

**THE INFLUENCE OF THE SUPERINTENDENT OF SCHOOLS
ON STUDENT ACADEMIC PERFORMANCE**

A Dissertation

by

JEFFREY MARK HANKS

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

May 2010

Major Subject: Educational Administration

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Approved by:

Chair of Committee,
Committee Members,

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John R. Hoyle
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ABSTRACT

The Influence of the Superintendent of Schools on Student
Academic Performance. (May 2010)

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Chair of Advisory Committee: Dr. John R. Hoyle

The purpose of this study was to model, through structural equation modeling techniques, the relationships among superintendent practices of collaborative goal-setting , establishment of nonnegotiable goals for achievement and instruction, board alignment with and support of district goals, monitoring goals for achievement and instruction, use of resources to support the goals for achievement and instruction, defined autonomy, and student achievement.

In this study, 300 Texas public school superintendents responded to a survey that measured their perception of superintendent practices and responsibilities. Data was collected and analyzed using SPSS statistical software. A confirmatory factor analysis was conducted, and a structural equation model was constructed in EQS. Loadings for each path in the model were analyzed.

A CFA analysis, which was intended to test the measurement model of superintendent leadership practices, was conducted. A 50-item survey which was hypothesized to measure the six dimensions of leadership practices was subjected to a

CFA. Results indicated that a two-factor structure model has significantly better data-model fit compared with the originally hypothesized six-factor model. A structural equation model was constructed based on the two-factor model and relationships between each latent variable and student performance were analyzed. Results of this study did not reveal a significant relationship between the latent constructs and student performance, as measured by the leadership practices and responsibilities perceived by participating superintendents and the Texas Assessment of Knowledge and Skills, a criterion referenced test used in Texas to assess primary and secondary student skills in reading, writing, mathematics, science, and social studies.

Research articulates the role and responsibilities of the superintendent as the educational leader of a school district with evidence regarding effective leadership skills within the context of expected job tasks. Research substantiates that when superintendents effectively address specific responsibilities they can have a profound, positive impact on student achievement. Focusing on the implications of the Texas accountability system as a means of defining school performance and the need to evaluate the non-discernable aspects of superintendent leadership, this quantitative study sought to examine the relationship between latent constructs of superintendent leadership and academic achievement.

DEDICATION

There is no doubt that I would not have been successful in this endeavor had it not been for my wife Maxine Hanks. She has encouraged, supported, pushed and shoved me through the doctoral program, all with a love and grace unparalleled. Thank you Max for the encouragement you provided and for all of the sacrifices you made to allow me this opportunity. I love you for all that you do for us as a family.

The first Aggie in the family was our son Taylor Hanks. It was his decision to come to Aggieland where we all fell in love with the Aggie way of life. Thank you for exposing me to Texas A&M University and for putting up with me as a fellow student. I have cherished every minute of being “Joe College” and hope I did not embarrass you too much. I look forward to graduating with you and the class of 2010. Know that I love you and believe in you and am eager to see what the future holds for you.

Finally, I want to thank my mother and father, Clara Ruth and Don Hanks. What an awesome set of parents. My father, Don Hanks, has been a public school teacher and coach for over 50 years. If ever there was a hero, my dad is one. I think of the influence that he has had on countless young people during his lifetime and can only hope that I will be able to touch in a meaningful way half of the number of young people that he has. My mother, Clara Ruth Hanks, may deserve the most credit for this accomplishment. She always believed in my abilities and encouraged me to reach for the stars regardless of what the task was.

ACKNOWLEDGEMENTS

A consistent theme that I encountered as I read other dissertations in preparation for writing this document is that no dissertation is ever the work of one individual. Throughout my coursework and at each stage of the development of this dissertation, I realized just how fortunate I was to be guided, directed, and assisted by a talented and esteemed group of individuals at Texas A&M University.

First and foremost, I want to thank the members of my dissertation committee for their encouragement and counsel in guiding the development of this study. To Dr. John R. Hoyle, I owe a tremendous debt of gratitude for serving as my committee chairman, for providing me guidance throughout my doctoral studies, and for allowing me to be one of your final students to complete under your guidance prior to your retirement. Dr. Hoyle is a relentless force for good in a world with few heroes. I am awed by the ripple effect of his influence on all of the school administrators he has touched, and all that they have touched. And the wave carries on. Dr. Hoyle epitomizes Albert Pine's observation about the humility of greatness, "What we do for ourselves dies with us. What we do for others and the world remains and is immortal."

To Dr. Virginia Collier, there is not a finer, more gracious lady that represents the educational administration practitioners of the state. I thank you for providing focus and clarity to the process and to this dissertation. I appreciate the perspective that you have brought to my study. You have consistently gone out of your way to accommodate your students, and I am no exception. Thank you for all that you have done for me.

To Dr. Mario Torres, who helped focus my thinking at times during the doctoral process when things tended to get a little fuzzy. You have a great talent for getting to the point, all in an effort to get the best out of your students. I appreciate all that you have done for me throughout this process.

To Dr. Tim Murphy, I hope you know how much I enjoyed having you as an instructor and how much I value your insight. I thank you for agreeing to serve as a member of my dissertation committee. You have an innate talent for finding good in most all things, and I needed that from time to time during this study. Thank you for helping me find the corn in the succotash.

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CHAPTER I

INTRODUCTION

School reform has been a significant focus in the state of Texas for a number of years. A system of increasing state educational standards has been instituted to improve student achievement for all students across the state. Mandatory standardized testing has been implemented to assess student learning and schools have been ranked according to the results of the standardized tests. Awards and penalties have been established to reward those schools that show improvement, and to penalize those schools that do not. Schools that do not meet the state achievement goals, as measured by student performance on the Texas Assessment of Knowledge and Skills (TAKS) or the federal Adequate Yearly Progress (AYP) standard, have been threatened with embarrassment, or worse yet, takeover by the state. These possible sanctions have forced school districts to focus on leadership to institute the necessary changes to meet the standards. Other than an emphasis on increasing standardized test scores, little direction has been given by legislation to train district leaders or to identify individuals with qualities for leadership that could support school improvement.

This dissertation follows the style of the *Journal of Educational Research*.

Every person who pays school taxes has some view of what the job of the superintendent should be. Some see the superintendent as the benevolent parent figure who is the guardian of school culture and traditions (Houston, 2007). Many see the superintendent as the person to blame for a myriad of things which might go wrong in the district, or the person to resolve or mediate disputes between parents and individual school principals. Still others may see the superintendent as the CEO of a major corporation who sends out sharply worded memorandums from the central office but is seldom seen visiting individual schools. Former U.S. Secretary of Education William Bennett saw the superintendent as a member of the “blob”, or “bloated educational bureaucracy”, which he asserted “is made up of people in the education system who work outside of classrooms, soaking up resources and resisting reform without contributing to student achievement” (Walker, 1987). Mr. Bennett’s statement seems to indicate that the superintendent has little or no significant impact upon classroom instruction and thus no impact upon student achievement.

Superintendents must not only lead the district in all matters financial, ensure school safety, and act as the school spokesperson; this person must also play a major role in academic improvement. Any school board that plans to improve student achievement in all its schools must hire a superintendent who will be very involved in the district’s instructional program (Cuban, 1984).

The urgent drive for academic improvement in public schools began with the launch of Sputnik I by the Russian government in October of 1957. Sputnik created a political furor which changed the direction of education in our nation, and focused the

attention of all Americans on the national importance of our educational system. The immediate demand for students with a strong math and science background produced pressure on the legislature to create laws which would make us competitive on a global level, not only for our pride, but also for our future safety. Growing criticism of public education spawned by Sputnik created a negative impact on the public perception of the effectiveness and professionalism of superintendents (Houston, 2007).

In the early 1980's a series of reports emerged that focused on the need for school reform and higher standards and expectations for education for excellence (Houston, 2007). In April of 1983, a report by Ronald Reagan's National Commission on Excellence in Education warned that our nation was being threatened by "a rising tide of mediocrity." The report titled *A Nation at Risk* went on to state, "If an unfriendly foreign power had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war. As it stands, we have allowed this to happen to ourselves. We have even squandered the gains in student achievement made in the wake of the Sputnik challenge. Moreover, we have dismantled essential support systems which helped make those gains possible. We have, in effect, been committing an act of unthinking, unilateral educational disarmament (U.S. Department of Education, 1983, p.1). Again widespread concern renewed the cry for academic improvement in the nation's public schools. The public was in a quandary as to who to turn to as a leader to guide education to a higher level of achievement.

On January 8, 2002, President George W. Bush signed into law the latest version of the Elementary and Secondary Education Act (ESEA), the federal No Child Left

Behind legislation (NCLB). NCLB is wide sweeping federal legislation which provides additional funding for schools in areas with high rates of poverty in an effort to level the playing field between wealthy and poor districts. The law attempts to help schools improve by focusing on accountability for results, freedom for states and communities, proven education methods, and choices for parents (U.S. Department of Education, 2002).

Increased accountability for advancing student academic achievement every year has created the pressure for improvement, and other components of NCLB have provided the support for superintendents and schools to improve. While it seems at this time in history that academic improvement is being made by districts nationwide, certain aspects of NCLB have proven controversial since the time it was signed into law (Lane & Baker, 2006). A higher level of accountability is required under NCLB and punitive sanctions are in place to force compliance of individual schools and districts. Community stakeholders and school boards have turned to their superintendents to keep districts on track and avoid becoming a target of school improvement sanctions (Lashway, 2002).

Statement of the Problem

It is generally accepted that the principal is the instructional leader of his or her school (Marzano, Waters, & McNulty, 2005). For this reason, school improvement efforts have in the past often been focused at the individual school level. It is not uncommon to find a district with one or more schools performing at high levels of student achievement while at the same time having one or more schools performing at

much lower levels. Much research is available concerning the role of the school principal as the academic leader and as the key player in student achievement, but more research needs to be done on the importance of the superintendent's ability to influence student achievement and the methods proven most effective in accomplishing that goal. Effective superintendent leadership can prove critical to setting the stage by creating an environment conducive to excellence which helps principals to stay focused on academics. Superintendents who effectively emphasize certain leadership responsibilities can provide necessary pressure and support to keep all schools in their district on track with academic goals (Hall & Hord, 1987).

School districts are now being held accountable by No Child Left Behind (NCLB) legislation which requires that every school within the district meet Adequate Yearly Progress (AYP) annually. NCLB has stipulated that all students will score proficient or advanced on state benchmark tests by 2014. This requirement has caused tremendous pressure for academic improvement in states around the nation. The emphasis of NCLB on each individual school makes it imperative that academic improvement is uniformly fostered, and the superintendent is in an ideal position as the head of the central office to create and implement a systematic improvement plan. A district is only as effective as its weakest school, but a superintendent's intervention can raise awareness and implement techniques to affect major changes in weaker schools within the district. Islands of excellence can be created by particularly strong and effective principals; however, the individual principals are without the ability to materially impact student achievement in other schools within the district. The

superintendent's influence reaches all schools directly and through their work with principals who are influenced by the superintendent's academic leadership. The burden of accountability has shifted from the principal at the school level to the superintendent at the district level (Sayre, 2007).

Heightened demands by the public for school accountability and student performance, greater student diversity, teacher and principal shortages, special interest groups, deteriorating school facilities and increasing time demands have created a leadership crisis in Texas public schools (Hoyle, 2002). Improving student performance on the Texas Assessment of Knowledge and Skills (TAKS) begins with the superintendent and is passed down to each principal, counselor and teacher, creating a more intense learning environment (Hoyle, 2002). Cuban (1984) writes that school districts are unlikely to create higher student achievement in the absence of superintendents who are highly involved in the district's instructional program.

Although the importance of the superintendent's role as instructional leader warrants more investigation, much of the former and current research has been directed toward the principal and his or her impact on student achievement. Little information seems to be available in the way of studies and research involving the superintendent as the leader of school improvement (Schlechty, 1986). One study laments, "Whether or not superintendents can measurably affect student achievement has not been the subject of extensive research" (Glass, Bjork and Brunner, 2000, p. 62). In the 1980's most research and reform initiatives seemed to focus primarily on student learning, teacher professionalism, and decentralization of the school hierarchy (Castagnola, 2005). In

recent years advocates of district-led strategies have complained about a shortage of empirical studies on how school system leadership may affect student achievement (Archer, 2006). Research is available which acknowledges the changing role of the district superintendent from a focus on management to a focus on student achievement (Murphy, 1994). Additional studies explore the impact of board/superintendent relations and how student achievement is impacted. Only a few empirical studies on the instructional leadership role of superintendents have been published (Castagnola, 2005).

The scarcity of information concerning the ways in which superintendents impact student achievement by his or her daily decisions and actions cries out for further investigation. A recent working paper including a meta-analysis of twenty-seven articles conducted by Mid-continent Research for Education and Learning (McREL) indicates that a correlation of .25 exists between principal leadership and student achievement. The same study states that superintendents who effectively implement five specific leadership responsibilities have an impact on student achievement which correlates at .24, only one hundredth of a percent less (Waters & Marzano, 2006). These findings suggest untapped potential for superintendents to lead their schools to greater academic achievement and provide specific areas of leadership which appear to be most effective. As a result of the small statistical relationship, questions are raised by superintendent practitioners and educational leadership programs across the nation regarding whether or not Waters and Marzano's (2006) research substantiated this influence.

Purpose of the Study

The purpose of this study is to determine the strength of relationship between superintendent ratings of their use of practices and emphasis of identified responsibilities (Waters & Marzano, 2006) when contrasted with indicators of student achievement as measured by the Texas Education Agency's accountability rating system in Texas school districts. This study proposed to challenge the research of Waters and Marzano (2006), and either prove or disprove the relationships established in their study between the superintendent practices of: collaborative goal setting, establishment of nonnegotiable goals for achievement and instruction, board alignment to goals, monitoring goals for achievement and instruction, ensuring resources are provided to support the goals for achievement and instruction, defined autonomy and student achievement.

Mid-continent Research for Education and Learning (McREL) conducted a meta-analysis examining results from 27 studies conducted since 1970 that used quantitative methods to study the influence of school district leaders on student performance. This meta-analysis revealed a significant correlation between district leadership and student achievement. Altogether, these studies involved 2,817 districts and the achievement scores of 3.4 million students (Waters & Marzano, 2006). The McREL study boasts of being the "largest-ever" compilation of research on superintendents.

All Texas public school districts were identified for the study. Conclusions were made as to the strength of relationship between the superintendent and student performance in the district as measured by accountability performance ratings assigned

by Texas Education Agency. Performance ratings were identified by the Academic Excellence Indicator System (AEIS) used by the Texas Education Agency. Schools are rated as exemplary, recognized, academically acceptable, or academically unacceptable.

This study tested McREL's findings as to the impact of the five stated leadership responsibilities on student achievement plus the additional construct of defined autonomy by measuring the survey responses of Texas superintendents against state accountability test scores.

Research Questions

This study was guided by the following research questions:

1. What relationships exist between student achievement as measured by the Texas school accountability rating system and the superintendent's valuing of collaborative goal setting?
2. What relationships exist between student achievement as measured by the Texas school accountability rating system and the superintendent's valuing of nonnegotiable goals for achievement and instruction?
3. What relationships exist between student achievement as measured by the Texas school accountability rating system and the superintendent's valuing of Board of Trustee alignment and support of district goals?
4. What relationships exist between student achievement as measured by the Texas school accountability rating system and the superintendent's valuing of monitoring goals for achievement and instruction?

5. What relationships exist between student achievement as measured by the Texas school accountability rating system and the superintendent's valuing of use of resources to support achievement and instruction goals?
6. What relationships exist between student achievement as measured by the Texas school accountability rating system and the superintendent's valuing of defined autonomy?

Significance of the Study

There is an ongoing trend of fewer and fewer qualified candidates for the position of superintendent of schools, not only in Texas, but across the nation as well. Search consultants, university professors, and various state agencies indicate that the top position in public schools is no longer attracting an ample number of qualified candidates. This lack of qualified applicants has been termed a "serious crisis in American education" by superintendents who participated in a national survey in 2000 (Hoyle, 2002, p.7). For many years, the superintendency has been seen as a vital role for the success of education. These esteemed educators have been viewed as dedicated public servants charged with the responsibility of providing the best possible education for the children they serve. Along with this tremendous responsibility, school superintendents have been given the respect they deserve by members of their particular communities. Those who aspired to fill the role of superintendent were plentiful, primarily because of the challenges of the job, the compensation packages, and the status in their community that the position provided them (Hoyle, 2002).

That was then and this is now. The respect for superintendents has been systematically eroded as the job has taken on added challenges. These challenges include an increasingly diverse and growing student population, a need to be politically wise and to have the ability to manage conflict, not to mention the ever increasing pressures of students performing well on state assessments. All of these challenges have taken their toll on the superintendency (Hoyle, 2002). The role of the superintendent has evolved over the years to include a strong expectation by stakeholders that he or she be at the forefront of efforts concerning student achievement. Although much has been written about the principal's role in student achievement, few studies have addressed the issue of the superintendent's role (Murphy, 1990). Very little research is available concerning the roles of superintendents and exactly how they influence student achievement (Johnson, 1996).

Many studies exist regarding leadership characteristics, but few studies have been conducted regarding perceptions by superintendents of their practice and the relationship to student performance. This study provided useful feedback on leadership practices as exhibited by the participating superintendents. This study added to the body of knowledge concerning the ability of superintendents to impact student achievement. Moreover, the results reveal which individual responsibilities have the strongest correlation with improved student achievement as measured by the Texas accountability system. If schools are expected to rise to a new standard of providing "high levels of learning for all students," then all persons, including the superintendent, must become active team members in achieving this goal (DuFour, 2004, p. 15).

Findings from this study may provide guidance to institutions of higher learning as they plan the curriculum which will be used in preparing future administrators for district level leadership positions. Finally, this study offers suggestions for practicing superintendents to improve their current leadership methods in such a way as to have a greater impact on student achievement.

Limitations

This study was limited to the information and data acquired from a review of the literature, student performance data and the survey instrument. In addition the study was limited by Texas superintendent's ratings of their use of the following leadership responsibilities identified by McREL: (1) collaborative process for goal-setting; (2) establishment of nonnegotiable goals for achievement and instruction; (3) board alignment and support of district goals; (4) monitoring goals for achievement and instruction; (5) use of resources to support the goals for achievement and instruction goals; and (6) defined autonomy. The study was further limited by the fact that respondents to the survey instrument are participating on a voluntary basis. The results could be skewed if several schools of a particular demographic mix choose to not participate. Additionally there may be factors other than the six responsibilities included in the survey for a superintendent to influence student achievement; however this study measured only the correlation of the listed responsibilities. Correlations do not represent a causal relationship.

Delimitations

This study was restricted to the total population of superintendents in the state of Texas. The survey was based upon six identified responsibilities with accompanying activities developed by Mid Continent Regional Educational Laboratory (McREL). Because NCLB requires each state to develop its own benchmark test, I chose to measure only Texas correlations because no national standard is currently available.

Definition of Terms

The intent of the following definition of terms is to provide clarity to the operational definitions utilized throughout this course of study.

Accountability Ratings: Each campus and school district in the state of Texas annually receives a rating assigned through the accountability system process. Districts and campuses are evaluated based on student performance on the Texas Assessment of Knowledge and Skills, completion rate, and annual dropout rate. The Texas Education Agency's Accountability Manual identifies the requirements for each rating category. From the 2008 Accountability Manual (TEA, 2008a), an exemplary rating means that for every subject tested, at least 90% of the tested students achieved a passing standard on the test. A recognized rating indicates that for each subject, at least 75% of the tested students passed the test. An academically acceptable rating equates to at least 70% of the students passing the English language arts/reading component; writing and social studies exams required at least 65% of the students tested to pass the test; 50% of the students passing the mathematics assessment; and at least a 45% passing rate on the science test. Student performance that falls below the academically acceptable standard in any subject

area results in an academically unacceptable rating for the campus or the district. Performance is evaluated for All Students and the following student groups: African American, Hispanic, White, and Economically Disadvantaged.

Academic Excellence Indicator System (AEIS): The Academic Excellence Indicator System (AEIS) pulls together a wide range of information on the performance of students in each school and district in Texas every year. This information is put into the annual AEIS reports (TEA, 2008b), which are available each year in the fall. The AEIS Report is the primary medium for communicating school performance in Texas. The performance indicators for 2007-2008 are found in the Accountability Manual (TEA, 2008a) and are shown in Table 1.

Adequate Yearly Progress: Under the accountability provisions in the No Child Left Behind (NCLB) Act, all public school campuses, school districts, and the state are evaluated for Adequate Yearly Progress (AYP). Districts, campuses, and the state are required to meet AYP criteria on three measures: Reading/Language Arts, Mathematics, and either Graduation Rate, for high schools and districts, or Attendance Rate for elementary and middle/junior high schools. If a campus, district, or state that is receiving Title I, Part A funds fails to meet AYP for two consecutive years, that campus, district, or state is subject to certain requirements such as offering supplemental education services, offering school choice, and/or taking corrective actions (TEA, 2008c).

TABLE 1. Requirements for Accountability Rating Category

	Academically Acceptable	Recognized	Exemplary
Base Indicators			
TAKS (2007-08) <ul style="list-style-type: none"> • <i>All students and each student group meeting minimum size:</i> • African American • Hispanic • White • Econ. Disadv. 	Meets each standard: <ul style="list-style-type: none"> • Reading/ELA... 70% • Writing 65% • Social Studies 65% • Mathematics 50% • Science 45% or Meets Required Improvement	Meets 75% standard for each subject or Meets 70% floor and Required Improvement	Meets 90% standard for each subject
Completion Rate I (Class of 2007) <ul style="list-style-type: none"> • <i>All students and each student group meeting minimum size:</i> • African American • Hispanic • White • Econ. Disadv. 	Meets 75% standard or Meets Required Improvement	Meets 85% standard or Meets floor of 75% and Required Improvement	Meets 95% standard
Annual Dropout Rate (2006-2007) <ul style="list-style-type: none"> • <i>All students and each student group meeting minimum size:</i> • African American • Hispanic • White • Econ. Disadv. 	Meets 2% standard or Meets Required Improvement	Meets 2% standard or Meets Required Improvement	Meets 2% standard or Meets Required Improvement

Source: TEA, 2008a.

Board Alignment and Support of District Goals: Board support for district goals for achievement and instruction is maintained. The Board ensures that these goals remain the top priority in the district and no other initiatives deflect attention or resources from accomplishing these goals.

Collaborative Goal Setting: The superintendent involves all relevant stakeholders, including board members and principals, in the process of setting nonnegotiable goals for the district.

Defined Autonomy: The superintendent provides autonomy to principals to lead their schools, but expects alignment on district goals and use of resources for professional development.

Elementary and Secondary Education Act (ESEA): The Elementary and Secondary Education Act (Pub.L. 89-10, 79 Stat. 27, 20 U.S.C. ch.70) is a United States federal statute enacted April 11, 1965. The Act is an extensive statute which funds primary and secondary education, while explicitly forbidding the establishment of a national curriculum. As mandated in the Act, the funds are authorized for professional development, instructional materials, and resources to support educational programs, and parental involvement promotion. The Act was originally authorized through 1970; however, the government has reauthorized the Act every five years since its enactment. The current reauthorization of ESEA is the No Child Left Behind Act of 2001.

Instructional Leadership: “Strong leadership that promotes excellence and equity in education and entails projecting, promoting, and holding steadfast to the vision; garnering and allocating resources; communicating progress; and supporting the people,

programs, services, and activities implemented to achieve the school's vision" (Zepeda, 2003, p. 4).

Leadership Responsibility: For the sake of this study, leadership responsibility will represent six leadership responsibilities with accompanying practices which if carried out effectively have a significant impact on student academic performance (Waters & Marzano, 2006). These responsibilities are: (1) goal-setting process, (2) nonnegotiable goals for achievement and instruction, (3) board alignment with and support of district goals, (4) monitoring goals for achievement and instruction, (5) use of resources to support the goals for achievement and instruction, and (6) defined autonomy.

Monitoring Goals for Achievement and Instruction: The superintendent monitors and evaluates implementation of the district instructional program, the impact of instruction on achievement, and the impact of the implementation on the implementers.

No Child Left Behind (NCLB): NCLB is federal legislation which was signed into law on January 8, 2002. The law helps schools improve by focusing on accountability for results, freedom for states and communities, proven education methods, and choices for parents.

Nonnegotiable Goals for Achievement and Instruction: Goals that all staff members must act on that are targeted toward student achievement and the instructional program. Specific achievement targets are established for the district, for individual schools, and for subpopulations of students within the district. These goals are based on relevant research and implemented on all campuses.

Region 13 Education Service Center (ESC): Regional education service centers were created by the Texas legislature in 1967 when it became apparent that combining certain tasks common to each district would promote operational efficiency and effectiveness. Region 13 ESC serves 57 school districts and the Texas counties of Llano, Gillespie, Burnet, Blanco, Kendall, Williamson, Travis, Hays, Comal, Milam, Lee, Bastrop, Caldwell, Guadalupe, Fayette, and Gonzales.

Resources to Support Achievement and Instruction Goals: Resources including time, money, personnel, and materials are dedicated to accomplish the district goals. Emphasis is placed on professional development of teachers and principals to achieve district goals.

State Accountability System: A standards-based accountability system sets goals in the form of standards, assigns responsibilities for meeting those goals, and holds the system accountable for its performance. Under this type of system, the state's role changes from ensuring compliance with regulations, to providing incentives and offering technical assistance to build school capacity. State officials prescribe the outcomes, but the choices about instructional methods and practices are left for the professional educators to decide.

Superintendent of Schools: The Superintendent shall be the educational leader and chief executive officer of the District.

Texas Assessment of Knowledge and Skills (TAKS): The Texas Assessment of Knowledge and Skills (TAKS) is a standardized test used in Texas primary and secondary schools to assess students' attainment of reading, writing, math, science, and

social studies skills required under Texas education standards. It is developed and scored by Pearson Educational Measurement with close supervision by the Texas Education Agency. Though created before the No Child Left Behind Act was passed, it complies with the law. The TAKS replaced the previous test, called Texas Assessment of Academic Skills (TAAS) in 2003.

Organization of the Dissertation

This Dissertation is organized into five chapters and prefaced by a brief abstract of the study. Chapter I provided an introduction, a statement of the problem, the purpose of the study, significance of the study, limitations, delimitations, definitions of terms, and research questions. Chapter II contains a review of the current literature. Within this chapter, the changing role of the superintendent is discussed along with a historical perspective of accountability. An overview of leadership theory as well as the role of the superintendent as an instructional leader is presented. In addition, Chapter II provides an overview of past studies that are directly and tangentially related to this study. This review outlines relevant issues associated with district leadership and responsibilities. Chapter III contains the methodology of the study including population, instrumentation and data collection, as well as analysis procedures. Chapter IV presents the analysis and comparisons of the data collected in the study as it relates to the research questions. Chapter V is the final chapter which consists of the researcher's summary, conclusions and recommendations for further research.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

The content of this literature review contains the following major topics: the changing role of the superintendent; a historical perspective of accountability; leadership theories; the superintendent and instructional leadership; and studies directly related.

Much has been written about the principal's role in relation to student achievement; however, through the years doubt has been cast on whether or not the superintendent's role has any impact whatsoever. The superintendency as a whole tends to generate an enormous amount of conflict and tension. The life of a superintendent can be extremely stressful due to the ambiguous nature of the position. Every stakeholder feels that they have a right to determine expectations for the top position in the school (Mayo, 1999). School board members occasionally run for office on their own or a small group of individuals' personal agenda for change. State and federal legislation can add escalating expectations to the position. Sometimes the environment surrounding the superintendent becomes filled with conflict and pressure. Rod Paige, former secretary of education, suggests that superintendents must exude special leadership skills having both integrity and thick skin (Scherer, 2004).

The Changing Role of the Superintendent

Perhaps no school employee's role has changed more through the years than that of the superintendent. In the early 1800's the superintendent emerged as a "part-time secretary to the local school board, the superintendent was responsible for conducting faculty meetings as well as taking minutes at board meetings" (Cuban, 1976, p. 112). While the teacher's realm has been primarily his or her classroom and the principal focuses on the operations of the school, the superintendent has been the liaison between the school and the outside world. As time and change has marched on, the superintendent's responsibility and interactions have grown from just meeting the expectations of the community to following the regulations of the state and documenting accountability, to striving to meet the ever-increasing demands of the federal government as a requirement of receiving funding. According to Hoyle, the passage of ESEA and NCLB resulted in an ever growing list of expectations (Hoyle et al., 2004). The superintendent is now the chief executive officer of the school district and is in charge of budget management, communications, curriculum and instruction, personnel management, school board relations, human relations, and organizational development (Wolf, 1987). With the increased responsibility has come an increase in the level of difficulty and stress on the job.

In 1965 the Educational Policy Commission recognized the superintendent's job as "one of the most crucial and perhaps the most difficult public positions in American life today." During the following decade the superintendent had gained the respected position of an expert in matters of education (Zeigler, Jennings, & Peak, 1974). The

golden years of high respect soon came to an end with a series of negative national reports which cast questionable light on district level administration.

With increased pressure resulting from the NCLB act, the primary role of the superintendent has shifted more and more into the position of academic leader. Throughout the history of the superintendency the role of the position has been determined by the demands of the times, the person of the superintendent, as well as by the position itself (Wolf 1987, p. 2). State regulations that focus attention on student outcomes such as test scores and graduation requirements create a context in which district leadership must focus on instruction (Castagnola, 2005, p. 17). Whatever significant changes are made in school organizations and schooling, they surely will involve the position of the superintendent (Glass, 1992).

Through the early 1850s' the superintendent was little more than a glorified secretary. Their duties were primarily clerical but also included tasks such as collecting demographic data and accounting for the money (Houston, 2007). The first local superintendents were hired by Buffalo, New York and Louisville, Kentucky in 1837. Many large school districts followed suit and over the next three decades thirty large schools around the nation had hired their own superintendent. As time passed superintendents became the norm and oversaw the daily operations of local districts gaining power and prestige as major community leaders (Houston, 2007).

By the turn of the 20th century, the role of the superintendent had evolved to include the expectation that he was an expert in the field of teaching and was capable of being an advisor to teachers who were accountable for classroom instruction. The three

decades following 1910 saw superintendents established as managers. During this period some claim superintendents were cowards who became powerless and vulnerable because they lacked conviction and political courage (Eaton, 1990). Still others argued that superintendents were actually cunning political pragmatists who were responding to the social realities of the times (Burroughs, 1974).

During the decade of the 1920s' the superintendent came to be viewed as a manager of the industry of education. He was expected to run the school as a business and commonly used techniques recommended by industrialists and management consultants such as Frederick Taylor. The great depression was a time of turmoil and anguish for the entire nation. During and shortly after this time, people protested against a realignment of authority in public education. Kowalski indicates that this resulted in increased power for superintendents and lessened local community control (Kowalski, 1999).

Another period of turmoil and national stress was the Second World War. The role of the superintendent changed with the nation and a new era of democratic leadership and statesmanship was ushered in. Superintendents became political strategists in an effort to gain support for their initiatives. They were constantly pushed to respond to the political, social and economic issues of the period. Funding was in short supply and superintendents had to compete with other state organizations for the money to operate their schools (Callahan, 1966; Edwards, 2007).

By the 1980's the expectations of the superintendent's role had shifted more toward academics. Stakeholders believed that the superintendent should be heavily

involved in the academic mission through goal setting. He should also be a part of curriculum development and the overall academic vision (Lashway, 1995). Public school dissatisfaction, low student achievement and a nationwide economic downturn all had their impact on the superintendent's role. Political pressure and public expectation constantly pull at the superintendent's position. During one decade he is a bureaucratic executive, ten years later collaboration and collective vision building may be the norm (Anthes, 2002; Beck & Murphy, 1993).

Over the years student academic achievement has moved to the forefront of the superintendent's role. Since the turn of the twenty-first century the school superintendent has become more of a facilitator seeking to establish professional learning communities. He has become a consensus builder who presses principals and faculty members to be data driven and collaboratively focused on the most effective instructional strategies (Sayre, 2007; Murphy, 1994). Paul Houston, former executive director of the American Association of School Administrators, (AASA) stated that the model of the superintendent as an omnipotent powerful position is no longer possible or desirable. The current environment of education calls for a different way of doing business. Bargaining agreements, court decisions, state and federal mandates and local political infighting have stripped away many of the formal powers of today's superintendents (Houston, 2007).

Historical Perspective of Accountability

Since the early 1980's, perception has been that America's public schools are lagging behind the nation's expectation of being the best in the world. Political contestants are quick to seize upon this opportunity to set education as their number one priority, if elected to office. This set of circumstances keeps the accountability of public schools at the top of the national agenda (Edwards, 2007).

Over the past three decades much progress has been made in our ability to test and monitor student achievement. Most states use one or more nationally normed test in addition to their own benchmark exams, which are required under the No Child Left Behind Act. Statistical methods and processes are in place to track individual students and groups of students, both in cross-section and longitudinally, through multiple years of their education. Huge databanks are in place which allows comparison among schools within a district and also among districts within a state. All of this data allows stakeholders to measure the performance of district and school leaders based upon both state benchmark and national tests (Firestone & Riehl, 2005).

There was a time when small one-room schools taught what was perceived as important by local parents or the teacher they hired. Later individual states set guidelines to be followed by all their individual schools. The trend since the passage of the Elementary and Secondary Education Act (ESEA) of 1965 has been toward more federal intervention in local schools across the nation. That trend was dramatically stepped up by the renewal of ESEA in its new form as the No Child Left Behind Act in 2002. The

intensity of accountability is at such a level as to blur the boundaries between state, local and federal power over education (Houston, 2007).

Blame for the perceived failure of public education has been laid squarely at the feet of local school superintendents. Progressive sanctions for schools repeatedly not meeting Adequate Yearly Progress (AYP) have a very real impact on local schools. This in turn brings increased pressure on superintendents from local, state and federal levels (Edwards, 2007).

There are those who question whether or not standardized tests represent an accurate measure of quality education. As accountability pressure increases, schools are sometimes accused by a wide range of sources of teaching to the test. Components of the No Child Left Behind Act require that each state develop frameworks or standards for each course which clearly outline expectations as to materials and information to be included by each teacher in every school. A criterion referenced benchmark test is then developed by each state based upon that states standard for every course and grade. Schools then teach to the state standards rather than teaching to the benchmark tests. Rod Paige states that standardized tests should serve as a thermometer giving us an indication as to the health of a child's education (Scherer, 2004). Others such as Peter Senge realize the reality of federal mandates, but do not see standardized testing as the best method in moving students toward a better education (Newcomb, 2003).

The work of the superintendent is difficult at best and there are some who perceive the pressure and stress generated by the No Child Left Behind Act as counterproductive. Legislated accountability systems that label districts and schools as

successes or failures based upon a set of narrowly defined performance indicators can contribute to the challenges superintendents face (Bracey, 2003; Edwards, 2007).

As power is taken at the federal level, it is removed from the consideration of local stakeholders. Paul Houston laments that decisions once made by local educators, are now being made at the top levels (Houston, 2007). As more federal and state laws are implemented more decisions are being made by legislators who have little or no formal training or experience in education outside of their own time as a student in a classroom. A majority of the nation's superintendents feel that the No Child Left Behind Act has a negative effect on the nation's schools. They perceive that some of the components of the law are not practical. An area of particular concern is the requirement to get all students to proficiency despite variables in socioeconomic status (SES) and special education placement. In addition, funding levels are perceived as insufficient by many superintendents (Houston, 2007).

With so much emphasis and accountability being placed on core academic subjects, some are concerned that other important goals for public education could be squeezed out all together. If, for example, the arts or music are not being tested on the benchmark exams and therefore no sanctions are issued concerning them, under performing schools might be inclined to place less emphasis on the arts and music. Those same schools may be more likely to include high concentrations of poverty students who are less likely to be exposed to the arts or music at home. Thus, those most in need of those courses might in fact receive less exposure to them at school (Rothstein & Jacobsen, 2006).

The pressure of accountability as measured by student performance on benchmark exams continues to increase. Some worry that as a result, traditional education values are diminishing (Glass et al, 2000). As the pressure on superintendents increases, it is passed along to principals, teachers and students. The demand for different results from schools is great and shows no signs of slacking (Scherer, 2004).

The job of the superintendent is becoming more complex. Former responsibilities have not been removed yet the superintendent now finds him or herself awash in a maze of legislation, politics and community activism (Houston, 2007). The increased responsibilities and pressure of accountability has not been offset by comparable increases in salary and benefits. Some worry that this will lead to a shortage of applicants for the position as current superintendents approach retirement (Glass et. al., 2000).

Eighty percent of superintendents admit to being frustrated with the politics and bureaucracy associated with their job. Stress creates many health related concerns and a majority of superintendents consider their jobs to be stressful (Glass & Franceschini, 2007; Farkas, et. al., 2003). G. W. Bracey laments that the unrelenting assessment pressure takes its toll on the persons in leadership positions. Some, he fears, may be detached from their psychological and moral moorings (Bracey, 2005).

As change impacts our nation the effect consistently creates change for our schools. The increased pressure of accountability in education is the result of shifting demands, expectations and needs of our nation (Scherer, 2004). It has been said that the only constant in education is change. "Our schools must be transformed, not because

they have failed in their traditional mission, but because the mission and context have changed” (Houston, 2007). In their book, *The Superintendent as CEO*, Hoyle, Björk, Collier, and Glass (2004, p.1) confirm that accountability standards for student performance has created a paradigm shift for educational leadership, especially the role of the superintendent by stating: “The old, less visible role of the school superintendent has changed to that of a highly visible chief executive who needs vision, skills, and knowledge to lead in a new and complex world”.

Leadership Theories

Organizational leadership has been described by Evers and Lakomski (1991) as a series of three overlapping phases: (a) scientific management, (b) the human relations approach, and (c) the behavioral science approach. Scientific management was established in the early 20th century and was described by leadership researchers such as Taylor (1911), Gulick and Urwick (1937), and Fayol (1949), all of whom were trained as engineers. The scientific management approach focused on production through specifically defined tasks and specified actions by workers.

The human relations approach began as a reaction against scientific management and was first described by Follett (1918), Mayo (1933), and Roethlisberger and Dickson (1939). The human relations approach initiated leadership concern regarding the relationships between management and workers.

The behavioral sciences approach came about in the late 1930’s and early 1940’s. The behavioral sciences approach emphasized the scientific study of educational organizations as complex systems as described by Barnard (1968) and Simon (1945).

The behavioral science approach has been developed over the last half of the 20th century, resulting in two primary branches: (a) the Theory Movement, and (b) the “new orthodoxy”. Culbertson described Theory Movement as a “law-like generalization for administrative phenomena” (Culbertson, 1981, p.48). The new orthodoxy included the concepts of open systems and contingency theory. Scott (1981) described open systems as having the capacity to absorb energy from outside sources in order to restore organizational energy and repair organizational breakdowns. Contingency theory was described by Fiedler (1967) as a management approach in which leadership adjusted to meet the demands and circumstances of the organization.

Development of organizational and educational leadership over the past 100 years was described by Palestini (1999). In the 1940’s, trait theory was highly regarded. Trait theory attempted to predict which individuals would become leaders and whether or not they would be effective. Components of trait theory include leadership drive, a desire to lead, confidence, intelligence, experience, and integrity (Palestini,1999,p.38).

The 1950’s brought a shift to a behavioral approach to leadership. A person’s ability to increase effectiveness, rather than particular traits, was measured. Two types of leaders were identified from the behavioral approach. The first was the production oriented leader who focused primarily on getting the task done. The second type of leader was employee oriented who focused on providing support for employees and involved them in the decision making process. In the late 1950’s, Mintzberg introduced the managerial roles theory. Depending on a given situation, a leader could display one of three leadership behaviors depending on the subordinate, supervisor and task

considerations. This theory blended into the early forms of situational leadership theory (Palestini, 1999, p.40).

At the beginning of the 1960's, McGregor introduced the Theory X/Theory Y concept for situational leadership. According to this theory, leadership style is based on assumptions made about other individuals, their characteristics, the task, the organization, and the environment (Palestini, 1999, p.42). People are seen as inherently lazy, extrinsically motivated, incapable of self-control, and wanting security with little responsibility by "X" managers. "Y" managers see people as not disliking work, intrinsically motivated, exerting self-control, and seeking responsibility. Frederick Fiedler's contingency theory was introduced in the 1960's as well. Contingency theory asserts that changing a leader's style is difficult and organizations should place individuals in situations that best fit their style. Fiedler identified two styles of leaders: (a) task oriented, and (b) relationship oriented.

In 1974, path-goal theory came into being. This theory asserts that leaders should attempt to influence followers' perceptions of goals and the path to achieve those goals (Palestini, 1999, p.45). Four styles of leadership were identified via path-goal theory: (a) directive – followers are given explicit expectations, (b) supportive – the leader is interactive and open with the followers, (c) participative – the leader takes in suggestions from the staff before making a decision, and (d) achievement oriented – the leader sets challenging goals for the followers and expects high performance and continuous improvement.

The Hersey-Blanchard model of situational theory was presented in the early 1970's as well. The premise of this model was based on the readiness of the followers. The followers' ability and willingness to accomplish a specific task is emphasized as the major contingency that influences appropriate leadership style (Palestini, 1999, p.50). The appropriate leadership style to use was determined by the task and relationship behavior of the followers. Four leadership styles were described in the Hersey-Blanchard model: (a) telling – giving specific instructions and close supervision when followers are at a low readiness level, (b) selling – explaining decisions and clarifying instructions when followers are at a low to moderate readiness level, (c) participating – sharing ideas and facilitating decision making when followers are at a moderated to high readiness level, and (d) delegating – giving responsibilities to followers when they are at a high readiness level.

Goal-setting theory suggests that specific and challenging but attainable goals can increase motivation because such goals lead to increased focus, effort and persistence, as well as to the development of specific task strategies to accomplish the goal. Feedback about progress toward achieving goals reinforces attention, effort, and persistence, or provides information for refining and altering strategy to make it more effective. In 1990, Gary Latham and Edwin Locke proposed that successful goal performance meets four conditions: goals must be specific, goals must be challenging, goals must be attainable, and individuals must be committed to the goals. When these four conditions are met, goal setting is an effective way of increasing motivation and

performance. The basic postulate of goal theory is that the intention to achieve a goal is a primary motivating force for behavior (Hoy & Miskell, 2008. p. 163).

Superintendent and Instructional Leadership

For years the role of academic leadership has seemed to reside with the school principal and until recently there was little research to indicate that the actions of the district superintendent could have any significant impact on student achievement. Now with the intense accountability associated with NCLB it would seem that the superintendent is ultimately responsible for providing the instructional leadership that will establish success at the district level.

Since the inception of the superintendent position we have seen the role change from teacher-scholar to manager to democratic leader, applied social scientist, communicator, chief executive and now to instructional leader. The role of the superintendent has changed through the years in response to social and political pressure and the expectations of the nation. With expanded curriculum requirements, expectations for closing the academic gaps between various groups of students and bringing all students to the proficient level, it is clear that the bar has been raised for public schools and their leaders. The time of the superintendent just making sure buildings are safe and dry, that the buses run on time, teachers are hired and the food is ready at lunch is long past. He must now be at the very heart of effective classroom instruction (Firestone & Riehl, 2005).

The superintendent must have command of a wide array of leadership and technological skills. He or she must now be able to facilitate the work of mixed groups

of administrators, teachers, students and other stakeholders who collaborate in “learning communities” to build a collective vision and to set and monitor district and school goals (Glass, Björk & Brunner, 2000).

This work is not entirely foreign or necessarily new to all superintendents. It has always been generally understood that academic achievement is the ultimate goal in the work of all educators, including administrators. A national survey of superintendents found, not surprisingly, that the desire to have a positive impact on student achievement was the leading motivating factor for accepting the job (Glass, 2007).

Superintendents are charged with oversight responsibilities regarding curriculum design focused on instruction and learning in multiple school contexts (Hoyle, 2002). As the CEO of the school district, superintendents are responsible for multiple roles focused to ultimately ensure the success of each student. Instructional leadership has become a primary indicator of a superintendent’s executive performance (Björk, 1993; Bredeson, 1996). Instructionally Effective School Districts (IESD) research has identified instructional leadership skills for superintendents. These skills include the recruitment of outstanding classroom teachers to improve learning and teaching and ultimately having an influence on the overall quality of instructional programs (Cuban, 1984; Hoyle, Björk, Collier, & Glass, 2004).

Teaching and learning, the *technical core* of education is the axis upon which education systems revolve (Hoy & Miskel, 2001). Education’s technical core consists of those structures, strategies, processes, and applications of teaching and learning drawn upon throughout an individual’s educational experience. Hoyle (1991) asserted that the

school superintendent must be competent in the technical core processes, coupled with effective leadership and management processes, which “transmit a common core of knowledge and skills indigenous to the role of the district CEO” (Hoyle, 1991, p. 23). The responsibility of superintendents ensuring and maintaining a highly refined technical core is reflected in the American Association of School Administrators (AASA) standards for superintendents.

The AASA standards reflect a high degree of responsibility for the superintendent to ensure quality teaching and learning. Standards 5, 6, and 7 (Hoyle, J.R.; AASA Commission on Standards for the Superintendency, 1993) speak directly to the technical core being a priority by stating superintendents will:

Standard 5: Design curriculum and a strategic plan that enhance teaching and learning in multiple contexts; provide planning and future methods to anticipate occupational trends and their educational implications; identify taxonomies of instructional objectives and validation procedures for curricular units, using theories of cognitive development; align and sequence curriculum; use valid and reliable performance indicators and testing procedures to measure performance outcomes; and describe the proper use of computers and other learning and information technologies (p. 9).

Standard 6: Exhibit knowledge of instructional management by implementing a system that includes research findings on learning and instructional strategies, instructional time, advanced electronic technologies, and resources to maximize student outcomes; describe and apply research and best practice on integrating curriculum and resources for multicultural sensitivity and assessment strategies to help all students achieve at a high level (p. 10).

Standard 7: Develop a staff evaluation and development system to improve the performance of all staff members; select appropriate models for supervision based on adult motivation research (p. 11).

The standards highlight the tasks of evaluation of staff performance, curriculum design, assessment strategies, instructional leadership strategies, and student achievement as being vital to the success of schools.

A school superintendent's emphasis on the technical core is a key indicator of effective educational leadership (Björk, 1993). The school superintendent has historically been viewed as the instructional leader for the school system (Bredeson, 1996). Although the role of the superintendent has expanded over the past century and a half, Björk (1993) maintains the superintendent's instructional leadership of the technical core continues to be a critical factor in the success of districts. The superintendent's connection with what takes place in the classroom is necessary for district success and improvement (Wimpelberg, 1988).

According to Rowan (1995a), the core work of teaching and learning were not central elements of preparation or practice in educational administration until 1985. Rowan (1995b) states, "after a decade of sustained efforts to reform instruction in American schools, administrator preparation programs rarely require extensive course work on learning, teaching, or instructional management" (p.115). This lack of focus on the technical core appears to be changing since the standards that have driven superintendent preparation programs now place increased emphasis on instructional processes and student assessment (Hoyle, Björk, Collier, & Glass, 2004).

The studies conducted by Rowan, Petersen, and others have increased the focus on educational administration research efforts to investigate the issues that directly link administrative practice with the technical core. It is recommended by these researchers

that a balance be provided between the leadership responsibilities to ensure that a strong instructional focus is in place.

In the day to day operations of a school district there are many things that require the attention of the superintendent. The budget and all matters financial are one of his most challenging tasks. Managing personnel matters includes not only hiring and firing but also salary negotiations with teacher unions and personnel policy committees. Additionally, the superintendent is responsible for the maintenance and construction of buildings and facilities which may be spread over several campuses and separated by many miles. Finally, the superintendent must see to the needs of an elected board of trustees who want to be kept informed and up to date. It is often the case that individual board members have areas of particular interest within the overall school and much of the superintendent's time is spent satisfying the interests of those board members. Most superintendents would prefer to spend more time on instructional leadership and less time serving the needs of the school board (McAdams, 2006).

Much research is available concerning the principal's ability to impact student achievement. Most school districts are composed of several schools with various grade level configurations. The superintendent is in an ideal position to exert a system-wide influence that would impact all schools within the district. As the top decision maker he not only has system-wide reach but also has the power and capacity to place appropriate pressure and support in key areas affecting key positions to raise all boats as the district moves forward together (Sayre, 2007; Waters & Marzano, 2006).

In order to accomplish the expectations and meet the requirements of the No Child Left Behind Act, superintendents must be aware of the latest research on teaching and learning. They must be able to lead as a facilitator and to ensure that effective instructional strategies are being used in every classroom. Data must be monitored in order to assure that goals are being met and that students are learning and retaining the content of state standards (Houston, 2007). The new style of leadership required by superintendents is less top down and more leadership by consensus. Telling people what to do may accomplish what the superintendent believes needs to be done, but it may not be the most effective way to build leadership capacity and move the district forward as a professional learning community (Blum & Kneidek, 1991).

In this era of new opportunity it is important that all stakeholders be brought to the table. The strength of America has always been in its diversity. As public schools move into a new century it is critical that leaders look back and learn the hard lessons from times when some students were shut out from opportunities freely offered to others. Superintendents must be sure that teachers, parents, board members and other interested parties are included in defining the purpose of schooling and establishing school wide goals. These goals must be familiar and understood throughout the organization (Sayre, 2007).

Superintendents must be sure that high levels of learning are available to all students. One of the only ways to be sure that takes place is to monitor student data. As ongoing decisions are made they must be driven by classroom level data. If success is to

be had by all, if all students are to rise to proficiency, then leaders must rely on data as a key tool in decision making (Leithwood, Aitken & Jantzi, 2001).

Professional development is important to the success of administrators and teachers alike. It must be job embedded and sensitive to the particular needs of those being served. The No Child Left Behind law is strong on professional development in requiring that sufficient funding is made available to provide for bringing professionals in to work with teachers, sending personnel to training off site, or paying for additional time outside of contracted days for attendance and participation in professional development activities (Sayre, 2007). Superintendents are coming to realize that valuable components of professional development can be as simple as teachers or administrators sharing with each other what is working best and having the greatest impact on student achievement.

Sometimes instructional leadership means just being physically present at each school on a regular basis. Some superintendents oversee districts that include many individual school campuses. It is often a challenge just to get away from the central office, which is not unlike the challenge principal's face in getting away from discipline issues and parent conferences in order to get into the classrooms. It becomes a matter of time management and setting aside strictly guarded time to invest in classroom and school visits. If the superintendent is to be an effective instructional leader he or she must know what is going on in the classroom and in order to know that, he or she must be committed to spend time there (Blasé & Blasé, 1998).

As the district level administrator, it is the superintendent's responsibility to allocate funds. As an instructional leader it is critical that those funds be allocated with the highest priority given to instructional effectiveness and student achievement. If a superintendent talks big about academic achievement but expends the funds with a clear priority to other areas he will soon destroy the confidence and trust which has been placed in him by other administrators and teachers (Lashway, 2002; Sayre, 2007).

The role of the superintendent has changed. The superintendent is no longer the custodian of the books and buildings. Their work now, as always, is critical to the success of each school. That work however, is now measured by all the various criteria of the No Child Left Behind Act. The superintendent must be the instructional leader of a systemic process in moving every school and every student forward toward academic excellence. He must possess new and additional skills and be sure that all players are doing their part in moving forward in a unified front. This is a far cry from the work first envisioned for the role (Houston, 2007).

The superintendent, once viewed as an expert who was unquestioned and unchallenged in the role of school governance has been forced by high-stakes accountability to shift from a managerial to an instructional leadership role. There appears to be specific leadership responsibilities which, when effectively applied, yield improvement in student achievement as measured by standardized tests.

Studies Directly Related

It is often assumed that administrators exert an influence on the performance of their organizational units. There is mounting evidence reflecting the principal's influence on the academic performance of schools with little attention being paid to the influence of the superintendent and their influence on the academic performance of the school district. Change agency is a must for school superintendents. Hord (1990) recognizes an abundance of literature supporting superintendent standards and responsibilities, but contends that few studies actually measure what superintendents really do in their position of leadership.

A study conducted by Ann Weaver Hart and Rodney T. Ogawa in 1987 titled, *The Influence of Superintendents on the Academic Achievement of School Districts*, focused on the superintendent and their influence on the academic performance of sixth and twelfth grade students on the mathematics and reading sections of the standardized achievement test of the California Assessment Program. It was found that superintendents exerted a small influence on the academic performance of school districts with greater influence on sixth grade test scores than on twelfth grade test scores (Hart & Ogawa, 1987). Although the results of this study are characterized as "incidental" influence, the findings suggest a need for further study to determine the levels and nature of superintendent influence (Hord, 1990).

Joseph R. Castagnola conducted a study involving Connecticut school superintendents in 2005. He identified 24 superintendents who were classified as instructionally focused based upon student test scores. Participants in his study were

asked to complete both the Superintendent as Instructional Leader Survey (SILS) which was developed by Watts in 1992, and the Connecticut Superintendent Survey which was developed by Shibles, Ritchie, and Castagnola in 2002. Select participants were additionally asked to participate in focus group meetings where information was recorded and separated into measurable data. Survey results showed no significant differences between the responses of those superintendents classified as instructionally focused and the other superintendents surveyed (Castagnola, 2005).

In 2006, J. Timothy Waters and Robert J. Marzano published a working paper which involved a meta-analysis of 27 studies which were conducted between 1970 and 2005. These studies represented the majority of research conducted within the United States during this time period which contained measurable data connecting student achievement with corresponding actions of district superintendents.

The meta-analysis indicated that there are five specific leadership responsibilities, with accompanying practices, which created a statistically significant impact on student achievement. The leadership responsibilities are: goal-setting process, nonnegotiable goals for achievement and instruction, board alignment with and support of district goals, monitoring goals for achievement and instruction, and use of resources to support the goals for achievement and instruction (Waters & Marzano, 2006, p. 13). Their findings were later published in their book, *District Leadership That Works: Striking the Right Balance* (Marzano & Waters, 2009).

Ellen Wolf conducted a study using a perceptual survey to determine what the role of the school superintendent was in 1987. The study targeted superintendents and

principals in the state of Washington but also included ten nationally known experts. The conclusion of the study was that superintendents establishing mutual understanding and working relationships with the school board was their most critical role. Low priority was given to curriculum and instruction activities (Wolf, 1987).

Cynthia Edwards conducted a 2007 study titled, *An Analysis of the Relationship of Superintendent Instructional Leadership Behaviors and District Performance Outcomes*. In this study she developed a survey instrument which was used to measure superintendent self-assessed instructional leadership behaviors. Nine hundred fifty-one Texas superintendents participated in the study. A linear combination of superintendent instructional leadership domains including mission, instructional management, and systems of practice yielded a significant ($p < .05$) impact on student test scores (Edwards, 2007).

Summary

It is becoming all too clear that the pattern for the future is a constant push for accountability and a strict focus on student performance (Glass, 2000). Public expectation will be for superintendents to lead districts to higher levels of achievement as AYP approaches one hundred percent proficient or advanced on state benchmark tests (Boon, 2001, p. 3).

Standards which set the criteria for classroom instruction and accompanying high-stakes tests are leading the latest reform movement under NCLB. Standards-based accountability with a high level of scrutiny from legislators and state departments of

education will likely produce a turbulent and stressful job climate for district superintendents (Lashway, 2002, p. 5).

It is clear that school district leadership matters and that there is no place in today's school for the "blob" that was identified twenty-two years ago. The complexities that school superintendents are required to address, including the demands of high stakes testing and accountability, do not allow superintendents, who wish to be successful, the luxury of one dimensional leadership.

CHAPTER III

METHODOLOGY

Introduction

The study described herein sought to determine whether leadership at the district level is an integral part of the mix of actions that in the aggregate have a causal effect on student performance. This study acknowledged the need for research on distinct superintendent leadership practices with regard to student performance as delineated through indicators prescribed in the Texas Academic Excellence Indicator System. The study describes, through structural equation modeling techniques, the relationships among the superintendent practices of: 1) collaborative goal setting; 2) establishment of nonnegotiable goals for achievement and instruction; 3) Board of Trustee alignment and support of district goals; 4) monitoring goals for achievement and instruction; 5) use of resources to support achievement and instruction goals (6) defined autonomy and the dependent variable of student achievement. In 2006, J. Timothy Waters and Robert J. Marzano published a working paper which involved a meta-analysis of 27 studies that were conducted between 1970 and 2005. These studies represented the majority of research conducted within the United States during this time period which contained measurable data connecting student achievement with corresponding actions of district superintendents.

The meta-analysis indicated that there are five specific leadership responsibilities, with accompanying practices, which created a statistically significant impact on student achievement. The leadership responsibilities identified by Waters and

Marzano are: goal-setting process, nonnegotiable goals for achievement and instruction, board alignment with and support of district goals, monitoring goals for achievement and instruction, and use of resources to support the goals for achievement and instruction (Waters & Marzano, 2006, p. 13). An additional finding of a practice they termed defined autonomy was also identified. Their findings were later published in their book, *District Leadership That Works: Striking the Right Balance* (Marzano & Waters, 2009).

This study strives to expand on the research of Robert J. Marzano and Timothy Waters by surveying superintendents across the state of Texas and probing their perceptions regarding their use of these identified practices. The collected data was correlated to the student performance results of each respondent's district performance as measured by the 2007-2008 TAKS results.

Research Design

This study examined the relationship of latent constructs of superintendent practices to aid in formulating conclusions regarding unobserved characteristics that were the most influential in improving student performance. Six superintendent practice constructs were evaluated to determine the strength of the relationship between each factor to the dependent variable, student performance. Through the use of a 50 item survey instrument developed by the researcher for this study, the perceptions of superintendents were analyzed regarding leadership practices to determine the effect of these practices on student achievement.

Pilot Study

A pilot study was conducted to establish the validity and reliability of a survey instrument measuring superintendent responses to identified superintendent practices and their influence on student performance. This survey instrument was identified as the Pilot Study Survey Instrument. A sample of superintendents in the state of Texas was solicited to complete the pilot study measuring the superintendent's influence on student performance. The purpose of this sample survey was to establish the reliability and validity of the instrument using Cronbach's Alpha.

The survey is based on the working paper titled, *School District Leadership that Works: The Effect of Superintendent Leadership on Student Achievement* by J. Timothy Waters, Ed.D. and Robert J. Marzano, Ph.D. (Waters & Marzano, 2006). Mid-continent Research for Education and Learning (McREL) conducted a meta-analysis examining results from 27 studies conducted since 1970 that used quantitative methods to study the influence of school district leaders on student performance.

The primary research question of the McREL study was, "What is the strength of relationship between leadership at the district level and average student academic performance in the district?" The computed correlation between district leadership and student achievement was .24 which is significant at the .05 level. The second research question sought to identify specific leadership responsibilities that produce gains in student achievement. This question asked, "What specific district leadership responsibilities are related to student academic achievement?" Five district-level leadership responsibilities plus one additional finding were identified as having a

positive effect on student achievement. These five leadership responsibilities are: (1) collaborative goal setting, (2) nonnegotiable goals for achievement and instruction, (3) Board alignment and support of district goals, (4) monitoring goals for achievement and instruction, and (5) use of resources to support achievement and instruction goals. In addition, defined autonomy, superintendent relationships with schools, was also determined to have a correlation to student achievement (Waters & Marzano, 2006).

Pilot Study Population

During the 2007-2008 school year, Texas had a population of 4,651,156 students attending 1031 public school districts (TEA, 2008b). The state of Texas is further divided into 20 Regional Education Service Center (ESC) areas as established in 1967. In collaboration with schools and communities, the ESC works to promote quality instruction in order to maximize student performance and to increase the efficiency and effectiveness of school operations. School districts receive non-regulatory support, guidance, and assistance in all areas from the Education Service Centers. An ESC operates under rules developed by the State Board of Education, with local control of regional services based on the needs of local districts.

The sample identified for the pilot study consisted of 57 superintendents employed in the Region 13 Education Service Center (ESC13) area of service which is primarily the Austin, Texas area. These 57 superintendents represent all public school districts within ESC 13 during the 2007–2008 academic year and served a student population of 343,808 (TEA,2008b). Of the 57 superintendents in ESC13, 30 superintendents participated in the pilot study.

Pilot Study Instrumentation

This study collected data to assess leadership practices as related to student performance. A sample of superintendents in the state of Texas responded to a survey instrument termed the Pilot Study Survey Instrument regarding the effect of the superintendent on student performance. The purpose of this sample survey was to establish the reliability and validity of the instrument. The pilot study focused on six district level leadership responsibilities. The survey instrument, as shown in Appendix A, contains 50 items that were scored on a five point Likert-type scale where a response of five (5) indicates a practice that is considered extremely important to the superintendent and a response of one (1) indicates a practice that has no importance to the superintendent.

Demographic information was collected from participants in the pilot study as well. Five questions were constructed to probe the years of service as the superintendent in the current district, total years of service as a superintendent, AEIS rating of the district from the 2007-2008 student performance data, gender, and size of the district in which the respondent was employed during the 2007-2008 academic year.

Pilot Study Procedures and Research Methodology

Data for the pilot study was collected pertaining to the perceived leadership characteristics and responsibilities of the superintendency. The population for the pilot study was the current superintendents of each of the 57 public school districts located within the service area of the Region 13 Educational Service Center. Surveys were sent via email to the superintendents defined by the pilot study with a link to the survey

instrument. The survey instrument consisted of 5 demographic questions and 50 questions pertaining to superintendent responsibilities. Each of the 50 items required the respondent to choose one of the following choices regarding their perception of leadership characteristics and superintendent responsibilities: (1) No Importance, (2) Little Importance, (3) Important, (4) Highly Important, and (5) Extremely Important.

A cover letter explaining the survey and confidentiality of subjects prefaced the survey. The pilot survey instrument was launched on April 19, 2009 and data was collected on May 1, 2009. The survey instrument was developed using the identified responsibilities of effective superintendents from Waters' and Marzano's 2006 study.

Of the 57 possible participants in the survey, 30 respondents completed the instrument within the data collection window. This is a response rate of 52.63%. Responses from each participating superintendent were collected in an electronic data base for purposes of data analysis. The survey instrument was made available through a link to an off-site host so that all responses were anonymous.

Pilot Study Data Analysis

After responses were collected from the 30 participating superintendents, the data was analyzed and interpreted using graphic techniques and numerical interpretations. The data gathered from the Pilot Study Survey Instrument was entered into a Microsoft Excel format using a personal computer. The data was then analyzed using the statistical program Statistical Package for Social Sciences (SPSS) for Windows Standard Version 16.0 (SPSS, Inc., 2007). Descriptive statistical analysis produced means, frequencies, central tendencies and standard deviations. Analysis of Variance (ANOVA) procedures

provided sums of squares, degrees of freedom, mean squares, F values, and significance values. In addition, SPSS calculated reliability values using Cronbach's Alpha.

AEIS Rating

Respondents were asked to indicate their district rating on the 2007-2008 AEIS accountability rating. To determine ratings under the standard accountability procedures, the accountability system for Texas public schools and districts uses three base indicators: performance on the Texas Assessment of Knowledge and Skills; the completion rate; and the Annual Dropout Rate for grades 7 and 8. The accountability rating system for Texas public schools and school districts uses a subset of the performance measures computed for AEIS to assign a yearly rating to each public school district and campus.

District accountability ratings for 2007-2008, assigned by the Texas Education Agency were released in August 2008 with final ratings announced by the Texas Education Agency in December 2008. Table 2 reflects the AEIS district ratings as provided by the respondents. Of the 30 respondents, 0 districts were rated Exemplary, 4 districts, or 13.3%, were rated as Recognized; 25 of the districts, or 83.3%, were rated as Academically Acceptable, and 1 district, or 3.3%, was rated as Academically Unacceptable.

TABLE 2. Pilot Study: District AEIS Accountability Ratings

Accountability Rating	Frequency	Response Percent
Academically Unacceptable	1	3.3%
Academically Acceptable	25	83.3%
Recognized	4	13.3%
Exemplary	0	0%

Longevity

Respondents were asked to indicate their length of service as superintendent in their current school district. No respondents had served in their current position for 12 or more years. There were 2 superintendents who had 9 to 11 years in their current position. This represented 6.7% of the respondents. There were 7 superintendents with 6 to 8 years of service, representing 23.3% of the responses. The superintendents with 3 to 5 years of service in their current district were represented by 8 or 26.7% of the respondents. The largest group was those superintendents with 0 to 3 years of service to their district. This group consisted of 13 individuals representing 43.3% of the sample. These responses are reflected in Table 3.

TABLE 3. Pilot Study: Superintendent Longevity in Current District

Years	Frequency	Response Percent
12+	0	0.00%
9 to 11	2	6.70%
6 to 8	7	23.30%
3 to 5	8	26.70%
0 to 3	13	43.30%

Experience

Respondents were asked to indicate their total years of experience as superintendent of schools. Table 4 reflects these responses. Of the respondents, 6 had 12 or more years of experience as a superintendent. This represented 20% of the respondents. There were 7 superintendents who had 9 to 11 years of experience as superintendent of schools. This represented 23.3% of the respondents. There were 6 superintendents with 6 to 8 years experience, representing 20% of the responses. The superintendents with 3 to 5 years of experience were represented by 8 or 26.7% of the respondents. This was the largest group. There were 3 superintendents with 0 to 3 years of experience. This group represented 10 % of the sample.

TABLE 4. Pilot Study: Total Years Experience as a Superintendent

Years	Frequency	Response Percent
12+	6	20.00%
9 to 11	7	23.30%
6 to 8	6	20.00%
3 to 5	8	26.70%
0 to 3	3	10.00%

Gender

Table 5 shows the majority of the respondents identified as male at 22 respondents or 73.3%. Female respondents numbered 8 or 26.7% of the surveyed population.

TABLE 5. Pilot Study: Gender of Respondents

	Frequency	Response Percent
Male	22	73.30%
Female	8	26.70%

UIL Classification

The University Interscholastic League (UIL) was created by The University of Texas at Austin to provide leadership and guidance to public school debate and athletic teachers. Since 1909 the UIL has grown into the largest inter-school organization of its kind in the world. The

voluntary-membership, non-profit organization exists to provide educational extracurricular academic, athletic, and music contests. The purpose of the UIL is to organize and properly supervise contests that assist in preparing students for citizenship. It aims to provide healthy, character building, educational activities carried out under rules providing for good sportsmanship and fair play for all participants.

Respondents were asked to identify the size of their school district by using the University Interscholastic League's classification system which ranges from class 5A to class 1A where a single high school 9th grade through 12th grade student populations define classifications as: 5A equals a student population of 2085 and greater; 4A equals a student population of 980 to 2084; 3A equals a student population of 430 to 979; 2A equals a student population of 200 to 429; and 1A equals a student population of 199 and below.

Table 6 reflects the district size as indicated by the respondents. Of the respondents, 2 or 6.67% were from the largest classification of schools, 5A. Class 4A was represented by 4 respondents or 13.33% of the survey participants. Class 3A had the most number of participants with 10 respondents representing 33% of the population. Superintendents from Class 2A represented 30% of the population with 9 respondents. And Class 1A had 5 superintendents respond, representing 16.67% of the population.

TABLE 6. Pilot Study: District Size

Classification	Frequency	Response Percent
5A	2	6.67%
4A	4	13.33%
3A	10	33.33%
2A	9	30.00%
1A	5	16.67%

Instrument Reliability

Cronbach's alpha was calculated to compute a reliability index. Cronbach's alpha (α) is based on the internal consistency of items in the survey and this value was determined to be high at .970. Table 7 is a reflection of this observation.

TABLE 7. Pilot Study: Reliability Statistics as Measured by Cronbach's Alpha

Cronbach's Alpha	N of Items
.970	50

Scale statistics revealed a mean score of 104.6 and a variance of 860.455 for the 50 items in the survey. The standard deviation for this data set is 29.334. These statistical values are shown in Table 8.

TABLE 8. Pilot Study: Scale Statistics

Mean	Variance	Std. Deviation	N of Items
104.60	860.455	29.334	50

The analysis of the between people and within people data for the 30 subjects are presented in the analysis of variance (ANOVA) table shown in Table 9. The Within Groups values represent variation of the individual item scores around their respective group means. In Table 8 the column “Sig” indicates the significance level of the F-test. When significance levels are less than .05, the values indicate differences between the survey items. In this data set the significance is shown to be .001, which is less than .05, therefore there are differences between the survey items.

TABLE 9. Pilot Study: Analysis of Variance

		Sum of Squares	df	Mean Square	F	Sig
Between People		499.064	29	17.209		
Within People	Between Items	309.304	49	6.312	12.272	.001
	Residual	730.936	1421	.514		
	Total	1040.240	1470	.708		
Total		1539.304	1499	1.027		
Grand Mean = 2.09						

Instrument Validity

Validity was established using content validity. The Pilot Study Survey Instrument was developed from the findings of Mid-continent Research for Education and Learning (McREL) through their meta-analysis examining results from 27 studies conducted since 1970. These inquiries used quantitative methods to study the influence of school district leaders on student performance. The primary research question of this study was, “What is the strength of relationship between leadership at the district level and average student academic performance in the district?” The computed correlation between district leadership and student achievement was .24 which is significant at the .05 level. A second research question sought to identify specific leadership responsibilities that produce gains in student achievement. This question asked, “What specific district leadership responsibilities are related to student academic achievement?”

Five district-level leadership responsibilities plus one additional finding were identified as having a positive effect on student achievement. In addition, length of service to the district by the superintendent was also determined to have a correlation to student achievement (Waters & Marzano, 2006). The five district-level responsibilities were identified as: (1) *Collaborative Goal Setting* - The superintendent involves board members and principals in the process of setting goals (Average r of .24). (2) *Nonnegotiable Goals for Achievement and Instruction* - Goals for student achievement and the instructional program are adopted and based on relevant research (Average r of .33). (3) *Board Alignment and Support of District Goals* - Board support for district

goals for achievement and instruction is maintained (Average r of .29). (4) *Monitoring Goals for Achievement and Instruction* - The superintendent monitors and evaluates implementation of the district instructional program, the impact of instruction on achievement, and the impact of implementation on the implementers (Average r of .27). (5) *Use of Resources to Support Achievement and Instruction Goals* - Resources are dedicated and used for professional development of teachers and principals to achieve district goals (Average r of .26). (6) *Defined Autonomy; Superintendent Relationship with Schools* - The superintendent provides autonomy to principals to lead their schools, but expects alignment on district goals and use of resources for professional development (Average r of .28).

Pilot Study Summary

The purpose of the pilot study was to establish the validity and reliability of the instrument used to survey the superintendents of ESC 13 regarding leadership characteristics and responsibilities. Construct validity was used to establish validity for the instrument used to collect data. Cronbach's alpha provided a reliability value of .970 which indicates high reliability within the items of the survey. In addition, the ANOVA determined that there is a significant difference between the mean values for the items of the survey instrument.

Present Study

The State of Texas had a reported student population of 4,651,156 representing 1031 public school districts for the 2007-2008 school year. The researcher expanded the pilot study and surveyed the remaining 974 superintendents of schools across the state of Texas. It is intended that this expanded study will serve as a means to inform superintendents regarding peer perceptions of the influence of the superintendent on student achievement and to affect necessary changes to better meet the needs of this critical component of school leadership.

This study attempted to describe, through structural equation modeling techniques, the relationships among the superintendent practices of: 1) collaborative goal setting; 2) nonnegotiable goals for achievement and instruction; 3) Board of Trustee alignment and support of district goals; 4) monitoring goals for achievement and instruction; 5) use of resources to support achievement and instruction goals; 6) defined autonomy; and student achievement.

In this study, 300 Texas public school superintendents responded to a survey instrument that measured their perception of the importance of identified superintendent practices and responsibilities. These 300 superintendents served 1,604,904 students or 34.5% of the students in the state of Texas during the 2007-2008 school year. Through the use of a 50 item survey instrument developed by the researcher for this study, the perceptions of superintendents were analyzed regarding leadership practices to determine the effect of these practices on student achievement. The survey instrument was identified as the Superintendent Perception of Practice (SPP). Items in this survey

are shown in Appendix B. Superintendents scored their responses on a five point Likert-type scale with a score of one (1) reflecting a practice of no importance and a score of five (5) reflecting an extremely important practice. Data was collected and analyzed using SPSS 16.0 and the structural equation modeling software EQS v. 6.1 for Windows. A confirmatory factor analysis, as well as a structural equation model, was constructed in EQS and loadings for each path in the model were analyzed. Traditional approaches such as ANOVA focus on differences in means between groups. Structural equation models (SEM) can be used to test such differences, but are mostly used to test for other differences between groups by examining the equivalence of covariance matrixes.

The study investigated leadership responsibilities in respect to student achievement. The study was necessary to verify the link established by Waters & Marzano (2006) in order to determine whether or not school superintendent leadership practices have an effect on student performance.

Type of Research

The category of research that the present study undertook was quantitative. The type of research was causal-comparative, using structural equation modeling to describe the relationships that occur among the variables that influence student achievement.

Procedures and Research Methodology

This study investigated the leadership effect of superintendents in Texas public schools in relation to student academic achievement. The survey used in this study, Superintendent Perceptions of Practice (SPP), was developed by the researcher to gather quantitative data to analyze the perceptions of superintendents with regard to latent

constructs of superintendent leadership. The survey was designed to explore the relationships between the following latent constructs of superintendent leadership: 1) collaborative goal setting; 2) nonnegotiable goals for achievement and instruction; 3) Board of Trustee alignment and support of district goals; 4) monitoring goals for achievement and instruction; 5) use of resources to support achievement and instruction goals; 6) defined autonomy; and student achievement.

A second purpose of the SPP survey was to collect data to determine what latent constructs of superintendent leadership have the most significant influence on student performance as measured by the AEIS system. A third expectation of the survey was that it would disclose the superintendent leadership constructs that superintendents perceive as having the most profound, positive impact on student achievement.

A review of the literature on organizational leadership and educational leadership revealed the types of instruments that had been used over the past two decades to survey various facets of effective leadership. The verification by Waters & Marzano (2006) that district leadership, fostered through value added responsibilities and practices, has a direct relation to student performance provided the confirmation of the need for additional research on the topic.

Drawing on the findings from a review of the literature, it was determined that a survey instrument did not exist to adequately answer the research questions posed in this study. Based on the influence of existing documents and resources, an instrument was developed for this study that considered latent leadership constructs from the corporate leadership perspective and from an educational leadership context. The survey questions

were uniquely formulated items developed to explore leadership aspects of the educational system: 1) collaborative goal setting; 2) nonnegotiable goals for achievement and instruction; 3) Board of Trustee alignment and support of district goals; 4) monitoring goals for achievement and instruction; 5) use of resources to support achievement and instruction goals and (6) defined autonomy as related to the overarching measure, student performance.

The scale used for the survey was developed on the rationale that superintendents would be completing the questions based on their perceptions of the superintendent's leadership behaviors and the types of practice that occur in Texas public school districts. The scale solicited participant responses to the survey items, primarily on the prevalence of importance as demonstrated by superintendent leadership behaviors. The scale for the survey is as follows: (1) No Importance, (2) Little Importance, (3) Important, (4) Highly Important, and (5) Extremely Important.

The latent constructs of collaborative goal setting, nonnegotiable goals for achievement and instruction, Board of Trustee alignment and support of district goals, monitoring goals for achievement and instruction, use of resources to support achievement and instruction goals and defined autonomy were surveyed to determine the strength of the relationship between each factor and to each measure of the dependent variable, student performance as evaluated by the TAKS. The data gathered in this study lend themselves well to a quantitative analysis, with the complexity and number of different variables and categories providing evidence of statistical analyses of the data for this study.

Data for the study was collected pertaining to the perceived leadership practices and responsibilities of the superintendency. The population for the study was the superintendents of each public school district in Texas in place at the time of the survey. The population excluded those superintendents who are served by ESC Region 13, Austin, Texas as this was the pilot study population. An invitation to participate in the study was sent via email to the superintendents defined by the study with a link to the survey instrument.

The survey instrument consisted of 50 questions pertaining to superintendent practices and 5 demographic questions. The survey instrument was launched on August 17, 2009 and data was collected on September 17, 2009. The Superintendent Perception of Practice was developed from the identified practices of effective superintendents identified in *School District Leadership that Works: The Effect of Superintendent Leadership on Student Achievement* by J. Timothy Waters, Ed.D. and Robert J. Marzano, Ph.D. (Waters & Marzano, 2006). The survey instrument was fundamentally the same survey instrument used in the pilot study but for the following changes:

- 1) The five demographic questions in the original survey were repositioned in the current survey as the final five questions of the document. This change was brought about due to three pilot survey respondents answering only the demographic information and overlooking the 50 items probing the superintendent leadership practices.
- 2) The demographic question regarding district size was modified from use of the University Interscholastic League (UIL) classification system to categories of district

size based on a range of student populations used by TEA in their classification of district size.

- 3) Although none of the questions were changed, the 50 items were re-ordered to prevent a patterned response from those completing the survey. The pilot survey was arranged so that all questions pertaining to a particular construct were identified by construct and grouped together. The researcher was concerned that respondents would value all items for a construct with the same ranking.

The survey instrument “Superintendent Perception of Practice” is presented in the appendix of this document as Appendix B.

The survey was developed using a software design program called SurveyMonkey which enabled the researcher to manage the data collection process through an invitation generator, an automated email notification, and list management feature to track survey responses. A web link was provided on an email initiated by the researcher that enabled each participant uncomplicated access to the online survey. Participants had online access to the survey for a four week period. Through the SurveyMonkey website, data collected from respondents was stored by a third party, secure site for later access by the researcher.

A cover letter explaining the survey and confidentiality of subjects prefaced the survey. The cover letter for the survey is shown in Appendix C. A second request for superintendents to participate in the study was sent via email two weeks after the launch of the survey. The second request is presented in Appendix D.

Confirmatory factor analysis models and structural equation models were created to describe the relationships of variables with one another and with student achievement. Several limitations may have existed within this study. It is possible that only strong superintendents responded to the questionnaire. There may have been concern among the superintendents that the survey responses could reflect poorly on them as leaders. This study was limited to Texas superintendent's ratings of their use of the following leadership practices identified by McREL: (1) goal setting process, (2) nonnegotiable goals for achievement and instruction, (3) board alignment with and support of district goals, (4) monitoring goals for achievement and instruction, (5) use of resources to support the goals for achievement and instruction, and (6) defined autonomy (Waters & Marzano, 2006). The study was further limited by the fact that respondents to the survey participated on a voluntary basis. The results could be skewed if several schools of a particular demographic mix chose to not participate. Additionally there may be factors other than the six practices included in the survey for a superintendent to influence student achievement; however this study measured only the correlation of the listed practices.

This study was restricted to the total population of superintendents in the state of Texas (N=1031). The survey was based upon six identified practices with accompanying activities developed by Mid Continent Regional Educational Laboratory (McREL). Because NCLB requires each state to develop its own benchmark test, the researcher chose to measure only Texas correlations because no national standard is currently available.

Population

Although there are 1,031 public school districts in the state of Texas, the survey population was comprised of 974 superintendents due to the removal from the population of the 57 superintendents from ESC Region 13, Austin, Texas, who made up the pilot study. The sample selected represented a majority of the school districts (94.47%) found in the state of Texas. Texas is comprised of people from a variety of ethnic, language, cultural and economic backgrounds, and the superintendents sampled in the study represent school districts that reflect the demographic diversity of the state.

Of the 974 possible participants in the study, the population was further refined by asking superintendents who were not in their district during the 2007 – 2008 school year to refrain from responding. From this population, 300 respondents (27.75% of the state or 30.80% of the study population) completed the instrument within the data collection window.

Instrumentation

The data collected for the purposes of this study was derived wholly from a survey of superintendents in the state of Texas and their responses to a survey instrument probing the effect of the superintendent on student performance. The survey used in this study, Superintendent Perceptions of Practice, was developed by the researcher to gather quantitative data to analyze the perceptions of superintendents with regard to latent constructs of superintendent leadership. Student performance data was collected from the 2007-2008 Academic Excellence Indicator System (AEIS) report. This data reflected

the academic performance of students in mathematics, science, social studies, and English/Language Arts for each of the 300 responding superintendents' school districts.

The data collection instrument developed for this research was disseminated using an electronic email distribution list comprised of the 974 superintendents identified for the population. Each superintendent identified in the population received an electronic cover letter explaining the background of the research project, its purpose, procedures, and a link to the survey. The Superintendent Perception of Practice was made available through a link to an off-site host. Responses from each participating superintendent were collected in an electronic data base, secured by a third party host, accessible by the researcher for purposes of data analysis.

Additional descriptive information was collected from participants in the study as well. Participants' years of service (longevity) as the superintendent in the current district, total years of experience as a superintendent, AEIS rating of the district from the 2007-2008 student performance data, gender, and size of the district the respondent is currently employed by was probed.

The rate of response may have been affected by the time of the year the surveys were sent. Requests for participation in the study were sent in mid-August which is just prior to the 2008-2009 release of AEIS results and coincides with the start of school for most districts. It is possible that these events may have had an impact on the superintendents' decision to participate or not participate in this study.

The Superintendent Perception of Practice (SPP) focused on six, district level leadership practices or constructs. The first construct of district level leadership

responsibilities was identified as *collaborative goal setting* in which the superintendent involves board members and principals in the process of setting goals for the district. The second construct of district level leadership responsibilities was *nonnegotiable goals for achievement and instruction* where the goals for student achievement and the instructional program are adopted and based on relevant research. The third construct was *board alignment and support of district goals* indicating the necessity for board members' support for district goals for achievement and instruction. The fourth construct of district level leadership was *monitoring goals for achievement and instruction* where the superintendent monitors and evaluates implementation of the district instructional program, the impact of instruction on achievement, and the impact of implementation on the implementers. Construct five identifies the *use of resources to support achievement and instruction goals* as a leadership responsibility of superintendents where resources are dedicated and used for professional development of teachers and principals to achieve district goals. The sixth construct is identified as *defined autonomy* where the superintendent provides autonomy to principals to lead their schools, but expects alignment on district goals and use of resources for professional development.

The survey instrument consisted of 50 items pertaining to these superintendent practices and 5 demographic questions. Each of the 50 items required the respondent to rate their perception of leadership characteristics and superintendent responsibilities by level of importance on a Likert-type scale where a response of five (5) indicated a practice that is considered extremely important to the superintendent and a response of

one (1) indicated a practice that has no importance to the superintendent. Table 10 identifies the survey instrument constructs and related survey instrument items.

The Superintendent Perception of Practice was developed using the identified responsibilities of effective superintendents from *School District Leadership that Works: The Effect of Superintendent Leadership on Student Achievement*, by J. Timothy Waters, Ed.D. and Robert J. Marzano, Ph.D. (2006) with reliability and validity established through the pilot study. Responses from each participating superintendent were collected in an electronic data base for purposes of data analysis. The survey instrument was made available to respondents through an electronic link to an off-site host.

TABLE 10. District Level Leadership Constructs and Survey Instrument Items

Leadership Constructs	Items
Collaborative Goal Setting	1, 7, 15, 22
Establishment of Nonnegotiable Goals for Achievement and Instruction	2, 8, 16, 23, 29
Board of Trustee Alignment and Support of District Goals	3, 9, 17, 24, 31, 35
Monitoring Goals for Achievement and Instruction	4, 10, 18, 25, 32, 37, 39, 42
Use of Resources to Support Goals for Achievement and Instruction	5, 11, 19, 26, 40
Defined Autonomy	6, 12, 13, 14, 20, 21, 27, 28, 30, 33, 34, 36, 38, 41, 43, 44, 45, 46, 47, 48, 49, 50

Descriptive information was also collected from participants in the study. The longevity of the superintendent in the current district, total years of experience as a superintendent, AEIS rating of the district from the 2007-2008 student performance data, gender, and size of the district the respondent is currently employed by were probed. Respondents were asked to provide their Texas Education Agency assigned county and district number that would allow the researcher to cross reference participants with their 2008 TAKS data.

The survey instrument used in this study was developed specifically for the present study. All of the factors in this study's structural equation models were identified through the review of the previous literature, focusing on Waters & Marzano's (2006) findings. The statements developed for the Superintendent Perception of Practice were formatted from the factors as they were described in the literature.

Procedures

Data for this study was collected pertaining to the perceived leadership characteristics and responsibilities of the superintendency. The population for this study was defined as all Texas public school superintendents, excluding those whose districts are served by Education Service Center 13 in Austin, Texas. The superintendents whose districts are served by ESC 13 (n=57) were excluded from this study because they served as the pilot study population. Invitations to participate in the survey were sent electronically to the 947 superintendents defined by the study with a link to the survey instrument shown in Appendix B.

Included in this invitation to participate were further instructions to define the population of superintendents in the study to those who were in place at their district during the 2007-2008 school year. Information was also provided explaining the survey and confidentiality of subjects and that only the researcher would know from which schools the responses came. An informed consent statement was included as an attachment to assure respondents that their individual responses to the survey would be kept anonymous and confidential. Individuals were provided notice that their participation was strictly voluntary and that they could withdraw from the study at any time without fear of penalty.

AEIS Data

District achievement results for the 2007-2008 school year were collected through the Texas Education Agency's Web page (<http://www.tea.state.tx.us/>) which allowed for 2007-2008 statewide AEIS data to be downloaded into an Excel spreadsheet. Student performance data was retrieved for each district from which a superintendent responded. The study focused on four academic areas from the "All Students, Grade 3-11" data. Four data files were used to create the dependent variable, student performance. These four files were: (1) DA311TM08R -- Grades 3-11, Mathematics, 2008, All Students; (2) DA311TS08R -- Grades 3-11, Social Studies, 2008, All Students; (3) DA311TC08R -- Grades 3-11, Science, 2008, All Students; and (4) DA311TR08R -- Grades 3-11, Reading/English Language Arts, 2008, All Students.

Data Analysis

This study attempted to answer the following research questions:

1. What relationships exist between student achievement as measured by the Texas school accountability rating system and the superintendent's valuing of collaborative goal setting?
2. What relationships exist between student achievement as measured by the Texas school accountability rating system and the superintendent's valuing of nonnegotiable goals for achievement and instruction?
3. What relationships exist between student achievement as measured by the Texas school accountability rating system and the superintendent's valuing of Board of Trustee alignment and support of district goals?
4. What relationships exist between student achievement as measured by the Texas school accountability rating system and the superintendent's valuing of monitoring goals for achievement and instruction?
5. What relationships exist between student achievement as measured by the Texas school accountability rating system and the superintendent's valuing of use of resources to support achievement and instruction goals?
6. What relationships exist between student achievement as measured by the Texas school accountability rating system and the superintendent's valuing of defined autonomy?

The analysis of data provided some answers to these questions. The statistical techniques of principal axis factoring, exploratory factor analysis (EFA), confirmatory factor analysis (CFA), and structural equation modeling (SEM) were employed.

Principal axis factoring is a factor analysis technique used to explore the underlying structure of a collection of observed variables. This statistical technique is used to reveal any latent variables that cause the manifest variables to covary. During factor extraction the shared variance of a variable is partitioned from its unique variance and error variance to reveal the underlying factor structure (Field, 2005).

Confirmatory factor analysis is a form of factor analysis used to assess the number of factors and the loadings of variables. Confirmatory factor analysis is used as a first step to assess the proposed measurement model in structural equation modeling. In regard to structural equation modeling, Klem (2000) stated, “The measurement part of the model corresponds to factor analysis and depicts the relationship of the latent variables to the measured variables” (p.230). An attempt was made to identify the appropriate model in order to confirm the causal flow from each latent variable to the attached observed variables of the model. In order to assess the fit, the EQS software program produced indices that reflected whether or not the model provided a good fit for the data. For model specification, the paths among the variables were initially generated based on Waters and Marzano’s (2006) research.

Observed variable path analysis is a test of the structural model “comprising theoretically based statements of relationships among constructs” (Kelloway, 1998, p.81). Path analysis assumes that all variables are measured without error. For model

specification, the paths among the variables were generated based on previous research. The model was then estimated using the EQS software (Bentler, 2007). Based on the software estimates, it was then possible to add or delete paths to create a better model fit.

Latent variable path analysis allows researchers to incorporate measurement and structural consideration in estimating a complete model (Kelloway, 1998, p.103). According to Kelloway, there are two components to a structural equation model that must be considered during model specification: (1) “the structural model specifies the predictive relationship among the latent variables,” and (2) “the measurement model defines how the latent variables are measured” (p.103). With these components in mind, a model for the present study was designed and the model was assessed for fit, then for structure. The fit for the measurement model provides a baseline for the fit of the full latent variable model. EQS software (Bentler, 2007) was used to estimate and assess the fit of the model.

The examination of the influence of the superintendent on student performance was conducted using accepted quantitative measures. After responses were collected from the participating superintendents, the data was analyzed and interpreted using graphic techniques and numerical interpretations. The data gathered from the survey instrument was entered into a Microsoft Excel format using a personal computer.

A hypothesized model was created which postulates a priori that superintendent leadership is a six-factor structure composed of: (a) collaborative goal setting, (b) nonnegotiable goals for achievement and instruction, (c) board alignment and support of district goals, (d) monitoring goals for achievement and instruction, (e) use of resources

to support achievement and instruction goals, and (f) defined autonomy. It is hypothesized that the dependent variable, student performance, is influenced by each independent variable in the model. A review of the survey data was initially conducted using Statistical Package for the Social Sciences (SPSS), version 16.0 (SPSS for Windows, 2007). Using EQS for Windows version 6.1, a confirmatory factor analysis was conducted on the hypothesized model to determine the relationships between superintendent responsibilities and student performance. Each factor was labeled and measured by at least three variables to determine the relationship between superintendent leadership and the identified latent constructs.

Maximum likelihood estimation was used. Model fit was determined using Chi Square, the Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA), and the Standardized Root Mean Square Residual (SRMR). Good model fit was determined if $CFI > .90$ or $RMSEA < .06$. Multivariate kurtosis as measured by the normalized estimate of Mardia's coefficient was included. Multiple executions of the model were conducted to determine good model fit.

This study attempted to explain the relationships among the variables through structural equation modeling. A model was created based on the theoretical foundation established in Chapter II of this study. Data from the survey of superintendents and their perceptions of how the practices of collaborative goal setting, development of nonnegotiable goals for achievement and instruction, board alignment and support of district goals, monitoring of goals for achievement and instruction, use of resources to support achievement and instructional goals, defined autonomy, and student

achievement data were entered into a correlation matrix which was then entered into the EQS software to obtain parameter estimates (Klem, 2000).

Hypothesized Model

A hypothesized model was proposed for the study that postulates a priori that superintendent leadership practices effecting student performance is a six-factor structure identified as follows: Factor 1 – *Collaborative Goal Setting*, Factor 2 – *Development of Nonnegotiable Goals for Achievement and Instruction*, Factor 3 – *Board Alignment and Support of District Goals*, Factor 4 – *Monitoring of Goals for Achievement and Instruction*, Factor 5 – *Use of Resources to Support Achievement and Instructional Goals*, and Factor 6 – *Defined Autonomy*. The dependent variable is a multi-faceted component defined by student academic performance in TAKS subject areas summed across grades 3-11.

In this hypothesized model, it was predicted that each area of student performance was influenced by each independent variable in the model (collaborative goal setting, development of nonnegotiable goals for achievement and instruction, board alignment and support of district goals, monitoring of goals for achievement and instruction, use of resources to support achievement and instructional goals, and defined autonomy). Collaborative goal setting is identified as factor 1 and is shown to have an effect on each of the remaining factors of development of nonnegotiable goals for achievement and instruction, board alignment and support of district goals, monitoring of goals for achievement and instruction, use of resources to support achievement and instructional goals, and defined autonomy. Development of nonnegotiable goals for

achievement and instruction was identified as factor 2. It was hypothesized that this factor has an impact on each of the other five factors in the model as well. Board alignment was identified as factor 3. It is hypothesized that this factor has an impact on factor 1 and factor 2 as well as factor 4 and factor 5. It was not hypothesized to have an impact on factor 6. Factor 4, monitoring goals for achievement and instruction, was hypothesized to impact factors 1, 2, 3 and 5, but not on factor 6. Factor 5 was identified as use of resources to support the goals for achievement and instruction. This factor was hypothesized to impact factors 1, 2, 3, and 4, while not influencing factor 6. The final factor of the hypothesized model is factor 6, defined autonomy. This factor was hypothesized to impact factors 1 and 2. Each of these six factors was hypothesized to directly impact student achievement.

The hypothesized model was created based on the theoretical foundation formulated by the relationship between superintendent leadership and student performance described in Chapter II. The student performance measures of mathematics, science, social studies and English/Language Arts are measures identified in the Academic Excellence Indicator System (AEIS) report that primarily constitute the annual performance ratings for Texas public schools. The data from the measures was representative of the respondents participating in the survey. District level 2008 TAKS results were used as the performance measure.

The focus of this study is centered on six specific areas of superintendent leadership and the impact that those leadership practices have on student success. As hypothesized by the influence of superintendent leadership and the relationships that

exist between the latent constructs (collaborative goal setting, development of nonnegotiable goals for achievement and instruction, board alignment and support of district goals, monitoring of goals for achievement and instruction, use of resources to support achievement and instructional goals, and defined autonomy) correlations between each factor are shown and indicated by double headed arrows in the model. Student achievement measured by subject area performance on the 2008 Texas Assessment of Knowledge and Skills in mathematics, science, social studies, and English/Language Arts as summed across grades 3-11 for districts responding to the survey is reflected in the model and is hypothesized to be directly influenced by each of the latent constructs. A single headed arrow, which represents a regression path, exists to show the inferred relationship between each latent construct and the dependent variable. The hypothesized model is shown in figure 1.

Summary

Chapter III presented an overview of the methodology used for this study. The pilot study was described in detail to establish the validity and reliability of the survey instrument measuring superintendent responses to identified superintendent practices and their influence on student performance. This survey instrument was identified as the Superintendent Perception of Practice (SPP). Details of the present study were then provided revealing a population and sample that should generalize to all Texas public school districts with regard to the influence of the superintendent on student performance. The supporting literature and rationale for the development of the research instrument was provided as well. A summary of the data collection process detailing the

methods for the dissemination of the research instrument, Superintendent Perception of Practice, was offered. A description of the hypothesized model, including a figure diagram of the model, concluded Chapter III.

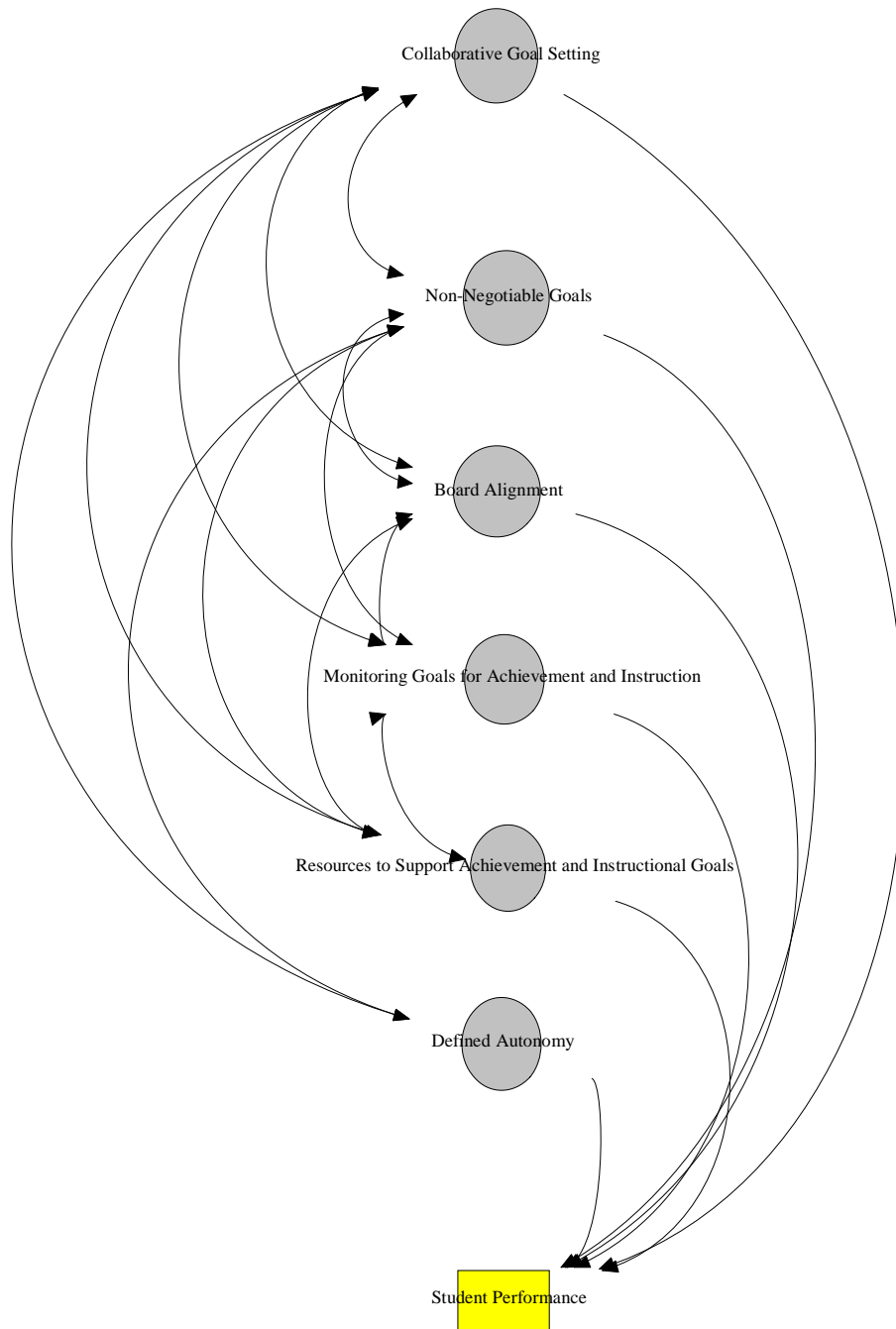


FIGURE 1. Hypothesized Model

CHAPTER IV

DATA ANALYSIS

Introduction

The purpose of this study was to examine the relationship between unobservable superintendent characteristics that influence student achievement as annually measured by the Texas Assessment of Knowledge and Skills. Defined by the research of Waters and Marzano (2006) and a comprehensive review of the literature on organizational and educational leadership, this study focused on six latent constructs of superintendent leadership: collaborative goal setting, development of nonnegotiable goals for achievement and instruction, board alignment and support of district goals, monitoring of goals for achievement and instruction, use of resources to support achievement and instructional goals, and defined autonomy.

In this chapter, the analytical approach in testing the measurement model of superintendent leadership practices is presented. A series of preliminary analysis is initially described to address multivariate assumptions and data screening concerns. A hypothesized 6-factor structure and an alternative 2-factor structure model were tested. The final section outlines the attempt to test a structural model which depicts the relationship between student achievement and leadership practices.

Collection of Data

A 50-item survey was developed based on the literature to measure superintendents' influence on student achievement. Participants were asked to respond using a Likert-type scale of 1 (no importance) to 5 (extremely important). An email explaining the intent of the survey and containing a link to the electronic survey instrument was sent to 957 superintendents in the state of Texas. As part of the sampling procedure, filtering statements were added to eliminate respondents who were not serving in their present capacity during the 2007-2008 school year. Three hundred superintendents responded to the survey, which represents a 31.45% response rate.

The district performance data used for this study were the Academic Excellence Indicator System (AEIS) student performance data from the 2007-2008 academic year. The AEIS is the standard used by the TEA to determine school effectiveness. The AEIS identifies school district performance using four ratings: Exemplary, Recognized, Academically Acceptable, and Academically Unacceptable. Descriptive statistics run on the sample found that 161 respondents (53.7%) represented school districts rated as Academically Acceptable by the Texas Academic Excellence Indicator System (AEIS) as compared to 66.6% of the districts state-wide being rated as Academically Acceptable. The percentage of districts in the state that met the Recognized standard was 26.8%, while 122 respondents (40.7%) represented school districts rated as Recognized. Thirteen respondents (4.3%) were representative of Exemplary rated school districts as compared to 3.5% across the state. Only one respondent (0.3%) indicated their district

was rated as Academically Unacceptable as compared to the state percentage of 2.6. The AEIS district ratings for respondents are reflected in Table 11.

TABLE 11. District AEIS Accountability Ratings

Accountability Rating	Frequency	Response Percent	State Performance
Academically Unacceptable	1	0.3%	2.6%
Academically Acceptable	161	53.7%	66.6%
Recognized	122	40.7%	26.8%
Exemplary	13	4.3%	3.5%
Missing	3	1.0%	

Longevity in the current superintendency was probed and is shown in Table 12. The majority of respondents (134 or 44.7%) indicated longevity in their current position of two years or less prior to the 2007-2008 school year. Of the remaining respondents, 63 (21.0%) indicated they had been in the district from 3 to 5 years, 60 (20.0%) reported being in their current position for 6 to 8 years, 21 (7.0%) responded as being in their current position for 9 to 11 years, and 19 (6.3%) reported having been in their current superintendency for 12 or more years.

TABLE 12. Superintendent Longevity in Current District

Years	Frequency	Response Percent
12+	19	6.3%
9 to 11	21	7.0%
6 to 8	60	20.0%
3 to 5	63	21.0%
0 to 3	134	44.7%
Missing	3	1.0%

Experience in the capacity of superintendent of schools was probed and is reflected in Table 13. Superintendents with 2 years or less experience as a superintendent were represented by 90 respondents (30.0%) while 75 respondents (25.0%) indicated they had served as a superintendent of schools for 12 or more years. Within this inquiry, 45 respondents (15.0%) indicated total superintendent experience to be 3 to 5 years, 55 or 18.3% indicated 6 to 8 years experience as a superintendent, and 32 respondents (10.7%) indicated 9 to 11 years of experience in the superintendency.

TABLE 13. Total Years Experience as a Superintendent

Years	Frequency	Response Percent
12+	75	25.0%
9 to 11	32	10.7%
6 to 8	55	18.3%
3 to 5	45	15.0%
0 to 3	90	30.0%
Missing	3	1.0%

Descriptive statistics indicated 247 respondents (83.0%) were male and 50 respondents (16.0%) were female. Of the 300 respondents to the survey, 3 respondents (1.0%) did not answer this item. Gender information is reported in Table 14.

TABLE 14. Gender of Respondents

Gender	Frequency	Response Percent
Male	247	83.0%
Female	50	16.0%
Missing	3	1.0%

The respondents represented school districts with populations of varying sizes as demonstrated in Table 15. The majority of the respondents were representative of small school districts with 128 (42.7%) indicating they represented school districts with 999 or less students. School districts with populations from 1,000 to 2,999 were represented by 85 (28.3%) respondents, districts with populations ranging from 3,000 to 4,999 had 31 (10.3%) respondents, districts with populations ranging from 5,000 to 9,999 had 22 (7.3%) respondents, and respondents representing districts with greater than 10,000 students were 31 (10.3%). This population distribution is similar to that of the state of Texas.

TABLE 15. District Size

Population	Frequency	Response Percent	State Percent
10,000+	31	10.3%	7.6%
5,000 – 9,999	22	7.3%	5.8%
3,000 – 4,999	31	10.3%	7.0%
1,000 – 2,999	85	28.3%	21.0%
999 or less	128	42.7%	58.7%
Missing	3	1.0%	

Data Reduction

The 50-item measure of superintendent practices was made up of six dimensions: 1) collaborative goal setting; 2) nonnegotiable goals for achievement and instruction; 3) Board of Trustee alignment and support of district goals; 4) monitoring goals for achievement and instruction; 5) use of resources to support achievement and instruction goals; and 6) defined autonomy. Data reduction was the initial method used to analyze the data using the SPSS software. All fifty items and the responses from the 300 participating superintendents were included in the analysis. The *Univariate descriptives* option was selected to provide the mean and standard deviation for each variable. The *Coefficients* option was selected to produce the R-matrix, and the *Significance levels* option was selected to produce a matrix indicating the significance value of each correlation in the R-matrix. To test for multicollinearity the *Determinant* of this matrix was requested and found to be 2.98E-010 which is greater than .00001 and indicates no multicollinearity. The correlation matrix was screened to determine if values existed that

were too high with values greater than .9, or too low with values less than .1. Correlations that are .9 or greater may measure the same variable while correlations that are .1 or less may allow one or more of the variables to load only onto one factor, making its own factor. The objective of this analysis was to reduce the number of variables. Variables with correlations that were .9 or greater, and those that were .1 or less were deleted.

Item Analysis

Item analysis statistics were run for the fifty items of the survey instrument using all responses from the 300 superintendents who participated in the study. Analysis of the correlation matrix revealed survey item correlation values between variables. Correlation values below .1 were identified for the following items: Q1, Q3, Q14, Q20, Q38, Q46, and Q49, suggesting that these seven variables be deleted. Forty-three of the fifty survey items were retained.

Table 16 displays the mean and standard deviation for each item that was not deleted following the correlation matrix analysis. All responses to the retained items for the superintendent's survey were within 1.035 standard deviations from the mean.

TABLE 16. Mean and Standard Deviation for Retained Items

	Item	Mean	Standard Deviation
2.	Modeling understanding of instructional design.	1.64	.651
4.	Using an instructional evaluation program that accurately monitors implementation of the district's instructional program.	1.67	.747
5.	Adopting an instructional and resource management system supporting implementation of the district's instructional philosophy.	1.97	.819
6.	Providing the expectation and support for principals to lead within the boundaries defined by the district goals.	1.21	.490
7.	Using the goal setting process to set goals developed jointly by the board of trustees and administration.	1.68	.712
8.	Establishing clear priorities among the district's instructional goals and objectives.	1.46	.619
9.	Establishing agreement with the board of trustees on the type and nature of conflict in the district.	2.20	.899
10.	Monitoring student achievement through feedback from the instructional evaluation program.	1.43	.638
11.	Providing extensive teacher and principal professional development.	1.59	.724
12.	Using standards for content and instruction for basic design principles.	1.88	.760
13.	Committing the district and schools to continuous improvement.	1.27	.503
15.	Developing goals that are coherent and reflect attendant values which support involvement and quality in achievement.	1.81	.727

TABLE 16. Continued

	Item	Mean	Standard Deviation
16.	Adopting instructional methodologies that facilitate the efficient delivery of the district's curriculum.	1.65	.695
17.	Along with the board of trustees, remaining situationally aware and agreeing on the political climate of the school district.	2.01	.866
18.	Using a system to manage instructional change.	2.01	.862
19.	Training all instructional staff in a common but flexible instructional model.	1.89	.853
21.	Rewarding successful teachers and terminating the employment of unsuccessful teachers.	1.72	.791
22.	Communicating performance expectations to central office staff and principals.	1.39	.599
23.	Incorporating varied and diverse instructional methodologies that allow for a wide range of learning styles that exist in a multi-racial student population.	1.80	.814
24.	Establishing agreement with the board of trustees on the nature of teaching and learning strategies to be used by the district.	2.76	1.012
25.	Annually evaluating principals.	1.59	.764
26.	Controlling resource allocation.	1.81	.793
27.	Establishing teacher evaluation as a priority for principals.	1.70	.782
28.	Ensuring that principals speak with teachers about results.	1.24	.486
29.	Adopting 5 year nonnegotiable goals for achievement and instruction.	2.54	1.035
30.	Establishing strong agreed upon principles or values which direct the actions of people within the organization.	1.74	.743
31.	Providing professional development for board members.	2.17	.897
32.	Reporting student achievement data to the board of trustees on a regular basis.	1.91	.842
33.	Ensuring that schools have a clear mission focused on school performance.	1.42	.620
34.	Rewarding students beyond standard honor rolls and recognition assemblies for exceptional performance.	2.34	.909

TABLE 16. Continued

	Item	Mean	Standard Deviation
35.	Establishing agreement with the board of trustees on the effectiveness of board training.	2.25	.908
36.	Ensuring that school practices are characterized by opportunity for all students to learn.	1.45	.613
37.	Ensuring that the curricular needs of all student populations are met.	1.40	.612
39.	Observing classrooms during school visits.	1.89	.885
40.	Providing access to professional growth opportunities through the design of a master plan to coordinate in-service activities of the district.	1.95	.802
41.	Ensuring that homogeneous ability groupings within classrooms do not segregate students into racial or other inappropriate groups.	2.12	.998
42.	Coordinating efforts of individuals and groups within the organization to increase reliability of the system, with adjustments by individuals to quickly respond to system failures.	2.10	.838
43.	Providing leadership in curriculum development.	1.72	.700
44.	Including socializing functions in district meetings.	2.56	.862
45.	Developing principal awareness of district goals and actions directed at goal accomplishment.	1.54	.666
47.	Promoting innovation.	1.63	.654
48.	Expecting principals to fulfill instructional leadership responsibilities.	1.22	.496
50.	Directing personnel operations to ensure a stable yet improving and well-balanced work force.	1.73	.758

The preliminary analysis involved determining the reliability coefficients of each dimension. Items with low inter-item correlations ($r < .30$) were excluded from the succeeding analyses. Table 17 shows the reliability coefficients and the items retained for each of the dimensions.

TABLE 17. Reliability Coefficients

Dimensions of Superintendent Practices	Reliability Coefficient (α)	Items Retained
1) collaborative goal setting	.56	7, 15, 22
2) nonnegotiable goals for achievement and instruction	.70	2, 8, 16, 23, 29
3) Board of Trustee alignment and support of district goals	.76	3, 9, 17, 24, 31, 35
4) monitoring goals for achievement and instruction	.74	10, 18, 25, 32, 37, 39, 42
5) use of resources to support achievement and instruction goals and student achievement	.75	5, 11, 19, 26, 40
6) defined autonomy	.85	6, 12, 13, 21, 27, 28, 30, 33, 34, 36, 41, 43, 44, 45, 47, 48, 50

Following the deletion of the seven variables identified above, the data was again subjected to data reduction analysis with no additional items being identified in the correlation matrix for deletion. Multicollinearity was again tested for and found to be $8.18E-009$, which is greater than $.00001$ and indicates no multicollinearity. Two tests, Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity were run on the data set to determine if factor analysis should be conducted. Kaiser-Meyer-Olkin (KMO) measures the sampling adequacy of the data set and should exceed $.5$ for a satisfactory factor analysis to proceed. The KMO measure of sampling adequacy is an index for comparing the magnitudes of the observed correlation coefficients to the magnitudes of the partial correlation coefficients. Large values for the KMO confirm that a factor analysis of the variables is appropriate. For this data set the KMO was $.928$ which indicates the sample size is adequate for factor analysis.

Bartlett's test of sphericity is another indicator of the strength of relationship among variables. Bartlett's test of sphericity is used to test the null hypothesis that the variables in the population correlation matrix are uncorrelated. The observed significance level is 0.001 . It is small enough to reject the hypothesis and indicates that the strength of the relationship among the variables is strong, suggesting that the researcher proceed with a factor analysis for the data. KMO and Bartlett's Test results are shown in Table 18.

TABLE 18. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.928
Bartlett's Test of Sphericity Approx. Chi-Square	5285.434
df	903.000
Sig.	.001

The anti-imaging correlation matrix was produced to determine the sampling adequacy for each variable. All of the diagonal elements representing each item were found to exceed the minimum value of .5 and were determined to be adequate in regard to sample size.

Communalities were determined for each variable. The communalities indicated the proportion of each variable's variance that can be explained by the underlying latent continua. Variables with high values are well represented in the common factor space, while variables with low values are not well represented. Communalities are the extent to which an item correlates with all other items.

The remaining items were then reduced to form three parcels for each dimension. The parcels were derived by computing the mean of the items randomly assigned to it. Parceling is a standard item reduction procedure in SEM, especially if there are many items measuring a variable. By combining multiple items into a parcel, the standard

errors are reduced. There is no hard and fast rule for the decision regarding the number of parcels. The minimum number is two but more than two is better because again, this would reduce the standard errors of the parcel scores. There is a trade-off to be considered. More parcels would mean additional parameters to estimate and would therefore require larger samples. Considering the number of respondents ($n=300$) and the total number of items to be reduced into parcels, three is an optimal choice for this data set.

Table 19 summarizes the item assignment of each parcel. Note that collaborative goal setting had only three items. Each of these items was considered as single parcels. The values derived for each of the parcels were used as the manifest indicators of each latent dimension.

Exploratory Factor Analysis

Exploratory factor analysis (EFA) is generally used to discover the factor structure of a measure and to examine its internal reliability. EFA is often recommended when researchers have no hypotheses about the nature of the underlying factor structure of their measure. Exploratory factor analysis has three basic decision points: (1) decide the number of factors, (2) choosing an extraction method, (3) choosing a rotation method.

TABLE 19. Distribution of Items in the Parcels

Dimensions	Items		
	Parcel 1	Parcel 2	Parcel 3
1) collaborative goal setting	7	15	22
2) nonnegotiable goals for achievement and instruction	16, 29	8, 2	23
3) Board of Trustee alignment and support of district goals	9, 3	35, 24	17, 31
4) monitoring goals for achievement and instruction	18, 39, 37	42, 32	10, 25
5) use of resources to support achievement and instruction goals and student achievement	40, 26	19, 5	11
6) defined autonomy	30, 44, 33, 6, 13	12, 34, 43, 41, 50	45, 47, 36, 48, 27

The 50 survey questions and the 300 responses from the superintendents were included in the factor analysis process. The factor analysis methods suggested by Field (2005) were employed to investigate the data and to conduct the steps of the analysis.

The manifest indicators (parcels) were subjected to an exploratory factor analysis (EFA) to check whether the parcels would load accordingly with their respective dimension. The literature suggests that the underlying factors should be related to each other. Waters and Marzano identified four major findings in their executive summary: (1) District-level leadership matters; (2) Effective superintendents focus their efforts on creating goal-oriented districts; (3) Superintendent tenure is positively correlated with

student achievement; and (4) Defined autonomy, indicating that an increase in building autonomy is associated with an increase in student achievement (Waters & Marzano, 2006, p.4). The most significant findings in support of superintendent leadership practices and student performance stem from finding two as identified by Waters and Marzano: “Effective superintendents focus their efforts on creating goal oriented districts” (p.3). This finding revealed five leadership practices that have a statistically significant correlation with student performance. The five leadership practices were identified as (1) collaborative goal setting – effective superintendents include central office staff, building administrators, and board members in the goal setting process; (2) nonnegotiable goals for achievement and instruction – effective superintendents ensure that goals for student achievement and classroom instruction include specific targets for schools and students; (3) board alignment and support of district goals – districts with high level of student performance have specific student performance goals that are supported by school boards that do not allow other initiatives to detract attention or resources from accomplishing those goals; (4) monitoring goals for achievement and instruction – effective superintendents continually monitor district progress toward achievement and instruction goals to ensure that these goals remain the driving force behind a district’s actions; (5) use of resources to support achievement and instruction goals – effective superintendents ensure that all campuses have the necessary resources such as time, money, personnel, and materials to accomplish the goals for student performance (Waters & Marzano, 2006, pp. 3-4).

Additional studies noted that superintendents who impact student performance excelled at maneuvering within the social constraints of their job. They initiated contacts and controlled meeting topics. They also controlled channels of information while organizing operations in the manner they desired (Hord, 1990). Instructionally driven superintendents “enact their instructional leadership roles through a broad array of activities including staff selection, principal supervision, establishing clear instructional goals, monitoring instruction, and financial planning to improve instruction” (Björk, 1993, p. 246). Theory suggests that the factors that emerged from the principal axis analysis might correlate which indicates an oblique rotation should be used.

Principal axis factoring with promax rotation and subsequent Kaiser Normalization indicated that a forced extraction of 6 factors do not reflect the expected loadings. When an oblique rotation is conducted, such as the promax rotation, two matrices are formed: the pattern matrix and the structure matrix. The pattern matrix contains the factor loadings while the structure matrix takes into account the relationship between factors. The pattern matrix is preferable for interpretative reasons because it contains information about the unique contribution of a variable to a factor (Field, 2005).

A subsequent exploratory factor analysis (EFA) was performed to exclude the parcels of “collaborative goal setting” considering that this dimension has a low reliability coefficient ($\alpha = .56$). This subsequent EFA reflects a two-factor distribution of the remaining parcels. One factor contains all the parcels of “Board of Trustee alignment and support of district goals.” All other parcels load highly on the second factor. This second factor contains the parcels identified with establishing nonnegotiable goals for

achievement and instruction, defined autonomy, monitoring goals for achievement and instruction, and resources to support goals for achievement and instruction, This two-factor distribution is shown in Table 20.

TABLE 20. Factor Loadings of the Parcels / Manifest Indicators

Parcels / Manifest Indicators	Factor Loadings	
	1	2
Auto P3	.869	
Monit P1	.749	
Auto P1	.719	
Reso P3	.699	
Monit P3	.695	
Auto P2	.661	
NonNeg P1	.627	
NonNeg P3	.577	
Monit P2	.544	
Reso P1	.517	
Reso P2	.512	
NonNeg P2	.489	
Align P2		.953
Align P3		.669
Align P1		.545

Reliability

Cronbach's alpha was calculated to compute a reliability index. Cronbach's alpha (α) is based on the internal consistency of items in the survey and this value was determined to be high at .97. Table 21 is a reflection of this observation.

TABLE 21. Reliability Statistics as Measured by Cronbach's Alpha

Cases	Cronbach's Alpha	Scale Mean	Standard Deviation
300	.97	53.68	27.86

Confirmatory Factor Analysis (CFA)

Confirmatory Factor Analysis (CFA) is employed when the researcher has some knowledge of the underlying latent variable structure, factor relationships, and then tests the hypothesized a priori statistically (Byrne, 2006). Using a confirmatory factor analysis approach, a model is tested using goodness-of-fit tests to determine if the pattern of variances and covariances in the data is consistent with a structural (path) model specified by the researcher. Prior to incorporating the dependent variable, student performance, into a structural equation model, a progression of confirmatory factor analysis models was constructed to test the factor loadings, relationships of the latent constructs, and to evaluate the goodness of fit of the model. CFA model 1 and CFA model 2 were measurement models underlying a full structural equation model (SEM). If the fit of the measurement model is found acceptable, then the researcher can proceed to

the second step of testing the structural model by comparing its fit with that of different structural models. Considering the results of the EFA, the subsequent test of the measurement model of superintendent practices involved the comparison of 2 models. Model 1 reflects the originally hypothesized 6-factor structure and model 2 reflects a 2-factor structure model. The two models were tested using confirmatory factor analysis (CFA). Model 1 is shown in Figure 2.

Testing the Measurement Models

Several descriptive statistics for the various manifest variables were generated. Almost all of the variables are significantly positively skewed. The normalized value of Mardia's Coefficient is 12.71 indicating multivariate kurtosis. As a result, the assumption of distributional normality was not addressed. It was not deemed necessary to transform the scores because robust statistics were used in the succeeding SEM analysis.

Inspection of bivariate scatter plots indicated that variables are linearly related. Further examination of the correlation matrix indicates that a significant number of correlations are within the mid-range (.25 to .50) and thus reflecting the factorability of the correlations and absence of singularity.

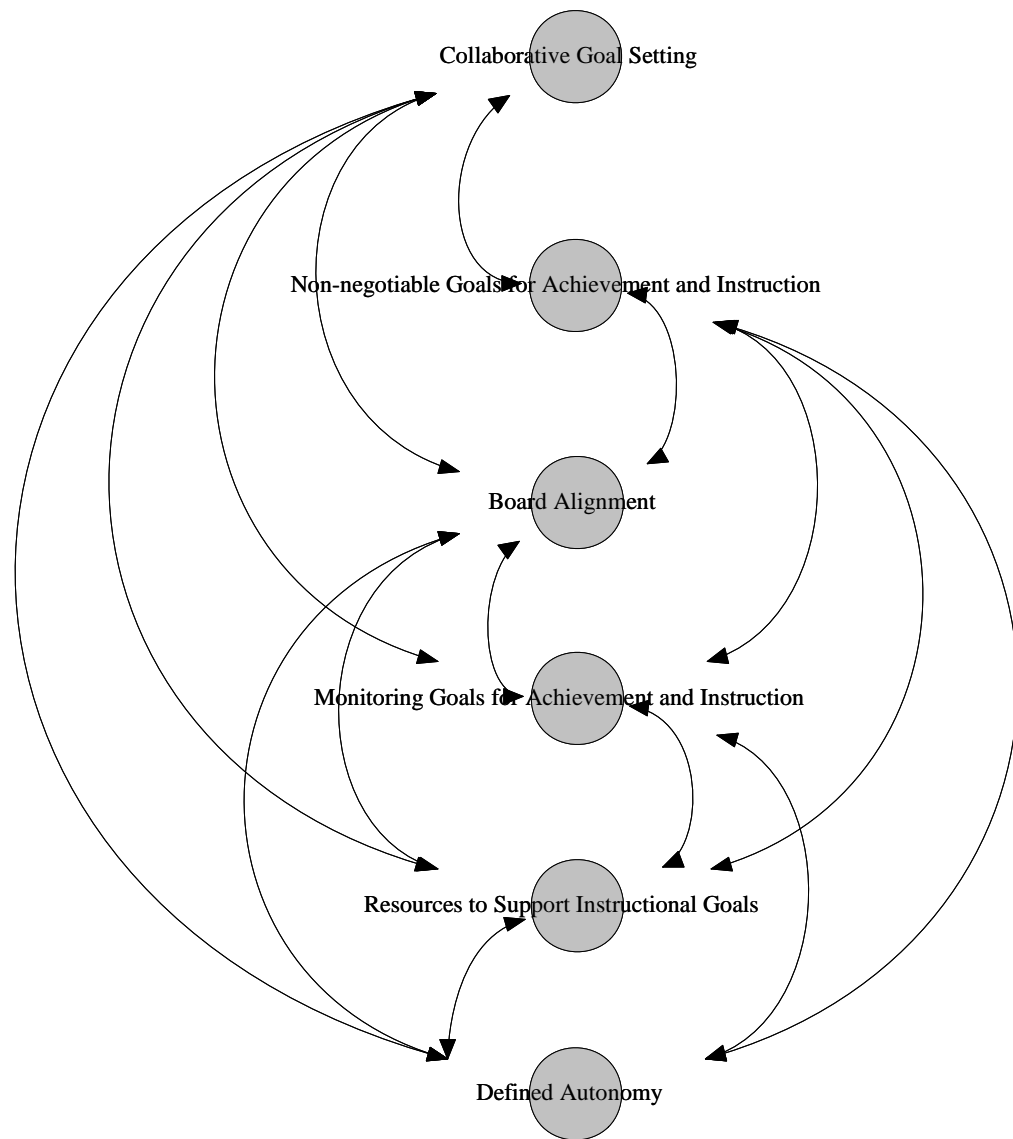


FIGURE 2. 6-Factor Confirmatory Factor Analysis Model

The CFA was run using the modeling software EQS 6.1. Maximum likelihood (ML) estimation was employed for generating the parameter estimates. Robust statistics incorporated the necessary corrections due to violations of the distributional normality assumption. Model fit was determined using Chi Square, the Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA), Normed Fit Index (NFI), and Non-Normed Fit Index (NNFI). Good model fit was determined if CFI, NFI, or NNFI $> .90$ or RMSEA $< .06$. Figure 3 presents the diagram of the 2-factor model with the corresponding standardized parameter estimates and factor loadings. The 5-factor CFA model, which includes all of the original factors with the exception of collaborative goal setting, follows and is shown in Figure 4.

Goodness-of-Fit

Goodness-of-Fit indices describe how well a model fits a set of observations. Measures of goodness-of-fit typically measure the difference between observed values and expected values of a model.

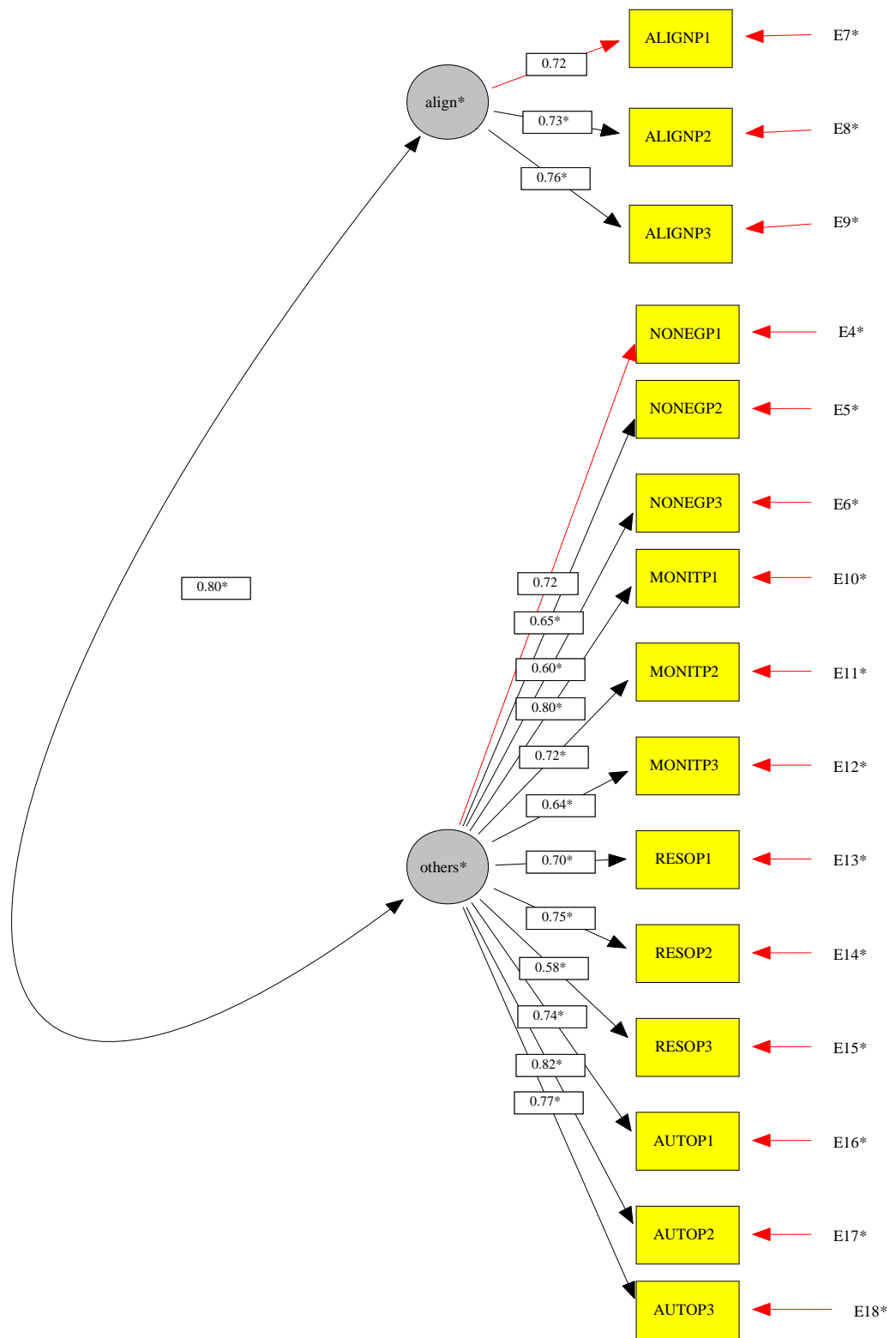


FIGURE 3. 2-Factor Confirmatory Factor Analysis Model

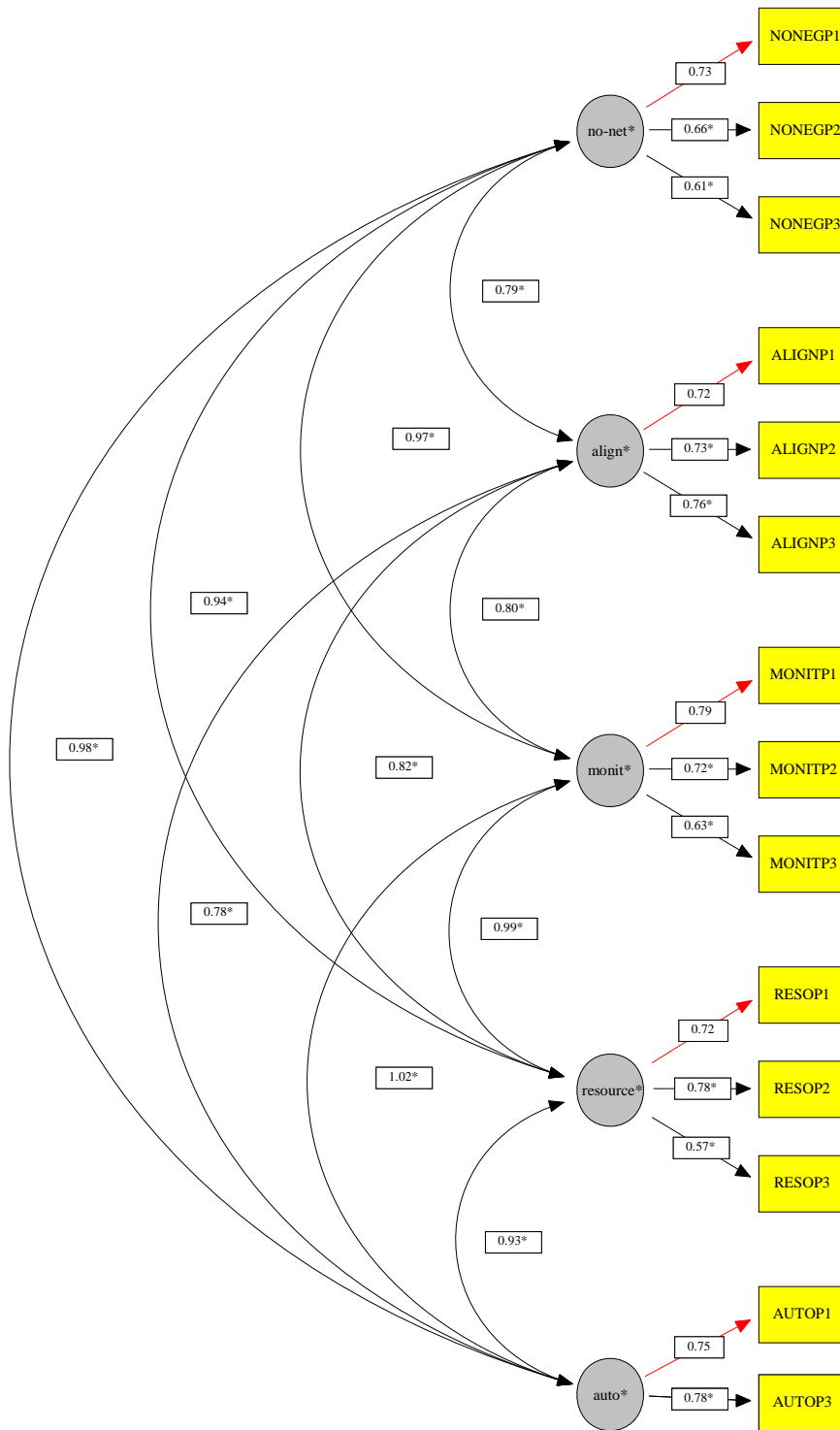


Figure 4. 5-Factor Confirmatory Factor Analysis Model

Goodness-of-fit indices are shown in Table 22 for the confirmatory factor analysis models. The table includes the following goodness-of-fit indices: Chi-square, degrees-of-freedom, comparative fit index (CFI), Root Mean-Squared Error of Approximation (RMSEA), normed fit index (NFI), and non-normed fit index (NNFI). Results show that data-model fit is not optimal for the originally hypothesized 6-factor model. The 5-factor model and the 2-factor model seem to be almost equivalent in terms of the various fit indices; however, an error message was provided in the EQS output file for the 5-factor model which indicated the output for this model was not to be trusted. Further analysis of the 5-factor model was not conducted.

TABLE 22. Summary of Fit Indices

Fit Indices	CFA Model 1 (6-Factor)	CFA Model 2 (2-Factor)
χ^2	663.73	206.71
	df =123	df = 89
	p<.001	p<.991
CFI	.80	.96
RMSEA	.11	.06
NFI	.77	.92
NNFI	.76	.95

Degrees of freedom (*df*) “is a function of the non-redundant pieces of information present in the matrix of associations being analyzed”, according to

Thompson (2000, p. 265). A lower df is an indication of fewer model parameters. The 2-factor CFA model had a smaller df measurement than the 6-factor CFA model and for this index presents a better fit.

Klem (2000) indicates that chi square (χ^2) assesses the size of discrepancies between observed (S) and implied (Σ) indices, in other words, the difference between S and Σ . The 2-factor CFA model had a lower χ^2 at 206.71 than the 6-factor CFA model at 663.73. A better model fit was indicated for the 2-factor CFA model as a result of the chi-square index.

The Comparative Fit Index (CFI) “adjusts the normed fit index for sample size and for degrees of freedom of the maintained model” (Bollen, 1989, p. 314). The CFI increased in the 2-factor CFA model which indicates a better goodness-of-fit for this model.

The root mean squared error of approximation (RMSEA) is a “badness of fit” index in that a value of zero indicates the best fit and higher values indicate worse fit (Kline, 2005, p. 138). The RMSEA for the 2-factor CFA model (.06) was lower than what was calculated for the 6-factor model (.11). The 2-factor model had a better RMSEA goodness-of-fit.

The normed fit index ((NFI) or Bentler-Bonnett normed fit index is useful for general measuring of fit. The Bentler-Bonnett non-normed fit index (NNFI) takes into account degrees-of-freedom. Both indices increased in the 2-factor CFA model, indicating a better goodness-of-fit.

Structural Equation Modeling (SEM)

A full structural equation model was attempted using EQS 6.1 for Windows software (Bentler, 2007). The model included the multidimensional relationships identified in the 2-factor CFA model that improved the fit of the CFA model. Student achievement, using the Texas Education Agency's Academic Excellence Indicator System (AEIS) data from 2008 for each participating school district was added to the model and paths were created that indicated relationships among the variables. Prior to running the model in EQS, twenty-one cases were removed due to "masking" of data. The Texas Education Agency employs masking of assessment data in order to comply with the federal Family Educational Rights and Privacy Act (FERPA). The term "masking" refers to the use of special symbols to conceal the performance results. Student assessment results are masked under the following conditions: (1) when very few students in the group are assessed. If performance is revealed for a group of very few students, then it is possible that the result of an individual student could be known, which violates that student's right to privacy; (2) when all students have the same result (either all passing or all failing). Revealing that 100 percent of the students passed, or 0 percent passed has been deemed to violate the privacy of all students tested in that the result for every student tested is known (TEA, 2007, p.1). Figure 5 provides a representation of the 2 factor SEM.

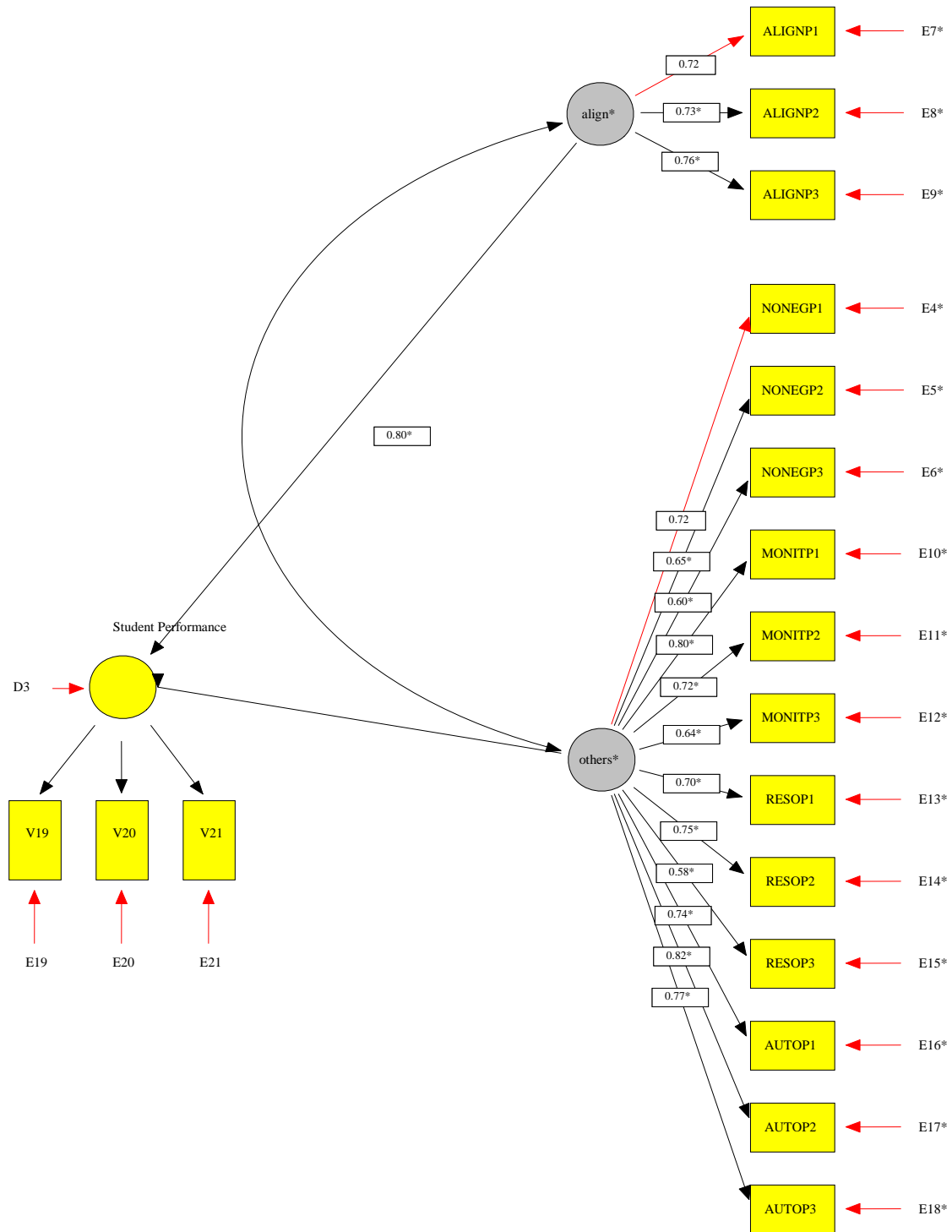


FIGURE 5: 2-Factor Structural Equation Model

Testing the Structural Model

The hypothesized structural model depicts student achievement as a function of superintendent leadership practices. Analysis using EQS software was unsuccessful in the converging of this model toward a solution.

An alternative path analysis was attempted. Each of the dimensions of superintendent leadership practices were collapsed into single value manifest indicators. Student achievement was also collapsed into two separate values. The first value was derived by calculating the mean scores for social studies, reading, and writing. The second value was derived by calculating the mean of scores in science and math achievement. With these formulations however, the achievement scores were not significantly correlated to any of the leadership practices dimensions. As a result, further path analysis is not feasible. Figure 6 provides a representation of the alternative path SEM.

No correlations were evidenced between any of the superintendent practices and student achievement; therefore, a solution could not be reached. The full SEM could not be generated and as a result, none of the fit indices for the full SEM were generated.

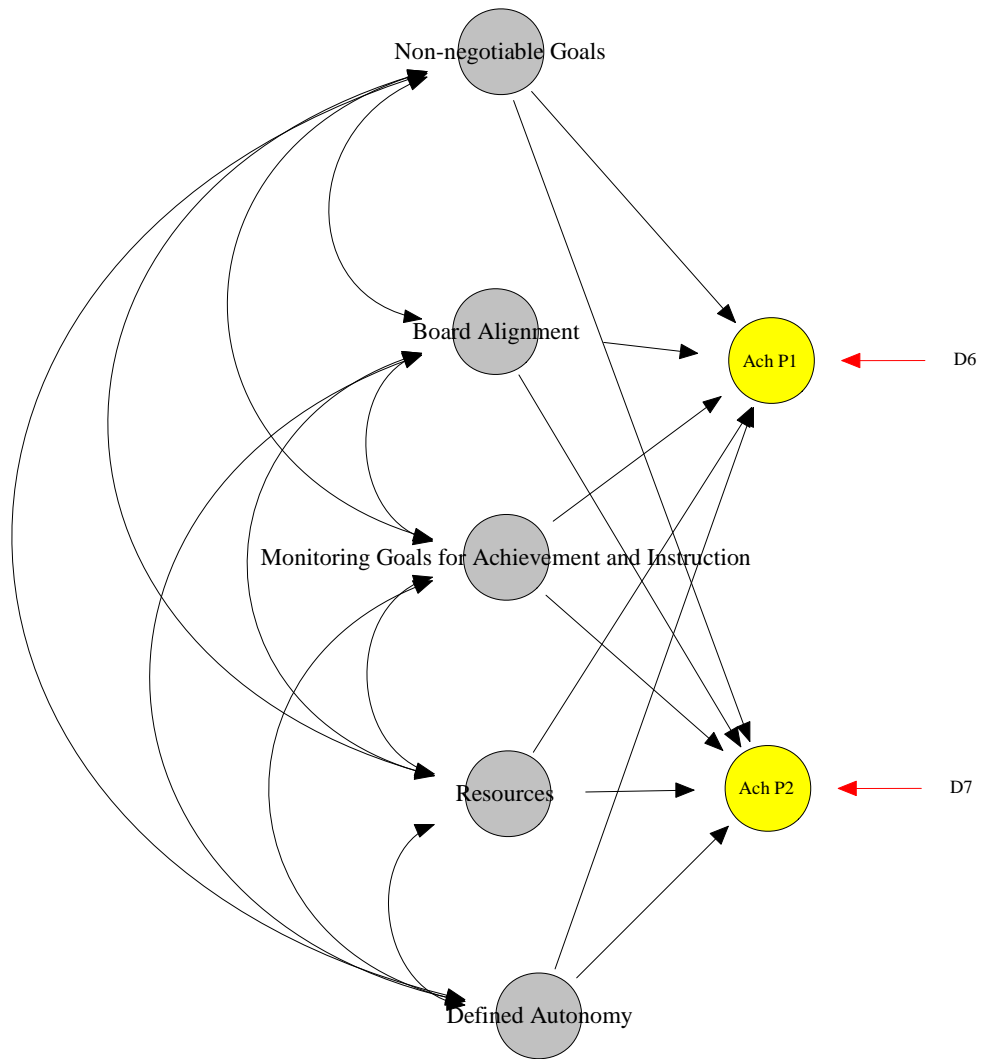


FIGURE 6. Alternative Path SEM

Summary

This chapter outlined the analysis and results of a confirmatory factor analysis (CFA) which was intended to test the measurement model of superintendent leadership practices. A 50-item survey which was hypothesized to measure six dimensions of leadership practices was subjected to a CFA. Results indicated that a two-factor structure model has significantly better data-model fit compared with the originally hypothesized six-factor model. In the alternative model, the dimension of “collaborative goal setting” was excluded.

Analysis of a structural equation model depicting the relationship between student achievement and leadership practices was not feasible because student achievement scores were not found to correlate to any dimension of leadership practices in this study. The structural equation model would not converge to allow for further analysis. The correlation matrix in Table 23 reflects the relationships between the leadership practices and student achievement and the lack of significance between the factors.

TABLE 23. Correlation Matrix from SEM

	1	2	3	4	5	6	7
1 Mean of SS, R, Wr							
2 Mean of M, Sc	.141						
3 Mean of nonnegotiable parcels 1,2,3	-0.043	0.015					
4 Mean of alignment parcels 1,2,3	-0.042	0	.579				
5 Mean of monitor parcels 1,2,3	-0.032	0.035	.695	.616			
6 Mean of resource parcels 1,2,3	0.01	0.043	.681	.606	.739		
7 Mean of autonomy parcels 1,2,3	-0.03	-0.03	.757	.630	.807	.741	
8 Mean of all achievement	.938	.475	-0.033	-0.016	-0.016	0.024	-0.037

CHAPTER V

SUMMARY AND CONCLUSIONS

Introduction

The purpose of this study was to investigate the influence of unobservable superintendent leadership characteristics on student achievement as evaluated annually by the Texas Assessment of Knowledge and Skills (TAKS). This investigation was conducted by examining the relationships between identified latent constructs of superintendent leadership with effect being measured by student achievement on the state assessment. Chapter V will discuss the results of this study in relation to the purpose and research questions posed in Chapter I. This chapter will also discuss recommendations for action based on the findings, as well as recommendations for future studies.

A review of the literature was conducted to obtain a comprehensive view of the superintendent's changing role as a result of major reforms in education policy that have placed an emphasis on the superintendent being an instructional leader in an effort to improve student performance. School districts are now being held accountable by No Child Left Behind (NCLB) legislation which requires that every school within the district meet Adequate Yearly Progress (AYP) annually. NCLB has stipulated that all students will score proficient or advanced on state benchmark tests by 2014. This requirement has caused tremendous pressure for academic improvement in states around the nation. The emphasis of NCLB on each individual school makes it imperative that

academic improvement is uniformly fostered, and the superintendent is in an ideal position as the head of the central office to create and implement a systematic improvement plan. A district is only as effective as its weakest school, but a superintendent's intervention can raise awareness and implement techniques to affect major changes in weaker schools within the district. Islands of excellence can be created by particularly strong and effective principals; however, the individual principals are without the ability to materially impact student achievement in other schools within the district. The superintendent's influence reaches all schools directly and through their work with principals who are influenced by the superintendent's academic leadership. The burden of accountability has shifted from the principal at the school level to the superintendent at the district level (Sayre, 2007).

Structural Equation Modeling was used to assess the relationships among superintendent practice latent constructs that influence student performance indicators defined in the Texas accountability system. The findings for the constructs, variables, and related measures used for this study resulted in outcomes that warrant additional discussion. This study was guided by the following research questions:

1. What relationships exist between student achievement as measured by the Texas school accountability rating system and the superintendent's valuing of collaborative goal setting?
2. What relationships exist between student achievement as measured by the Texas school accountability rating system and the superintendent's valuing of nonnegotiable goals for achievement and instruction?

3. What relationships exist between student achievement as measured by the Texas school accountability rating system and the superintendent's valuing of Board of Trustee alignment and support of district goals?
4. What relationships exist between student achievement as measured by the Texas school accountability rating system and the superintendent's valuing of monitoring goals for achievement and instruction?
5. What relationships exist between student achievement as measured by the Texas school accountability rating system and the superintendent's valuing of use of resources to support achievement and instruction goals?
6. What relationships exist between student achievement as measured by the Texas school accountability rating system and the superintendent's valuing of defined autonomy?

Summary of Findings

An assessment of the relationships among the latent constructs of collaborative goal setting, development of nonnegotiable goals for student achievement and instruction, Board of Trustee alignment and support of district goals, monitoring goals for achievement and instruction, effective use of resources to support achievement and instructional goals, defined autonomy and student achievement as defined by the TAKS student assessment using structural equation modeling was conducted. The overall fit of the two factor model was within the boundaries of the desired goodness-of-fit statistics. The representations of the constructs were revealed to be a very good fit and measured extremely well as indicated by the output statistics.

The demographic questions revealed a higher percentage of respondents at the Exemplary and Recognized level than the distribution of these higher ratings found across the state. It could be inferred that those superintendents of high performing districts are more inclined to participate in a study on student performance than are those superintendents that are leading districts that are performing at the Acceptable or Unacceptable level. Had there been findings for the research questions, these findings could have been probed further for each of the demographic questions posed.

Within the Academic Excellence Indicator System report, a wealth of comparisons, analyses, and conclusions can be advanced regarding every facet of the school system. Schools are very data driven and endeavor to make data driven decisions as catalysts to school reform, academic achievement, and improvement efforts. It is paramount to focus on the key issues that equate the data to the most significant concerns, with strategies formulated to address identified needs. The findings regarding the demographic populations have implications for treating the symptoms that should result in improvement strategies related to the needs of special populations of students that translate to all areas of the campus improvement plan in terms of sustained professional development training, instructional coaching, curriculum development, capacity building of staff, and high-quality classroom instruction. The recommendation for action is disaggregating the data below the surface level so that the priorities emerge. It is then that the focus can be on the development of appropriate strategies for establishing high expectations and addressing existing deficiencies. A leader must know the full extent of the symptoms before a full plan of treatment can be developed.

The six research questions directed the study toward the relationships these variables have with student achievement. The following is a summary of findings for each of the research questions posed:

Research Question 1: What relationships exist between student achievement as measured by the Texas school accountability rating system and the superintendent's valuing of collaborative goal setting? The construct of "collaborative goal setting" was deleted due to the low reliability coefficient of .56 which was revealed by the factor loadings of the parcels through principal axis factoring. The original research question of "What relationships exist among the superintendent responsibility of collaborative goal setting and student achievement as measured by the Texas school accountability rating system?" was deleted.

Research Question 2: What relationships exist between student achievement as measured by the Texas school accountability rating system and the superintendent's valuing of nonnegotiable goals for achievement and instruction? The construct of "establishment of nonnegotiables for achievement and instruction" reflected the factor loadings from the principal axis analysis and was retained with a reliability coefficient of .70, allowing for 30% error. Five variables loaded on this factor. No statistically significant relationship was found between this construct and student achievement.

Research Question 3: What relationships exist between student achievement as measured by the Texas school accountability rating system and the superintendent's valuing of Board of Trustee alignment and support of district goals? The third research question addressed the superintendent responsibility of "Board alignment and support of

district goals”. This construct remained intact with all four of the original variables loading on this construct with the addition of Q9 and Q17. This construct had a reliability coefficient of .76. The findings revealed that there are no statistically significant relationships among the superintendent responsibility of Board of Trustee alignment and support of district goals and student achievement as measured by the Texas school accountability rating system.

Research Question 4: What relationships exist between student achievement as measured by the Texas school accountability rating system and the superintendent’s valuing of monitoring goals for achievement and instruction? Although this construct had a reliability coefficient of .74 and 7 variables successfully loaded on the construct, no significance was found in the relationship between monitoring goals for achievement and instruction and the dependent variable of student achievement.

Research Question 5: What relationships exist between student achievement as measured by the Texas school accountability rating system and the superintendent’s valuing of use of resources to support achievement and instruction goals? The construct of “use of resources to support achievement and instruction” had a reliability coefficient of .75 with five variables loading on this construct. No statistically significant relationship was found for this superintendent responsibility and student achievement.

Research Question 6: What relationships exist between student achievement as measured by the Texas school accountability rating system and the superintendent’s valuing of defined autonomy? This construct had the highest reliability coefficient with a

value of .85; however, no statistical significance was realized for this construct and student performance.

Board alignment and support of district goals was retained and identified with Factor 1 as a result of the principal axis factoring analysis of the data. The four constructs of: establishment of nonnegotiables for achievement and instruction, monitoring goals for achievement and instruction, use of resources to support achievement and instruction, and defined autonomy were combined to create a single factor (Factor 2).

Conclusions

A review of the literature, as well as an analysis of the data form the basis for the following conclusions as they relate to the study of student performance relationships to superintendent practices as perceived by Texas superintendents. Experiential insight from 300 school district superintendents in the state of Texas was called upon in this study. This quantitative study did not reveal significant relationships between the six constructs of leadership practices probed and student achievement. The research design, framework, and questions are essential structures that must be in place for quantitative methods to be conducted (Gough, 2004). It is possible that these factors limited the quantitative measures from revealing the supportive constructs.

The following are conclusions and discussions for each of the research questions:

Research Question 1: What relationships exist between student achievement as measured by the Texas school accountability rating system and the superintendent's valuing of collaborative goal setting? This study did not reveal a statistically significant

relationship between student academic performance and collaborative goal setting as perceived by superintendents across the state of Texas.

The findings of this research demonstrate that for quantitative research to effectively investigate the connection between school superintendents' practice of collaborative goal setting and student achievement, greater detail must be given to the research design and sampling framework. Only four items from the survey instrument tested this construct. More survey items that tested this construct possibly should have been included in the survey. This construct was eliminated during the data analysis due to a lack of variables loading on this factor. Reevaluating the practices noted in the survey questions to determine if they are appropriate is a suggested action for a district leader.

While an empirical relationship was not found in this study between collaborative goal setting and student achievement recent studies have produced significant findings. Marzano and Waters (2009) indicated effective superintendents ensure that a collaborative goal setting process results in goals for achievement and instruction that are nonnegotiable and that must be acted on by all staff members. Achievement goals are established for the district as a whole, for individual schools, and for subpopulations of students within the district (Marzano & Waters, 2009, p. 6).

Björk (1993) stated that instructionally driven superintendents “exerted a strong influence in establishing instructional and curricular goals and staff awareness of these basic objectives is best communicated through participatory goal formation processes, which also constituted an important instructional leadership function” (p. 253).

Superintendents must be sure that teachers, parents, board members and other interested parties are included in defining the purpose of schooling and establishing school wide goals. These goals must be familiar and understood throughout the organization (Sayre, 2007). This concept of participatory goal formation is directly related to the superintendent practice of collaborative goal setting as identified by Marzano & Waters (2009).

Research Question 2: What relationships exist between student achievement as measured by the Texas school accountability rating system and the superintendent's valuing of nonnegotiable goals for achievement and instruction? This study did not reveal a statistically significant relationship between student academic performance and establishment of nonnegotiable goals for achievement and instruction as perceived by superintendents across the state of Texas.

It is a difficult thing to argue that there is a relationship between school superintendents and the technical core of achievement and instruction when the historical evidence shows a distancing of school superintendents from this all important responsibility. Hoyle (2002) and Björk (1993) emphasized that although researchers have gained insight into the tacit knowledge of school superintendents (Nestor-Baker & Hoy, 2001), little empirical evidence directly links these instructional leadership responsibilities of superintendents to student performance. Rowan's (1995a) call for educational research focusing on the superintendent relationship to the technical core went largely unanswered until recently.

The establishment of nonnegotiable goals for achievement and instruction as a means of influencing student performance is supported by the literature. Sayre tells us that the superintendent is in an ideal position to exert a system-wide influence that would impact all schools within the district. As the top decision maker he not only has system-wide reach but also has the power and capacity to place appropriate pressure and support in key areas affecting key positions to raise all boats as the district moves forward together (Sayre, 2007; Waters & Marzano, 2006).

This construct is further supported by Houston (2007) who identified the need for superintendents to be engaged in oversight of the instructional model among other tasks. In order to accomplish the expectations and meet the requirements of the No Child Left Behind Act, superintendents must be aware of the latest research on teaching and learning. They must be able to lead as a facilitator and to ensure that effective instructional strategies are being used in every classroom. Data must be monitored in order to assure that goals are being met and that students are learning and retaining the content of state standards (Houston, 2007).

Research Question 3: What relationships exist between student achievement as measured by the Texas school accountability rating system and the superintendent's valuing of Board of Trustee alignment and support of district goals? This study did not reveal a statistically significant relationship between student academic performance and Board of Trustee alignment and support of district goals as perceived by superintendents across the state of Texas.

The construct of Board alignment with goals for achievement and instruction is supported in the research as well. The accountability movement has placed school boards in a new, unfamiliar environment. Plecki, et.al. (2006) noted that historically school boards have not focused on student achievement. Marzano and Waters identified effective districts as those where the local board of education is aligned with and supportive of the nonnegotiable goals for achievement and instruction. The board ensures that these goals remain the top priorities in the district and that no other initiatives deflect attention or resources from accomplishing these goals (Marzano & Waters, 2009, p. 7). Cuban (1984), however, cautioned that no studies have shown that board policies, such as alignment of goals, produce the desired effect on student achievement. No research has demonstrated strategies in executing policy decisions that yield the desired results and tighter coupling may have a negative impact on the organization as an unintended consequence.

Research Question 4: What relationships exist between student achievement as measured by the Texas school accountability rating system and the superintendent's valuing of monitoring goals for achievement and instruction? This study did not reveal a statistically significant relationship between student academic performance and monitoring goals for achievement and instruction as perceived by superintendents across the state of Texas.

Monitoring goals for achievement and instruction implies a very detailed process for assessing progress in student performance and the instructional model. Getting caught in the details is a trap that management scholars remind us that strong leaders

avoid. If leaders focus exclusively on the bottom line, the capacity for perspective and vision is lost (Cangemi, Burga, Lazarus, Miller, and Fitzgerald, 2008).

Literature supporting the construct of monitoring goals for achievement and instruction is found within the research. Superintendents must be sure that high levels of learning are available to all students. One of the only ways to be sure that takes place is to monitor student data. As ongoing instructional decisions are made, these decisions must be driven by classroom level data. If success is to be had by all and if all students are to rise to proficiency then leaders must rely on data as a key tool in decision making (Leithwood, Aitken & Jantzi, 2001).

Research Question 5: What relationships exist between student achievement as measured by the Texas school accountability rating system and the superintendent's valuing of use of resources to support achievement and instruction goals? This study did not reveal a statistically significant relationship between student academic performance and use of resources to support goals for achievement and instruction as perceived by superintendents across the state of Texas.

It is possible that financial circumstances of school districts in today's economic strife have resulted in a reduction in resources to support achievement and instructional goals. Bredeson and Kose (2007) report in districts where budgets for curriculum and instruction remained static or were cut, approximately 83% of these superintendents indicated they would have spent more in these critical areas if money would have been available. Some of these respondents stated they reluctantly cut initiatives for curriculum and instruction. Curriculum and instruction may be considered a priority for most

superintendents although it appears that budget constraints prevented some superintendents from improving resources in this critical area (Bredeson & Kose, 2007).

As the district level administrator, it is the superintendent's responsibility to allocate funds. As an instructional leader it is critical that those funds be allocated with the highest priority given to instructional effectiveness and student achievement. If a superintendent talks big about academic achievement but expends the funds with a clear priority to other areas he will soon destroy the confidence and trust which has been placed in him by other administrators and teachers (Lashway, 2002; Sayre, 2007).

Professional development is a primary resource to support the attainment of goals for achievement and instruction. Professional development is important to the success of administrators and teachers alike. It must be job embedded and sensitive to the particular needs of those being served. The No Child Left Behind law is strong on professional development in requiring that sufficient funding is made available to provide for bringing professionals in to work with teachers, sending personnel to training off site, or paying for additional time outside of contracted days for attendance and participation in professional development activities (Sayre, 2007).

Research Question 6: What relationships exist between student achievement as measured by the Texas school accountability rating system and the superintendent's valuing of defined autonomy? This study did not reveal a statistically significant relationship between student academic performance and defined autonomy as perceived by superintendents across the state of Texas.

It is possible that participants in this study were not clear on the concept of defined autonomy. Superintendent responses to survey items regarding this concept may have been skewed as a result of this lack of understanding. Possibly granting more autonomy to campuses is not a guarantee for improved student performance. Eck and Goodwin (2010) report the Bill and Melinda Gates foundation found this out the hard way. After spending roughly a billion dollars to create small schools that were autonomous in nature, the foundation learned that their efforts had generated mixed results at best (Eck & Goodwin, 2010).

The construct of defined autonomy is made possible when the superintendent encourages principals and others to assume responsibility for school success. Defined autonomy means the superintendent expects building principals to lead within the boundaries defined by the district goals (Marzano & Waters, 2009, p. 8). The concept of collective efficacy falls within the construct of defined autonomy. Collective efficacy is associated with the tasks, level of effort, persistence, thoughts, stress levels, and achievement of groups (Bandura, 1993; Bandura, 1997). According to Bandura (1997), “collective efficacy is concerned with the performance capability of a social system as a whole” (p. 469). For schools, collective efficacy refers to the perceptions of teachers in school that the faculty as a whole can execute the courses of action necessary to have positive effects on students (Goddard, 2001, p. 467). Clearly there is a requisite for additional research in instructional leadership amalgamated to superintendent leadership and academic achievement.

Recommendations

Searching for the effect superintendent leadership, as identified by the six latent constructs of collaborative goal setting, development of nonnegotiable goals for student achievement and instruction, Board of Trustee alignment and support of district goals, monitoring goals for achievement and instruction, effective use of resources to support achievement and instructional goals, and defined autonomy, has on student performance was the impetus for this research.

The school reform movement that began with the release of the report *A Nation at Risk* has led to an increased emphasis on student performance as measured by standardized state assessments across our nation. Texas has been at the leading edge of school reform with the Texas Education Agency's development of student assessments dating back over 25 years. The focus of Texas superintendents on student performance as measured by standardized tests in core curricular areas has been re-emphasized as a result of the educational reforms that have come about since implementation of the No Child Left Behind act. Success on these high stakes tests is a requirement for high school students to be eligible to graduate. Beginning with the 9th grade class of 2011, students will be required to successfully complete End of Course Exams for each of the core academic areas as Texas moves toward a new assessment coined the State of Texas Assessment of Academic Readiness (STAAR).

Accountability ratings of schools and school districts based on student performance on state assessments has created the need for the essential superintendent practice of developing nonnegotiable goals for student achievement and instruction.

Effective superintendent leadership can prove critical to setting the stage by creating an environment conducive to excellence which helps principals to stay focused on academics. Superintendents who effectively emphasize certain leadership responsibilities can provide necessary pressure and support to keep all schools in their district on track with academic goals (Hall & Hord, 1987). The review of the literature noted the significant increase in competition among school leaders throughout the accountability wave of school reform. The publication of student performance and school and district rankings has created a greater pressure for school superintendents to engage in the design and implementation of the instructional program.

Although this researcher's study did not reveal the desired result of a measurable influence of the superintendent leadership latent constructs addressed in this study on student performance, recommendations for action for superintendents can be drawn from the study. The literature review and findings of this study were used to make the following recommendations:

1. The demands of the accountability system create a greater need for superintendents to facilitate the development of a clearly defined vision for the school district developed in a collaborative manner with a broad spectrum of stakeholders including board members, community and business leaders, parents, students, and educators.
2. A school's public should consider the possibility that the effectiveness of a superintendent, a district, or a campus cannot be measured solely by student performance on standardized state assessments. This may prompt superintendents

to facilitate the creation for a clearly defined vision for the school district, relying on input from a broad spectrum of the school's public.

3. School districts that are searching for leadership should do so by probing each candidate's use and understanding of superintendent practices that relate to improved student performance.
4. It is recommended that superintendents look at their district from a systems approach, asking themselves how the practices they employ influence what happens at the student performance level. Superintendents reflecting on their leadership practices, as compared to the six leadership constructs from this study, may identify practices that can be incorporated into their own leadership practice.

Implications for Further Study

The student performance variables imbedded in this study were articulated by the 2008 Academic Excellence Indicator System (AEIS). The use of completion rate, dropout rate, and the campus comparison group variables would offer additional insight for a future study into the types of measures that predict student performance. As high-stakes testing continue to be the direction of the state and the nation, district leaders continue to seek additional insight into the complexities associated with student achievement. Consideration of the influence of demographic characteristics on student performance affords school district leaders additional insight into factors that exist beyond the superintendent's control. Recent research has connected principal leadership competencies and practices that have the most profound impact on student achievement disclosed in the book *School Leadership that Works* (Marzano, Waters, & McNulty,

2005) with the concept of collective efficacy. Collective efficacy is defined as “the perceptions of teachers in a school that the faculty as a whole can execute the courses of action necessary to have positive effects on students” (Goddard, 2001, p. 467). Goddard’s research relating collective efficacy and student performance demonstrated the results obtained beyond what typically has been predicted by socio-economic status or race (Goddard, Logerfo, & Hoy, 2004) leading to the need to consider further research on other influential constructs, such as collective efficacy, as a predictor of academic achievement.

1. Further testing on the developed constructs is suggested and consideration of alternate sources of student performance data, norm-referenced assessment data, and varied indicators of the Texas Assessment of Knowledge and Skills (TAKS) data are suggested methods to expand the current study.
2. Variables not addressed in this study such as superintendent longevity, student ethnicity, and student socio-economic status should be probed to provide insight into relationships between student performance and superintendent leadership practices.
3. In addition to the variables measured by the AEIS data, it is recommended that a future study consider the effects of collective efficacy as a measure to predict student academic achievement.
4. This study considered a single year of student performance in relation to the leadership practices of superintendents. A longer longitudinal study may provide

a better perspective of the influence a superintendent has on student academic achievement.

5. The use of completion rate, dropout rate, and the campus comparison group variables would offer additional insight for a future study into the types of measures that predict student performance.
6. A reanalysis of the data, focusing on individual subsets of the data should be considered as a future study. It is possible that a subset of the data would produce a significant finding where the data as a whole did not.

Summary

The formulation of the instructional leadership factor for this study was predicated on a review of the literature on effective superintendent leadership characteristics. With the exception of collaborative goal setting, a majority of the survey items originally hypothesized to describe the instructional leadership constructs attached to those factors through the confirmatory factor analysis process. While modest attention has been given to the behaviors of superintendents that are associated with effective instructional leadership in school districts (Marzano & Waters, 2009; Petersen, 1999), standards based accountability challenges traditional assumptions about instructional leadership (Lashway, 2003).

According to Lashway (2003), instructional leadership has been raised to the pinnacle of the leadership agenda. The reaffirmation of instructional leadership as an important priority was impelled by the standards-based accountability system coupled with heavy pressure to provide tangible evidence of student success (Lashway, 2003).

The survey questions identified for the research were formulated based on a review of the literature, with the items developed from the book *District Leadership that Works: Striking the Right Balance* (Marzano & Waters, 2009). Clearly there is a need for additional research in instructional leadership focused on superintendent leadership and student academic achievement.

Possibly, reality is as Cuban (1983, p.4) states, “No one knows how to grow effective schools. None of the richly detailed, lovingly written descriptions of high-performers can point to a blue print of what a teacher, principal, or superintendent can do to improve academic achievement.” I, for one, hope this is not our reality and that future studies will continue to probe the relationships between leadership at the district level and student achievement.

Chapter V elaborated on the key findings from the study in relation to each research question developed to explore the latent constructs of superintendent leadership and their influence on student performance. Recommendations for action were suggested for district leaders that offered a practical application of the findings. The chapter concluded with recommendations for expanding the current study and descriptions for further research on areas related to effective superintendent leadership.

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APPENDIX A

**PILOT STUDY SURVEY INSTRUMENT: SURVEY OF THE INFLUENCE OF
THE SUPERINTENDENT ON STUDENT ACHIEVEMENT IN THE
EDUCATION SERVICE CENTER REGION 13 OF TEXAS**

**Survey of the Influence of the Superintendent on Student Achievement
In the Education Service Center Region 13 of Texas**

- A. Please indicate your most recent district accountability rating:
Exemplary O Recognized O Academically Acceptable O Academically Unacceptable O
- B. Please indicate how long you have been superintendent in your current district.
5 = 12+ yrs; 4 = 9 to 11 yrs; 3 = 6 to 8 yrs; 2 = 3 to 5 yrs; 1 = 0 to 3 yrs
5 4 3 2 1
O O O O O
- C. Please indicate how many total years you have served as a superintendent.
5 = 12+ yrs; 4 = 9 to 11 yrs; 3 = 6 to 8 yrs; 2 = 3 to 5 yrs; 1 = 0 to 3 yrs
5 4 3 2 1
O O O O O
- D. Please indicate the UIL classification of your school district.
5 = AAAAA; 4 = AAAA; 3 = AAA; 2 = AA; 1 = A
5 4 3 2 1
O O O O O

Please indicate the extent to which the following responsibilities of the superintendent are important to you. Score each statement where a five (5) indicates extremely important and a one (1) indicates no importance.

**5 = extremely important 4 = highly important 3 = important
2 = little importance 1 = no importance**

Collaborative Goal Setting

1. Developing a shared vision for the goal setting process.
5 4 3 2 1
O O O O O
2. Using the goal setting process to set goals developed jointly by the board of trustees and administration.
5 4 3 2 1
O O O O O
3. Developing goals that are coherent and reflect attendant values which support involvement and quality in achievement.
5 4 3 2 1
O O O O O

4. Communicating performance expectations to central office staff and principals.
5 4 3 2 1
 O O O O O

Non-Negotiable Goals for Achievement and Instruction

5. Modeling understanding of instructional design.
5 4 3 2 1
 O O O O O

6. Establishing clear priorities among the district's instructional goals and objectives.
5 4 3 2 1
 O O O O O

7. Adopting instructional methodologies that facilitate the efficient delivery of the district's curriculum.
5 4 3 2 1
 O O O O O

8. Incorporating varied and diverse instructional methodologies that allow for a wide range of learning styles that exist in a multi-racial student population.
5 4 3 2 1
 O O O O O

9. Adopting 5 year non-negotiable goals for achievement and instruction.
5 4 3 2 1
 O O O O O

Board Alignment and Support of District Goals

10. Establishing agreement with the board of trustees on district goals.
5 4 3 2 1
 O O O O O

11. Establishing agreement with the board of trustees on the type and nature of conflict in the district.
5 4 3 2 1
 O O O O O

12. Along with the board of trustees, remaining situationally aware and agreeing on the political climate of the school district.
5 4 3 2 1
 O O O O O

13. Establishing agreement with the board of trustees on the nature of teaching and learning strategies to be used by the district.

5 4 3 2 1
 ○ ○ ○ ○ ○

14. Providing professional development for board members.

5 4 3 2 1
 ○ ○ ○ ○ ○

15. Establishing agreement with the board of trustees on the effectiveness of board training.

5 4 3 2 1
 ○ ○ ○ ○ ○

Monitoring Goals for Achievement and Instruction

16. Using an instructional evaluation program that accurately monitors implementation of the district's instructional program.

5 4 3 2 1
 ○ ○ ○ ○ ○

17. Monitoring student achievement through feedback from the instructional evaluation program.

5 4 3 2 1
 ○ ○ ○ ○ ○

18. Using a system to manage instructional change.

5 4 3 2 1
 ○ ○ ○ ○ ○

19. Annually evaluating principals.

5 4 3 2 1
 ○ ○ ○ ○ ○

20. Reporting student achievement data to the board of trustees on a regular basis.

5 4 3 2 1
 ○ ○ ○ ○ ○

21. Ensuring that the curricular needs of all student populations are met.

5 4 3 2 1
 ○ ○ ○ ○ ○

22. Observing classrooms during school visits.
- 5 4 3 2 1**
O O O O O
23. Coordinating efforts of individuals and groups within the organization to increase reliability of the system, with adjustments by individuals to quickly respond to system failures.
- 5 4 3 2 1**
O O O O O

Use of Resources to Support Achievement and Instructional Goals

24. Adopting an instructional and resource management system supporting implementation of the district's instructional philosophy.
- 5 4 3 2 1**
O O O O O
25. Providing extensive teacher and principal professional development.
- 5 4 3 2 1**
O O O O O
26. Training all instructional staff in a common but flexible instructional model.
- 5 4 3 2 1**
O O O O O
27. Controlling resource allocation.
- 5 4 3 2 1**
O O O O O
28. Providing access to professional growth opportunities through the design of a master plan to coordinate in-service activities of the district.
- 5 4 3 2 1**
O O O O O

Superintendent Relationship with Schools

29. Providing the expectation and support for principals to lead within the boundaries defined by the district goals.
- 5 4 3 2 1**
O O O O O

30. Using standards for content and instruction for basic design principles.
- 5 4 3 2 1**
O O O O O
31. Committing the district and schools to continuous improvement.
- 5 4 3 2 1**
O O O O O
32. Screening, interviewing, and selecting teachers along with principals.
- 5 4 3 2 1**
O O O O O
33. Hiring experienced teachers.
- 5 4 3 2 1**
O O O O O
34. Rewarding successful teachers and terminating the employment of unsuccessful teachers.
- 5 4 3 2 1**
O O O O O
35. Establishing teacher evaluation as a priority for principals.
- 5 4 3 2 1**
O O O O O
36. Ensuring that principals speak with teachers about results.
- 5 4 3 2 1**
O O O O O
37. Establishing strong agreed upon principles or values which direct the actions of people within the organization.
- 5 4 3 2 1**
O O O O O
38. Ensuring that schools have a clear mission focused on school performance.
- 5 4 3 2 1**
O O O O O
39. Rewarding students beyond standard honor rolls and recognition assemblies for exceptional performance.
- 5 4 3 2 1**
O O O O O

40. Ensuring that school practices are characterized by opportunity for all students to learn.
- 5 4 3 2 1**
O O O O O
41. Applying district sanctions to students for unsatisfactory academic performance.
- 5 4 3 2 1**
O O O O O
42. Ensuring that homogeneous ability groupings within classrooms do not segregate students into racial or other inappropriate groups.
- 5 4 3 2 1**
O O O O O
43. Providing leadership in curriculum development.
- 5 4 3 2 1**
O O O O O
44. Including socializing functions in district meetings.
- 5 4 3 2 1**
O O O O O
45. Developing principal awareness of district goals and actions directed at goal accomplishment.
- 5 4 3 2 1**
O O O O O
46. Maintaining high expectations for school performance.
- 5 4 3 2 1**
O O O O O
47. Promoting innovation.
- 5 4 3 2 1**
O O O O O
48. Expecting principals to fulfill instructional leadership responsibilities.
- 5 4 3 2 1**
O O O O O

49. Ensuring that schools are characterized by an orderly environment.

5 4 3 2 1
O O O O O

50. Directing personnel operations to ensure a stable yet improving and well-balanced work force.

5 4 3 2 1
O O O O O

APPENDIX B

SURVEY INSTRUMENT:

SUPERINTENDENT PERCEPTION OF PRACTICE -

THE INFLUENCE OF THE SUPERINTENDENT ON STUDENT

ACHIEVEMENT

The Influence of the Superintendent on Student Achievement

The Survey

This survey is related to student performance from the 2007 - 2008 school year and your school district accountability rating associated with that time period. Please use this context as you answer the following questions. Choose the radio button that best indicates the extent to which the following responsibilities of the superintendent are important to you. Score each statement where a 5 indicates extremely important and a 1 indicates no importance.

5 = extremely important; 4 = highly important; 3 = important; 2 = little importance; 1 = no importance

1. Developing a shared vision for the goal setting process.

- 5 extremely important
- 4 highly important
- 3 important
- 2 little importance
- 1 no importance

2. Modeling understanding of instructional design.

- 5 extremely important
- 4 highly important
- 3 important
- 2 little importance
- 1 no importance

3. Establishing agreement with the board of trustees on district goals.

- 5 extremely important
- 4 highly important
- 3 important
- 2 little importance
- 1 no importance

4. Using an instructional evaluation program that accurately monitors implementation of the district's instructional program.

- 5 extremely important
- 4 highly important
- 3 important
- 2 little importance
- 1 no importance

- 5. Adopting an instructional and resource management system supporting implementation of the district's instructional philosophy.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 6. Providing the expectation and support for principals to lead within the boundaries defined by the district goals.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 7. Using the goal setting process to set goals developed jointly by the board of trustees and administration.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 8. Establishing clear priorities among the district's instructional goals and objectives.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 9. Establishing agreement with the board of trustees on the type and nature of conflict in the district.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance

- 10. Monitoring student achievement through feedback from the instructional evaluation program.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 11. Providing extensive teacher and principal professional development.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 12. Using standards for content and instruction for basic design principles.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 13. Committing the district and schools to continuous improvement.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 14. Screening, interviewing, and selecting teachers along with principals.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance

- 15. Developing goals that are coherent and reflect attendant values which support involvement and quality in achievement.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 16. Adopting instructional methodologies that facilitate the efficient delivery of the district's curriculum.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 17. Along with the board of trustees, remaining situationally aware and agreeing on the political climate of the school district.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 18. Using a system to manage instructional change.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 19. Training all instructional staff in a common but flexible instructional model.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance

- 20. Hiring experienced teachers.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 21. Rewarding successful teachers and terminating the employment of unsuccessful teachers.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 22. Communicating performance expectations to central office staff and principals.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 23. Incorporating varied and diverse instructional methodologies that allow for a wide range of learning styles that exist in a multi-racial student population.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 24. Establishing agreement with the board of trustees on the nature of teaching and learning strategies to be used by the district.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance

- 25. Annually evaluating principals.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 26. Controlling resource allocation.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 27. Establishing teacher evaluation as a priority for principals.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 28. Ensuring that principals speak with teachers about results.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 29. Adopting 5 year nonnegotiable goals for achievement and instruction.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 30. Establishing strong agreed upon principles or values which direct the actions of people within the organization.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance

- 31. Providing professional development for board members.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 32. Reporting student achievement data to the board of trustees on a regular basis.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 33. Ensuring that schools have a clear mission focused on school performance.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 34. Rewarding students beyond standard honor rolls and recognition assemblies for exceptional performance.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 35. Establishing agreement with the board of trustees on the effectiveness of board training.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance

- 36. Ensuring that school practices are characterized by opportunity for all students to learn.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 37. Ensuring that the curricular needs of all student populations are met.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 38. Applying district sanctions to students for unsatisfactory academic performance.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 39. Observing classrooms during school visits.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 40. Providing access to professional growth opportunities through the design of a master plan to coordinate in-service activities of the district.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance

- 41. Ensuring that homogeneous ability groupings within classrooms do not segregate students into racial or other inappropriate groups.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 42. Coordinating efforts of individuals and groups within the organization to increase reliability of the system, with adjustments by individuals to quickly respond to system failures.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 43. Providing leadership in curriculum development.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 44. Including socializing functions in district meetings.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 45. Developing principal awareness of district goals and actions directed at goal accomplishment.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance

- 46. Maintaining high expectations for school performance.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 47. Promoting innovation.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 48. Expecting principals to fulfill instructional leadership responsibilities.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 49. Ensuring that schools are characterized by an orderly environment.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance
- 50. Directing personnel operations to ensure a stable yet improving and well-balanced work force.**
- 5 extremely important
 - 4 highly important
 - 3 important
 - 2 little importance
 - 1 no importance

General Information

Please choose the radio button that best describes you and your experience.

- 1. Please indicate your district accountability rating during the 2007 - 2008 school year.**
 - Exemplary
 - Recognized
 - Academically Acceptable
 - Academically Unacceptable

- 2. Please indicate how long you have been superintendent in your current school district.**
 - 12+ years
 - 9 to 11 years
 - 6 to 8 years
 - 3 to 5 years
 - 0 to 3 years

- 3. Please indicate the total number of years you have served as a superintendent of schools.**
 - 12+ years
 - 9 to 11 years
 - 6 to 8 years
 - 3 to 5 years
 - 0 to 2 years

- 4. What is your gender?**
 - Male
 - Female

- 5. Please indicate the size of your school district.**
 - 10,000 students or greater
 - 5,000 to 9,999 students
 - 3,000 to 4,999 students
 - 1,000 to 2,999 students
 - 999 students or less

APPENDIX C

INVITATION TO PARTICIPATE IN THE STUDY

Dear Superintendent,

My name is Jeff Hanks and I am the Superintendent of Schools for Burnet Consolidated ISD. I am currently a doctoral student at Texas A&M University as well. I know your time is valuable and I am asking for a few minutes of it. I am conducting a survey as part of my study to determine the effect superintendents have on student achievement. I am sending the attached survey instrument to all public school superintendents in Texas and would greatly appreciate your participation in this study. I will be working under the supervision of Dr. John Hoyle (jhoyle@tamu.edu).

There are no specific risks associated with the information collected in this research. The survey instrument is web based and will take less than 15 minutes to complete, just a few buttons to click. The link to the online survey is displayed below. If you have any questions about the research study please feel free to contact me at jhanks@burnet.txed.net or 512/756-2124. Important: If you were not in your current district during the 2007-2008 school year, please do not complete the survey for this study is targeted to that specific year.

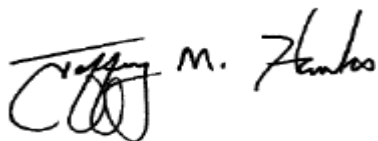
To participate, please click on the link below or copy and paste the link into the address line of your internet browser. Your participation is critical to the success and validity of this research.

Survey link:

http://www.surveymonkey.com/s.aspx?sm=FV8VJDuqJayZxgeoXNnFFQ_3d_3d

I thank you in advance for taking the time to complete this survey and I would like to take this opportunity to thank all of you for the great things you are doing for the children of your respective communities.

Sincerely,

A handwritten signature in black ink that reads "Jeffrey M. Hanks". The signature is written in a cursive style with a large, stylized initial "J" and "H".

Jeffrey M. Hanks
Doctoral Student, Texas A&M University
Superintendent of Schools
Burnet Consolidated ISD

APPENDIX D

SECOND REQUEST TO PARTICIPATE IN THE STUDY

8/30/09

This is a follow up email to the original message emailed on August 16th. I have received approximately 250 responses and would like more. If you have already completed this survey, thank you. If you have not, please take the time to follow the link below and complete the survey. Thank you in advance for your time and I sincerely hope you have a great school year in 2009 – 2010.

Dear Superintendent,

My name is Jeff Hanks and I am the Superintendent of Schools for Burnet Consolidated ISD. I am currently a doctoral student at Texas A&M University as well. I know your time is valuable and I am asking for a few minutes of it. I am conducting a survey as part of my study to determine the effect superintendents have on student achievement. I am sending the attached survey instrument to all public school superintendents in Texas and would greatly appreciate your participation in this study. I will be working under the supervision of Dr. John Hoyle (jhoyle@tamu.edu).

There are no specific risks associated with the information collected in this research. The survey instrument is web based and will take less than 15 minutes to complete, just a few buttons to click. The link to the online survey is displayed below. If you have any questions about the research study please feel free to contact me at jhanks@burnet.txed.net or 512/756-2124. Important: If you were not in your current district during the 2007-2008 school year, please do not complete the survey for this study is targeted to that specific year.

To participate, please click on the link below or copy and paste the link into the address line of your internet browser. Your participation is critical to the success and validity of this research. **Survey link:**

http://www.surveymonkey.com/s.aspx?sm=FV8VJDuqJayZxgeoXNnFFQ_3d_3d

I thank you in advance for taking the time to complete this survey and I would like to take this opportunity to thank all of you for the great things you are doing for the children of your respective communities.

Sincerely,

Jeffrey M. Hanks
Doctoral Student, Texas A&M University
Superintendent of Schools
Burnet Consolidated ISD

VITA

Name: Jeffrey Mark Hanks

Address: 208 East Brier Lane
Burnet, Texas 78611

Email Address: jhanks@burnet.txed.net

Education: B.S.F. Stephen F. Austin State University,
Nacogdoches, Texas. Forest Game Management, 1982.

M.Ed. Stephen F. Austin State University,
Nacogdoches, Texas. Educational Administration, 1991.

Ph.D., Educational Administration, Texas A&M University,
College Station, TX, 2010.

Professional Experience: Superintendent, Burnet Consolidated ISD, Burnet, TX, 2001 - Present

Principal, Burnet High School, Burnet, TX, 1998-2001

Principal, Palestine High School, Palestine, TX, 1995-1998

Principal, Cayuga High School, Cayuga, TX, 1993-1995

Assistant Principal, Palestine High School, Palestine, TX, 1992-1993

Biology Teacher, Palestine High School, Palestine, TX, 1984-1992

Middle School Science Teacher, Lamar Middle School, Temple, TX, 1982-1984