?	
H_O2: Teachers' recognition (Y_2) is not a function of the Principal's transformational leadership behaviors of redesigning organization-developing people (X_1) and setting directions (X_2) as perceived by teachers.	Reject H_O2
Research Question 1c: How much of the total variance of teachers' environment (Y_3) as source of teacher leadership development is accounted for or explained by the Principal's transformational leadership behaviors of redesigning organization- developing people (X_1) and setting directions (X_2) as perceived by teachers?	
H_O3: Teachers' environment (Y_3) is not a function of the Principal's transformational leadership behaviors of redesigning organization- developing people (X_1) and setting directions (X_2) as perceived by teachers.	Reject H_O3

Table 26 (continued)

Summary of Analyses

Questions/Hypotheses	Decisions
Research Question 2a: How much of the total variance of teacher's classroom management (Y_4) as a source of teacher self efficacy is accounted for or explained by the Principal's transformational leadership behaviors of redesigning organization- developing people (X_1) and setting directions (X_2) as perceived by teachers?	
H_O4: Teachers' environment (Y_4) is not a function of the Principal's transformational leadership behaviors of redesigning organization - developing people (X_1) and setting directions (X_2) as perceived by teachers.	Reject H_O4
Research Question 2b: How much of the total variance of teacher's instructional strategies (Y_5) as a source of teacher self efficacy is accounted for or explained by the Principal's transformational leadership behaviors of redesigning organization- developing people (X_1) and setting directions (X_2) as perceived by teachers?	
H_O5 Teachers' instructional strategies (Y_5) is not a function of the Principal's transformational leadership behaviors of redesigning organization- developing people (X_1) and setting directions (X_2) as perceived by teachers.	Reject H_O5
Research Question 3: What are the differences in teachers' perceptions of principals' transformational leadership behaviors in elementary and secondary schools?	
Ho6: There are no differences in teachers' perceptions of principals' transformational leadership behaviors in elementary and secondary schools.	Failed to Reject H_O6

Summary

This study uses exploratory and confirmatory analysis side by side. Descriptive statistics including mean, standard error of mean, variance, skewness, standard error of skewness,

kurtosis, and standard error of kurtosis are derived for each variable. Exploratory data analyses include box and whisker plots and stem and leaf displays. Multiple regression analyses are used to determine the amount of variance for each variable. Two-way factorial analysis was obtained to determine the differences in perceptions between elementary and secondary participants. Discussion and findings are provided in Chapter V.

CHAPTER V

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

Successful school leadership, as reported by empirical research findings, creates conditions that support effective teaching and learning while building capacity for professional learning and change (Hallinger and Heck, 1996; Fullan, 2001; Leithwood and Jantzi, 2006; Robinson, Lloyd, and Rowe, 2008). Schools of the 21st century have become very complex organizations for principals to lead alone. Research on effective school practices indicates that shared leadership has a positive impact on school achievement (Leithwood & Jantzi, 2008; Mascall, Leithwood, Straus, & Sacks, 2008; Printy & Marks, 2006). The need to develop teacher leaders both within and outside their classrooms has never been this crucial (Barth, 2001). Transformational leadership behaviors are vital for principals to exhibit in order to create the necessary conditions for school improvement, including teacher leadership development.

The purpose of this study was to examine how much of the total variance of teacher leadership and teacher efficacy is accounted for or explained by the Principal's transformational behaviors as perceived by the teachers in a South Texas school district. In addition this study also examines the differences between elementary and secondary teachers' perceptions of their principals' transformational leadership behaviors.

Teachers' perceptions of their own principal's transformational leadership behaviors were analyzed and then measured against the individual teacher's own level of teacher leadership and teacher efficacy. The findings indicate that (1) teacher leadership development is a function

of the principal's transformational leadership behaviors; (2) teacher efficacy is a function of the principal's transformational leadership behaviors; and (3) there are no differences between the elementary and secondary teachers' perceptions about their principal's transformational leadership behaviors.

Discussion of Findings

Research Question 1: How much of the total variance of developmental focus, recognition, and environment as source of teacher leadership development may be attributed to the Principal's transformational leadership behaviors as perceived by teachers?

Results of this study indicated that 16% of the total variance of teachers' developmental focus as a source of their own leadership development was explained or accounted by their principals' transformational leadership practices of setting directions, 1% was explained by the principals' transformational leadership practices of redesigning the organization, while the rest of the total variance was explained by other factors not measured in this study. The most important Principal's transformational leadership behavior, as reported by teachers in this study, was holding high expectations. These results suggest that when principals have high expectation of their teachers, teachers in turn will be more likely to exhibit developmental focus behaviors. Additionally, the results of this study found that 31% of the total variance of teachers' recognition as leaders and 33% of the total variance of teachers' environment are explained by their principals' transformational leadership practices of redesigning the organization, including strengthening school culture and building collaborative structures.

Thus, results of this study found that principals' transformational leadership behaviors account for the teachers' developmental focus, recognition, and environment as source of teacher

leadership development in schools. Principals as transformational leaders increase the development of teacher leaders. Leithwood's (1994) model of transformational leadership includes eight dimensions of behaviors encompassing three main categories of leadership practice: redesigning the organization, setting directions, and developing people. However, findings of this study, which was conducted exclusively with teachers from a South Texas school district, did not recognize the three transformational leadership practices as proposed by Leithwood. Instead, teachers in this study recognized only two constructs: the construct of redesigning organization as the most important and relevant transformational leadership practice and the construct of setting directions as the second one in importance. The construct of redesign organization includes the specific behaviors of strengthening school culture and building collaborative structures. Setting directions includes the behaviors of developing a shared vision, building consensus for school goals, and holding high expectations. The construct of developing people including modeling behaviors, individualized support, and intellectual stimulation behaviors was either not recognized by the teachers in this study or clustered with the general practice of redesigning the organization. Although the factorial structure obtained in this study for the leadership dimensions differs from the one proposed by Leithwood (1994), it follows the same theoretical guidelines.

The findings of this study support previous research studies that suggest that the contribution of leadership to the development of a strong school culture is an essential component for developing the capacity of the organization and its members (Ross & Gray, 2006; Leithwood & Jantzi, 2006; Horn-Turpin, 2009). The data also supports the premises proposed by Katzenmeyer and Moller (2001), Darling-Hammond et al., (1995), and Silva et al., (2000), among other teacher leadership advocates, that instructional improvement in schools requires an

organizational culture that supports collaboration and continuous learning that recognizes teachers as creators and re-creators of school culture. This includes teachers as leaders both inside and outside the classroom.

The data indicated that teachers perceived their principals' transformational leadership behaviors from the setting directions dimension as relevant to the development of their own leadership, mainly to their developmental focus. The specific behaviors under the visioning dimension of the setting directions construct include developing a shared vision, building consensus, and holding high expectations. These findings are consistent with previous empirical research studies that concluded that the visioning dimensions of setting direction practices greatly contribute to the effect of transformational leadership (Mascall, Leithwood, Straus, & Sacks, 2008; Leithwood & Jantzi, 2005; Ross & Gray, 2006). However, although teachers in this study recognized the importance of mutual engagement around developing a shared vision and building consensus for school goals, they did not considered these as the most meaningful behaviors as reported by Leithwood (1994). The holding high expectation behavior on behalf of their principals is what teachers in this study considered the most valuable principal behavior in developing teachers' developmental focus as a source of leadership development. This is in line with Ross and Gray (2006) findings that teachers are motivated by goals that they find personally compelling, as well as challenging. Teachers will rise to the occasion when their principals have high performance expectations of them.

The results in this study indicated that principals influence teacher leadership development mainly through redesign organization practices, namely, building collaborative structures and strengthening school culture as well as holding high performance expectations, a setting-direction practice. Developing people practices, such as providing individualized support

and intellectual stimulation were recognized but were not considered significant influences on teacher leaders. The only behavior recognized by teachers in the study as relevant to their own leadership development, under the developing people leadership practices, was modeling leadership behaviors on behalf of their principal. These results differ from the ones reported by Leithwood (2012) after conducting a meta-analytic review of 79 unpublished dissertations about the nature of transformational school leadership. He reported that leaders influence teachers mainly through people developing practices while redesigning organization practices had a smaller but significant influence on teachers. This difference may be explained due to the fact that the construct of teacher leadership development is theoretically more aligned to the behaviors included in the redesign the organization leadership practices than it is to the developing people leadership behaviors. By fostering collaborative professional structures within the school, principals can untapped leadership potential in teachers, increasing the capacity of schools to meet the educational needs of the students and to improve student achievement (Bangs & Frost, 2012). Thus, the redesign organization practices of building collaborative structures and strengthening school culture represent the most ideal set of behaviors to develop teacher leaders.

Research Question 2: How much of the total variance of instructional strategies and classroom management as a source of teacher efficacy may be attributed to the Principal's transformational leadership behaviors as perceived by teachers?

Results of this study indicated that 10% of the total variance of teachers' classroom management as a source of self-efficacy is accounted or explained by their Principal's transformational leadership behaviors, mainly through the leadership practice of setting directions. Additionally, 8% of the teachers' instructional strategies as a source of self efficacy is

accounted or explained by their principals' transformational leadership practices, mainly through the leadership practice of setting directions. These findings suggest that transformational principals increase their teachers' classroom management and instructional leadership mainly through setting direction leadership practices including behaviors such as holding high performance expectations, building consensus for school goals, and developing a shared vision.

The findings in this study indicated that principals' transformational leadership behaviors contribute to the teachers' sense of self-efficacy as perceived by teachers. These findings support the research results reported by Nir and Kranot (2006), Hipp (1996), and Demir (2008) in which significant relationship between transformational leadership and teacher efficacy was reported. In their study with a sample of 755 teachers, Nir and Kranot (2006) found higher levels of teacher efficacy in those schools in which higher levels of transformational leadership were found. Findings of this study recognized only two of the three teacher efficacy dimensions identified by Tschannen-Moran and Hoy (2001). Efficacy in instructional strategies and efficacy in classroom management were the two dimensions resulting from the factor analysis in this study. Items in efficacy in student engagement loaded across both factors, but the loadings were very low.

The results in this study indicated that principals influence teacher efficacy mainly through setting direction practices, namely, holding high performance expectations, developing a shared vision, and building consensus for school goals. The data in this study also indicated that principals' transformational leadership behaviors have a greater impact on teachers' self efficacy in classroom management than on self efficacy in instructional strategies. This could be explained by the emphasis teachers place on classroom management as an important element in effective teaching.

Although the effects of transformational leadership were not as strong in teacher self efficacy as they were on teacher leadership they were still strong and significant, especially in the dimensions of efficacy in classroom management and efficacy in instructional strategies. These results support empirical research finding previously reported. Ross and Gray (2006) identified 20 studies providing evidence linking transformational leadership to teacher efficacy. Their findings found that transformational leadership practices consistently predicted teachers' willingness to improve their instructional practices. When teachers feel efficacious about their work, they are more creative and willing to exercise professional judgment about approaches to effective teaching and learning practices.

The data in this study indicate that most of the effects of transformational leadership on teacher efficacy are related to the setting direction practice including holding high expectations, developing a shared vision, and building consensus behaviors. The direct effect of redesign organizational practices was not as strong as the setting directions. This suggests that teachers develop a strong sense of efficacy when their principals include them in decision making and hold high expectations of them. This finding is consistent with previous studies. Demir (2008) reported findings that transformational leaders' high expectations enhances teachers' self efficacy by inspiring them to accomplish beyond what they felt was possible. These results suggest that by involving teachers in decision making and holding high expectations of them, transformational principals can increase teacher self-efficacy resulting in higher levels of creativity in problem solving situations.

Research Question 3: What are the differences in teachers' perceptions of principals' transformational leadership behaviors in elementary and secondary schools?

The findings of this study indicate no difference between elementary and secondary teachers' perception of their principals' transformational leadership behaviors. These results are consistent with Leithwood and Jantzi (2006) who reported that the effects of transformational leadership did not significantly differ between elementary and secondary schools or among school types.

Although the analysis of this data did not support a significant difference between the perceptions of elementary and secondary teachers with regards to their principals' transformational leadership practices, it did find a difference between the importance and relevance teachers place on the two main transformational practices identified in this study-redesign organization and setting directions. Teachers in this study considered the redesign organization dimension which includes strengthening school culture and building collaborative structures more important than the setting directions practices.

The findings of this study are in line with Leithwood and Jantzi (2006) conclusion concerning the interpretation of research findings on effective practices on school leadership. They stated that effective school leaders tend to enact the same basic leadership practices across schools but in a manner that is responsive to each particular context. Thus, although shaping the school's mission, a setting directions leadership practice, has been identified in the literatures as the most influential avenue on effective school leadership be it in elementary or secondary schools (Hallinger & Heck, 1996; Robinson et al., 2008; Leithwood & Duke, 1999; Marks & Printy, 2003), teachers in this study considered redesign organization practices more aligned to the specific transformational practices leaders should enact in their schools. These findings suggest that the redesign organization leadership practice is more relevant in the school context of the teachers in this study.

Conclusions

This study sought to examine how much of the total variance of teacher leadership and teacher efficacy is accounted for or explained by the Principal's transformational behaviors as perceived by the teachers in a South Texas school district. In addition this study also examined the differences between elementary and secondary teachers' perceptions of their principals' transformational leadership behaviors.

Based on the data analyses and the discussion of findings, the conclusions of this study are summarized as follows:

First, transformational leadership has a significant effect on teacher leadership development. In these changing times where a school's greatness is measured by state test scores, discussions of school leadership must not only take into account the practices and effects of leadership, but also the sources of leadership. As the results of this study indicate, transformational leadership practices can produce positive effects on teacher leadership development. The key to success is in creating ways for all school members to collectively participate in leadership roles. As suggested by Barth (2001) and Crowther et al., (2002) for change and school improvement to occur, it is no longer sufficient to view only the principal as the leader. Twenty-first century school administrators must consider ways to harness the benefits of quality leadership through the teachers they lead. Thus, teacher leadership is a critical component to changing the direction of school effectiveness (Darling-Hammond, 2010; Lieberman & Miller, 2004; Katzenmeyer & Moller, 2001). As concluded by this study, transformational principals must be willing to create environments of collaboration that provide time for teachers to develop their leadership skills while helping teachers realize their own leadership potential.

Second, transformational leadership has a significant effect on teacher efficacy. Findings of this study conclude that principals adopting transformational practices, especially the specific behaviors in the setting directions domain have a significant effect on teacher efficacy in their schools. These findings are in line with several studies that have investigated links between principal transformational leadership behavior and teacher efficacy (Ross & Gray, 2006; Mascall et al., 2008; Hipp, 1996). In all of these studies principals enacting transformational practices have higher teacher efficacy than principals with transactional or any other type of leadership practices. As suggested by this study, principals can strengthen teacher efficacy by holding high expectations, developing a shared vision, and involving them in the decision making processes.

Third, there is no significant difference in teachers' perceptions of principals' transformational leadership behaviors in elementary and secondary schools. The results of this study indicate that teachers in both elementary and secondary school share the same interpretation with regards to their principal's transformational leadership behaviors. These findings confirm and support Leithwood and Jantzi (2006) claims that effective school leaders display the same transformational leadership practices across school, but in a manner that is responsive to each particular setting.

Lastly, the results of this study provide considerable support for its central claim that transformational leadership practices on behalf of the school principals influence teacher leadership and teacher efficacy. The most powerful leadership practices identified by teachers in this study were those related to the categories of redesign organization (strengthen school culture and providing collaborative structures) and setting directions (developing a shared vision, building consensus, and holding high expectations). However, it is important to keep in mind

that the specific practices that leaders enact to create these school conditions may look quite different in different school settings.

Implications and Recommendations

The current demands of state and federal accountability have resulted in the increased interest to focus attention to school leadership practices that have a direct impact on school improvement. In the last decades, transformational leadership practices have been advocated as a productive approach towards school restructuring initiatives. Vast amount of research, both qualitative and quantitative, claim that transformational leadership behaviors are capable of improving school conditions and increasing the commitment and effort of the members toward the achievement of school goals (Leithwood & Sun, 2012). The findings of this study not only add supporting evidence for the positive effect transformational leadership has on school conditions but also highlight the significant effect principals' transformational leadership behaviors have on the variables of teacher leadership and teacher efficacy.

This study will further practitioners' understanding with regards to the effects of transformational leadership practices in schools. This study also confirms the need to adapt the transformational leadership practices as the ones proposed by Leithwood (1994) to the particular school context. It is important to clarify, though, that transformational leadership theory does not predict the behaviors of teachers resulting from the influence of their principals' transformational leadership practices. Based on this line of thought, an implication and recommendation for future research is to conceptualize leadership based on the practices that seem important across different models rather than being limited by a specific model of leadership. The results of this study, for instance, did not recognize the eight discrete dimension of transformational leadership

as proposed by Leithwood (1994). Instead, it identified redesign organization practices including strengthening school culture and providing collaborative structures as the most important, of the two dimensions, identified by teachers in this study. Thus, future research inquiry on the nature of transformational leadership in schools should be "practice specific."

Results of this study confirm the importance that teachers place on school culture and collaborative structures for their own leadership development and sense of efficacy. These findings have implications for school administrators. Principals must build collaborative structures to reap the benefits of teacher leadership and teacher efficacy. By building collaborative structures and a culture of shared leadership, Principals can develop teacher leadership which is essential to school improvement efforts (Barth, 2001).

This study also has implications for university teacher and principal preparation programs. Teachers should be trained and prepared to contribute to knowledge building in their schools and positively influence student achievement both within and outside their classrooms. Similarly, principals should be trained and equipped with transformational leadership practices to provide developmental support to teachers and to be able to create a school culture in which the capacity of teachers to lead is enhanced.

Discussion of school leadership must not only take into account the practices and effects of leadership, but also the sources of leadership. Future research should focus more directly on teacher leadership and its effects on student achievement. The most basic implications for future research in the domain of teacher leadership are to clearly define the targeted context of teacher leadership practice and to examine the paths of teacher leadership influence on student learning. The literature focused on teacher leadership is still mainly descriptive instead of explanatory.

This study was designed to measure the teachers' perceptions of their principal transformational leadership practices. A recommendation for future research is to expand this study to include principals' perception of their own transformational leadership behaviors that could result in a comparative study to compare the responses of teachers and principals.

This study was designed to be analyzed through quantitative methods which limited the opportunity for the researcher to explore teachers' responses more in depth. Designing a mixed method study that includes interviews or focus groups with the participants would allow the researcher to gain a more in-depth understanding of teachers' perceptions about their principal's leadership practices.

Lastly the purpose of this study was to examine how much of the total variance of teacher leadership and teacher efficacy is accounted for or explained by the principal's transformational leadership behaviors as perceive by teachers in a South Texas school district. One limitation of this study is that the data is representative of the geographical area in which the study was conducted, which limits its generalizability to other parts of the country. In addition, the majority of the respondents were Hispanic teachers, and therefore the results cannot be generalized to the population as a whole. Conducting the same study by using a national sample would produce results more reflective and with increased generalizability to the overall population.

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APPENDICES

APPENDIX A

SURVEY PERMISSIONS AND APPROVALS TO CONDUCT STUDY

PERMISSION TO USE NATURE OF LEADERSHIP SURVEY

April 25, 2012
3201 W. San Luis Circle,
Mission, Texas

Dear Socorro Espinoza,

You have my permission to use my survey entitled The Nature of School Leadership for your dissertation research. Good luck with your study.

Sincerely,

Kenneth Leithwood
Professor Emeritus
OISE/University of Toronto

PERMISSION TO USE TEACHER LEARDERSHIP SCHOOL SURVEY (TLSS)

From: mkatzen383@aol.com [mkatzen383@aol.com]
Sent: Thursday, April 12, 2012 11:49 AM
To: Espinoza, Socorro - Alvarez
Subject: Re: Consent to use TLSS

Dear Socorro,
Yes, we can arrange for your use of the TLSS. I am attaching the validity/reliability information for your use. I will need a description of your study. We can then proceed with a written agreement on its use. I will provide the paper/pencil version of TLSS for $1.00 per copy (special rate for grad students) or let me know if you wish to use it electronically. I do not provide it that way but we can arrange for its use for a lump sum payment depending on the # of copies you will use. Sorry for the delay in my response and good luck with your study.

Marilyn Katzenmeyer, EdD

-----Original Message-----
From: sespinoz <sespinoz@mcallenisd.net>
To: mkatzen383 <mkatzen383@aol.com>
Cc: millssj <millssj@utpa.edu>; sespinoz <sespinoz@mcallenisd.net>
Sent: Sun, Apr 1, 2012 9:44 pm
Subject: Consent to use TLSS

Dear Dr. Katzenmeyer,

I am a doctoral student at the University of Texas Pan-American in the Educational Leadership Program. For my dissertation topic I am studying the effects of transformational leadership on teacher leadership development and teacher efficacy in a South Texas school district.

I am writing to you to request permission to use the Teacher Leadership Scholl Survey (TLSS) as one of my survey instruments. Please reply to me in writing if you are willing to grant permission for this request.
Also, can you please advise me where to locate the most current information describing the validity and reliability constructs of this instrument.

If you have any questions about the doctoral program, myself, or the nature of my study, please do not hesitate to contact me. You may also contact my dissertation chairperson, Dr. S. Mills at millssj@utpa.edumillssj@utpa.edu (956) 292-7444.

Thank you for your consideration to my request.

Sincerely,
Socorro M. Espinoza
Educational leadership Doctoral Student

PERMISSION TO USE THE TEACHERS' SENSE OF EFFICACY SCALE (TSES)

THE OHIO STATE UNIVERSITY COLLEGE OF EDUCATION AND HUMAN ECOLOGY

ANITA WOOLFOLK HOY, PH.D.

PROFESSOR
PSYCHOLOGICAL STUDIES IN EDUCATION

Dear

You have my permission to use the *Teachers' Sense of Efficacy Scale* in your research. A copy of both the long and short forms of the instrument as well as scoring instructions can be found at:

http://www.coe.ohio-state.edu/ahoy/researchinstruments.htm

Best wishes in your work,

Anita Woolfolk Hoy

Anita Woolfolk Hoy, Ph.D.
Professor

COLLEGE OF EDUCATION
29 WEST WOODRUFF AVENUE
COLUMBUS, OHIO 43210-1177

WWW.COE.OHIO-STATE.EDU/AHOY

PHONE 614-292-3774
FAX 614-292-7900
HOY.17@OSU.EDU

IRB APPROVAL

RE: IRB #2012-090-09
Kimberly Fernandez [kafernandez@utpa.edu]
Sent: Monday, October 22, 2012 3:20 PM
To: smespinoza@broncs.utpa.edu
Cc: IRB [IRB@utpa.edu]

Socorro,

Please attach an electronic copy of your consent form to this email (word document) so that I can stamp it with the IRB stamp of approval.

Thank You,

Kimberly Fernandez

From: Patricia Canales
Sent: Monday, October 15, 2012 1:23 PM
To: smespinoza@broncs.utpa.edu
Cc: Shirley Mills; Kimberly Fernandez
Subject: IRB #2012-090-09

Dear Socorro – as we discussed earlier, the IRB proposal above is approved with no contingencies (Expedited category 7). Ms. Kimberly Fernandez will send you a pdf of your informed consent form with the official IRB approval stamped on it. Please use only this consent form when recruiting. As I mentioned in our phone conversation, you did a fine job submitting the proposal – it was well written, complete, and included all necessary documents so it made reviewing so much easier – a big thank you for that.
Congratulations and good luck with your research!
Best regards,
Dr. Gonzales

SUPERINTENDENT'S LETTER OF PERMISSION TO CONDUCT STUDY

INDEPENDENT SCHOOL DISTRICT

DEBBIE CRANE ALISEDA, Secretary
JOSEPH M. CAPORUSSO, Member
JAVIER FARIAS, Member
SAM SALDIVAR JR., Member
DANIEL D. VELA, Member

JAMES J. PONCE, Ed. D., Superintendent

September 20, 2012

Mrs. Socorro M. Espinoza
3201 West San Luis Circle
Mission, Texas 78572

Dear Mrs. Espinoza:

This letter grants you permission to survey the teachers of the district for your doctoral dissertation entitled, *The Effects of Transformational Leadership Behaviors on the Factors of Teacher Leadership and Teacher Efficacy.*

To coordinate the collection of data and the protocol for administering the survey, I recommend that you contact the Principals directly.

Once your research is finalized, I would appreciate a summary report of your findings. I wish you well.

Respectfully,

James Ponce, Ed.D.
Superintendent

Fulfilling Our Promise

2000 NORTH 23rd STREET • McALLEN, TEXAS 78501-6126 • (956) 618-6027 • FAX (956) 686-8362
james.ponce@mcallenisd.net

APPENDIX B

PARTICIPANT INFORMED CONSENT

IRB #2012-090-09

INFORMED CONSENT FORM

ANONYMOUS SELF-REPORT SURVEY

Study title: The Effects of Principals' Transformational Leadership Behaviors on Teacher Leadership Development and Teacher Self-Efficacy.

This research survey is being conducted by Socorro M. Espinoza, doctoral student from the University of Texas – Pan American/UTPA. I am conducting a research study about the effects of Principals' behaviors on teacher leadership development and teachers sense of self-efficacy. The following survey should take about 30 minutes to complete.

If you would prefer not to participate, simply return the blank survey. Your responses are anonymous; you should not include any identifying information on this survey. I ask that you try to answer all questions. However, if there are any questions that you would prefer to skip, simply leave the answer blank. You must be at least 18 years old to participate.

Researcher contact information:

Name: Socorro M. Espinoza
Title: Doctoral Student
Dept: Educational Leadership
The University of Texas-Pan American
Phone: (956) 458-5896
Email: smespinoza@broncs.utpa.edu

This research has been reviewed and approved by the Institutional Review Board for Human Subjects Protection (IRB). If you have any questions about your rights as a participant, or if you feel that your rights as a participant were not adequately met by the researcher, please contact the IRB at 956.665.2889 or irb@utpa.edu. You are also invited to provide anonymous feedback to the IRB by visiting www.utpa.edu/IRBfeedback.

Please keep this sheet for your reference.

APPENDIX C

EXPLORATORY STATISTICS

STEM-AND-LEAF PLOTS AND BOX AND WHISKER DISPLAYS

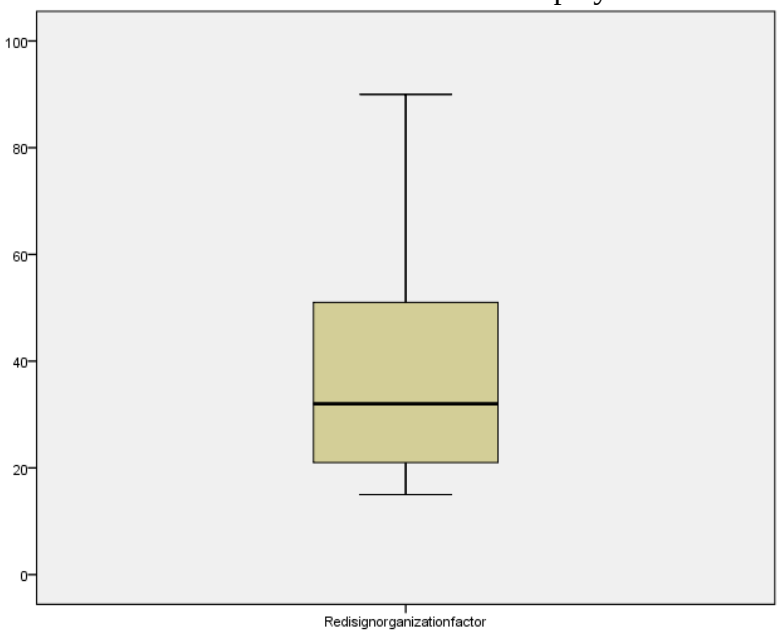
Redesign Organization Factor: Stem-and-Leaf Plot

Frequency Stem & Leaf

```
  .00      1 .
 61.00      1 . 55555555555555555555555555555555566666677777777777777888899999
 27.00      2 . 000000111111122223333334444
 25.00      2 . 55556666777777777888899999
 45.00      3 . 000000000000000011111222222222223333344444444
 15.00      3 . 555777777778888
 14.00      4 . 00001122222344
 22.00      4 . 5555555555677778888999
 17.00      5 . 01112222233334444
  9.00      5 . 566777778
  7.00      6 . 0023444
 15.00      6 . 557788888888999
  8.00      7 . 11222244
  5.00      7 . 56778
  6.00      8 . 112234
  3.00      8 . 779
  4.00      9 . 0000
```

Stem width: 10.00
Each leaf: 1 case(s)

Box-and-Whisker Display



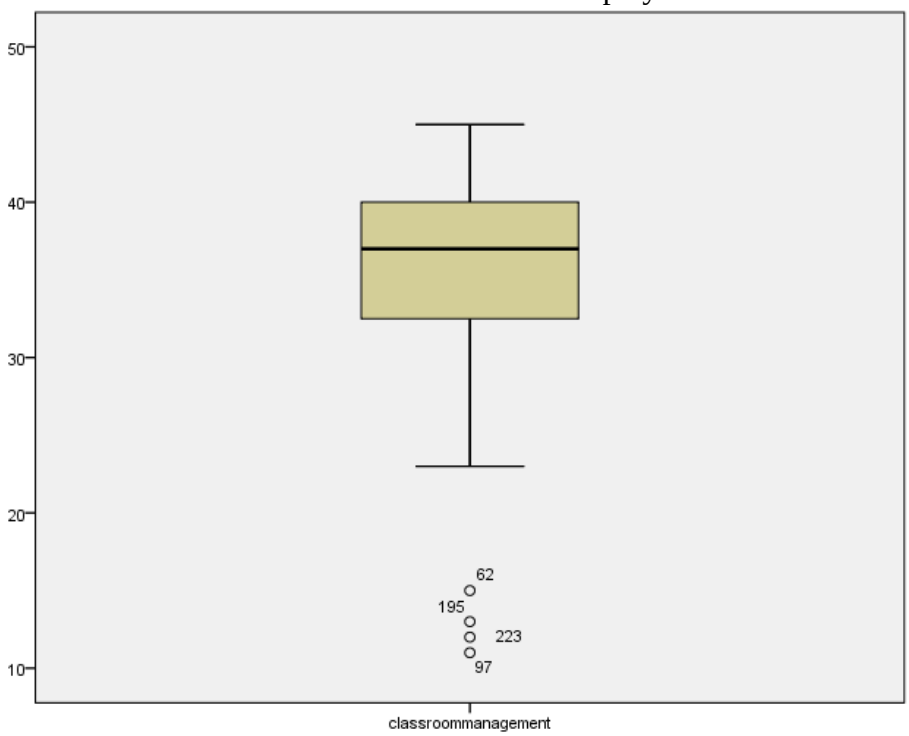
Classroom Management: Stem-and-Leaf Plot

Frequency Stem & Leaf

4.00 Extremes (=<15)
1.00 2 . 3
7.00 2 . 5555555
10.00 2 . 6667777777
17.00 2 . 88888888999999999
19.00 3 . 0000000001111111111
25.00 3 . 2222222222222333333333333
43.00 3 . 4444444444444444455555555555555555555555555
37.00 3 . 6666666666677777777777777777777777777
34.00 3 . 8888888888888888888889999999999999
39.00 4 . 000000000000000000000011111111111111111
27.00 4 . 2222222222222222233333333333
20.00 4 . 44455555555555555555

Stem width: 10.00
Each leaf: 1 case(s)

Box-and-Whisker Display



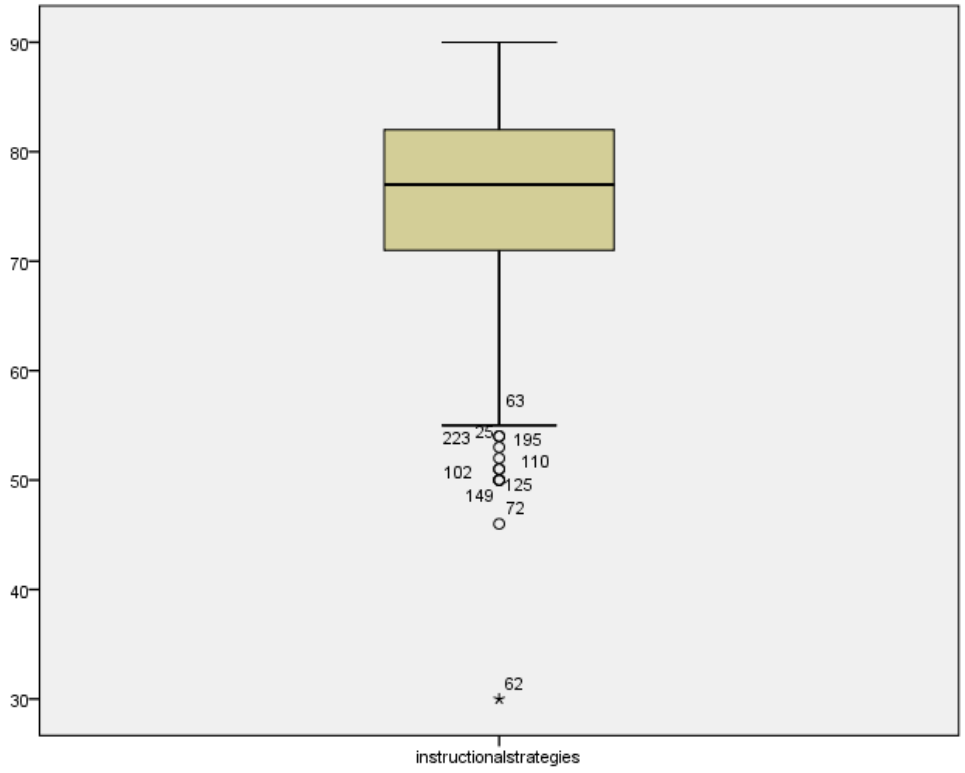
Instructional Strategies: Stem-and-Leaf Plot

Frequency Stem & Leaf

11.00 Extremes (=<54)
.00 5 .
7.00 5 . 5567899
17.00 6 . 00001111222223444
21.00 6 . 555566677788888899999
57.00 7 . 000000000001111111111112222222222333333333444444444444
67.00 7 .
5555555556666666666666667777777777777777777777888888888999999999
53.00 8 . 00000000000000011111111111222222222222222223333344444
30.00 8 . 555555555666667777788888999999
20.00 9 . 00000000000000000000

Stem width: 10.00
Each leaf: 1 case(s)

Box-and-Whisker Display



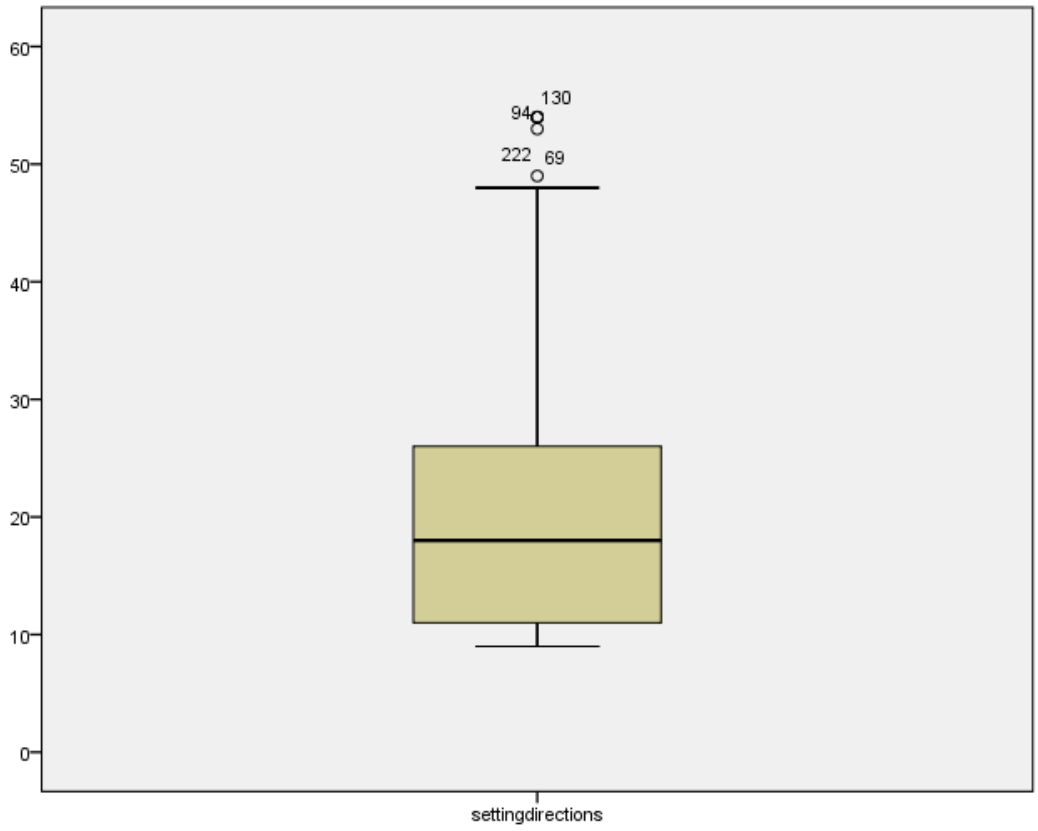
Setting Directions: Stem-and-Leaf Plot

Frequency Stem & Leaf

39.00 0 . 999999999999999999999999999999999999
65.00 1 .
00000000000000000011111111111111112222222233333333334444444444
67.00 1 .
55555555556666666777777777788888888888888888888899999999999999999
34.00 2 . 0000000000011111111112222233334444
42.00 2 . 555555666666666777777777777888888889999999
20.00 3 . 00000011122222222334
6.00 3 . 555779
1.00 4 . 3
3.00 4 . 558
6.00 Extremes (>=49)

Stem width: 10.00
Each leaf: 1 case(s)

Box-and-Whisker Display



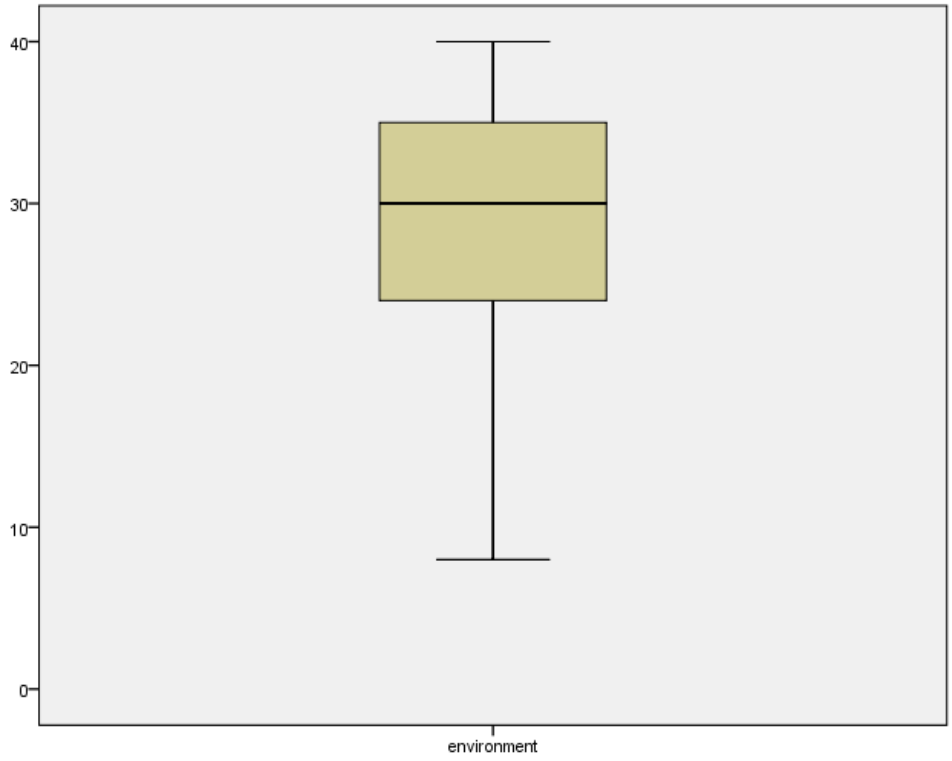
Environment: Stem-and-Leaf Plot

Frequency Stem & Leaf

3.00 0 . 889
6.00 1 . 112444
23.00 1 . 5566666667777778888999
47.00 2 . 00000001111222222333333344444444444444444444
57.00 2 . 55555555555566666667777777778888888888888888999999999999
73.00 3 .
00000000000001111111111112222222222222222222223333333333344444444444
48.00 3 . 555555555556666666666677777777788888888999999999
26.00 4 . 00000000000000000000000000

Stem width: 10.00
Each leaf: 1 case(s)

Box-and-Whisker Display



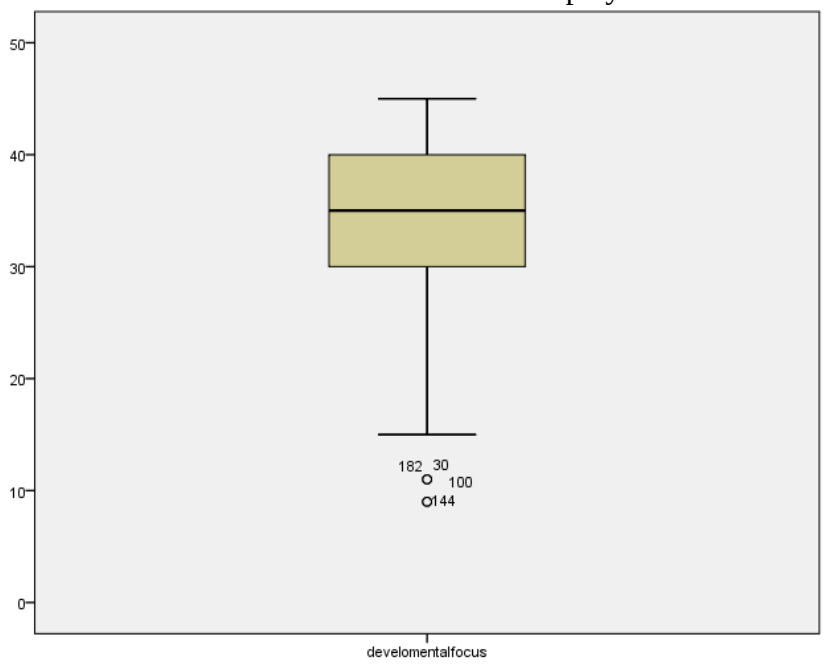
Developmental Focus Stem-and-Leaf Plot

Frequency Stem & Leaf

```
  4.00 Extremes    (=<11)
  1.00       1 .  5
  1.00       1 .  7
  4.00       1 .  8889
  5.00       2 .  00001
  7.00       2 .  2222333
  7.00       2 .  4455555
 20.00       2 .  66666777777777777777
 21.00       2 .  888888888889999999999
 18.00       3 .  000000001111111111
 26.00       3 .  22222222333333333333333333
 38.00       3 .  44444444444444444444555555555555555555
 34.00       3 .  66666666666666666677777777777777777777
 21.00       3 .  888888888888888889999
 14.00       4 .  00000001111111
 24.00       4 .  22222222222333333333333
 38.00       4 .  44444444444455555555555555555555555555
```

Stem width: 10.00
Each leaf: 1 case(s)

Box-and-Whisker Display



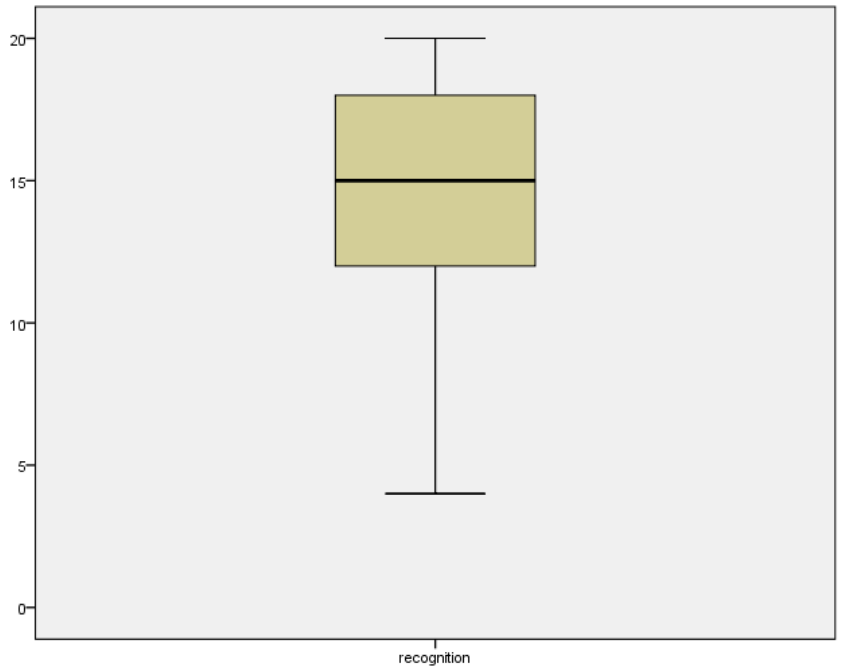
Recognition: Stem-and-Leaf Plot

Frequency Stem & Leaf

4.00	4 . 0000
2.00	5 . 00
5.00	6 . 00000
8.00	7 . 00000000
7.00	8 . 0000000
10.00	9 . 0000000000
7.00	10 . 0000000
14.00	11 . 00000000000000
28.00	12 . 0000000000000000000000000000
16.00	13 . 0000000000000000
26.00	14 . 00000000000000000000000000
25.00	15 . 0000000000000000000000000
29.00	16 . 00000000000000000000000000000
25.00	17 . 0000000000000000000000000
23.00	18 . 00000000000000000000000
17.00	19 . 00000000000000000
37.00	20 . 0000000000000000000000000000000000000000

Stem width: 1.00
Each leaf: 1 case(s)

Box-and-Whisker Display



BIOGRAPHICAL SKETCH

Socorro M. Espinoza was born September 9, 1961 in Chihuahua, Chih., Mexico, the daughter of Baldomero and Maria Meraz. She graduated from high school in 1980 and attended the Universidad Autónoma de Chihuahua. She graduated with honors in 1984 with a Bachelor of Science in Pedagogy. She received her Master in Guidance and Counseling from the University of Texas Pan-American in 2005. She continued her studies receiving certifications in school counseling, principalship, and superintendent. Additionally, she received her license as a Professional Counselor (LPC) from the state of Texas. During her fourteen years of experience in education, she has served as elementary teacher, high school counselor, high school assistant principal, dean of instruction, and school principal. Currently she is the principal of an elementary school in the McAllen Independent School District (MISD). Mrs. Espinoza completed the requirements for the Doctor of Education degree at the University of Texas Pan American in May of 2013.

Permanent Address: 3201 W. San Luis Circle, Mission, TX 78573