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Examining the Relationship Between Principal Leadership and School Climate

Abstract

The purpose of this quantitative study was to explore the relationship between transformative school principal leadership and school climate. The population of this study consisted of two middle schools with grades ranging from six through eight and one high school with grades ranging from nine through twelve. These schools are within the state of Texas. Quantitative data were obtained by using two instruments, the Principal Leadership Questionnaire (Jantzi & Leithwood, 1996) and the School Climate Assessment Instrument (Alliance for the Study of School Climate, 2014), and evaluated to determine if (a) correlations exist between the factors of transformational leadership and school climate, (b) if any predictive linear relationships exist between the factors of transformational leadership and school climate, and (c) if the individual school site, employment role, and tenure influence school climate in the tested Texas schools.

This study found that there was: (a) a statistically significant relationship between the six factors of transformational leadership and the leadership decisions factor of school climate, and (b) that the factors of transformational leadership influenced the factors of school climate, and (c) that the school site was the most significant predictor of school climate.

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EXAMINING THE RELATIONSHIP BETWEEN PRINCIPAL LEADERSHIP AND SCHOOL CLIMATE

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A Dissertation

Presented to

the Faculty of the Morgridge College of Education

University of Denver

_____

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

_____

by

Eric S. Lane

March 2016

Advisor: Dr. Bruce Uhrmacher

Author: Eric S. Lane
Title: Examining the Relationship Between Principal Leadership and School Climate
Advisor: Dr. Bruce Uhrmacher
Degree Date: March 2016

Abstract

The purpose of this quantitative study was to explore the relationship between transformative school principal leadership and school climate. The population of this study consisted of two middle schools with grades ranging from six through eight and one high school with grades ranging from nine through twelve. These schools are within the state of Texas. Quantitative data were obtained by using two instruments, the Principal Leadership Questionnaire (Jantzi & Leithwood, 1996) and the School Climate Assessment Instrument (Alliance for the Study of School Climate, 2014), and evaluated to determine if (a) correlations exist between the factors of transformational leadership and school climate, (b) if any predictive linear relationships exist between the factors of transformational leadership and school climate, and (c) if the individual school site, employment role, and tenure influence school climate in the tested Texas schools. This study found that there was: (a) a statistically significant relationship between the six factors of transformational leadership and the leadership decisions factor of school climate, and (b) that the factors of transformational leadership influenced the factors of school climate, and (c) that the school site was the most significant predictor of school climate.

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Chapter 1: Introduction to the Study

> It is the objectives and the objectives alone … that dictate the pupil-experiences that make up the curriculum. It is then these in their turn that dictate the specific methods to be employed by the teachers and specific material helps and appliances and opportunities to be provided. And, finally, it is the specific objectives that provide standards to be employed in the measurement of results.
>
> John Franklin Bobbitt (Au, 2011)

> (Calvin – During an Exam) As you can see, I have memorized this utterly useless piece of information long enough to pass a test question. I now intend to forget it forever. You've taught me nothing except how to cynically manipulate the system. Congratulations. (Watterson, 2015)

These contrasting quotes underscore what many feel regarding the condition of education in the United States. Schools, administrators, students, and parents are subjected to many conflicting messages about the current priorities in education. Many of these predictions have been driven by recent changes in educational policy and the resulting legislation that has affected every state in the union. It is not entirely clear what style of leader or school factors are best indicated to address these issues.

Few would dispute the value of education. An education can afford opportunities that would have never been possible were it not for the preparation that one received while in school. With the fluctuating economy and uncertain times, it is more important than ever for our nation's children to receive the proper education and training that will allow them to acquire a good job and produce the means by which to live (Boyer & Hamil, 2008). Becoming a productive member of society is a long-standing American

goal. Students graduate from high school then proceed to college. If they are successful, they may benefit economically, politically, and socially (Reed & Justice, 2014). Unfortunately, there are many issues facing our education system today, and several of them are having adverse effects on the caliber of the education our students are receiving. (Boyer & Hamil, 2008).

The role of the principal has changed strikingly over the past few years as the focus has shifted from only managing schools and overseeing instruction, to being held fully accountable for student performance. For school leaders to lead their schools, they must be conscious not only on how they lead but also how they are impacting the climate of their schools. Even though existing research suggests that school climate significantly affects student performance, it is typically an area that is overlooked by school administrators.

As schools have been tasked with these additional responsibilities, the expectations of the school leaders to meet, these demands have increased. Today's school leaders are required to lead in a different manner than they ever had to in the past. They must do this while addressing issues and problems that are relatively new, complex in nature and scope, paradoxical and dilemma-filled, and until now unknown to schools. (National Association of Secondary School Principals, 2007).

These results suggest that the United States may require a public education makeover. Indeed, students are inadequately prepared in elementary and middle school for academic success in high school. Consider that 75 percent to 80 percent of urban children begin kindergarten with an inadequate vocabulary. Many may become

discouraged and drop out, leaving the United States in the unenviable position of having one of the highest dropout rates. High dropout rates are costly to taxpayers. The annual public cost of dropouts in the state of Texas is $377 million, with an expected lifetime cost of $19 billion coming from three sources: lost revenue from taxes and fees, increased Medicaid costs and increased incarceration costs (Wright, 2012).

Leithwood (1994) suggests that transformational approaches to school leadership are especially appropriate to the myriad challenges facing schools entering the 21st century. He suggests that these be supported by practicing school administrators and featured more prominently in principal preparation programs (Valentine & Prater, 2011).

Shaping the educational climate of the school is often considered to be the primary responsibility of the principal (Snowden & Gorton, 1998). Principals can reinforce positive norms and values in their daily work, the words that they use, as well as the Relations that they have with others (Peterson, 2002). When done in a positive manner, high levels of student performance can also be achieved (Hallinger & Heck, 1998). Therefore, it is critical that principals be aware of the degree of influence that they have in shaping school climate to successfully promote student performance and professional development (Martin, 2009).

Purpose of the Study

The rationale for conducting this study is to examine the relationship between the various aspects of transformative principal leadership and school climate. Findings from this study may provide deeper insight into the specific factors of transformational

leadership and their relationship to school climate factors, which in conjunction could positively influence student performance.

The following study will help improve the educational situation of students for many reasons. First, future school leaders will gain a better understanding of the specific leadership competencies that influence a school's climate. Also, if the relationship between transformational leadership and school climate is shown to be valid, schools will seek candidates with transformational leadership competencies that can improve overall organizational health.

Research Questions

In this study, the variables that will be used to measure transformational leadership are the six factors from the Principal Leadership Questionnaire (PLQ), developed by Jantzi and Leithwood (1996). The variables used to measure school climate are the three factors derived from the School Climate Assessment Instrument (SCAI), developed by the Alliance for the Study of School Climate (2014). The following research questions were examined in this study:

1. Are there significant relationships between transformational leadership and school climate in the tested Texas schools?
2. Does transformational leadership influence school climate in the tested Texas schools?
3. Does the individual school site, employment role, and tenure influence school climate in the tested Texas schools?

Limitations

The following limitations, which focus on the applied methodology, apply to this study (Heppner & Heppner, 2004).

- The findings of the study will be limited by the validity and reliability of the instruments.
- The results of the study will be constrained by the accuracy and perception of the participants. It is assumed that they will respond honestly and interpret the instrument as intended.
- The findings of the study will be subject to the limitations of survey data collection methods.
- Due to the small unique sample available for the study, results may not be generalizable beyond the specific population from which the sample was drawn.
- The findings of this study will be based on Likert-type questions that do not allow participants to construct their responses or enable the researcher to probe for additional insight.

Definitions

The terms necessary to understand this study are defined below.

Attitude and Culture: Examines the pervasive attitudes and cultures that operate within the school and their relationship to the climate. This factor explores the degree to which social and communal bonds are present within the school, the attitudes that the members of the school possess, and the level of pride and ownership they feel. It includes

the degree to which efforts in this area are made intentionally or left to chance (Gangi, 2009).

Goal Acceptance: The extent to which the principal promotes cooperation among organizational members and assists them in working together toward common goals (Jantzi & Leithwood, 1996).

High-Performance Expectations: The degree to which the principal establishes expectations for excellence, quality, and high performance on the part of the organization's members (Jantzi & Leithwood, 1996).

Individualized Support: The degree to which the principal demonstrates respect for organizational members and concern about their personal feelings and needs (Jantzi & Leithwood, 1996).

Intellectual Stimulation: The degree to which the principal challenges organizational members to reexamine some of the assumptions about their work and rethink how it can be performed (Jantzi & Leithwood, 1996).

Leadership Decisions: Examines the relationships among decision-making mechanisms, how administrative authority is manifested and the climate that is created as a result. This factor includes the degree to which the collective possesses a shared sense of values and operational vision. It also explores the ways in which the quality of leadership affects school life (Gangi, 2009).

Modeling: The degree to which the principal sets an example for the organizational members to follow consistent with the values the principal espouses (Jantzi & Leithwood, 1996).

School Climate: Teachers' shared perceptions of their overall work environment that includes the internal features that distinguish one campus from another and affect the behavior of its staff members (Hoy, 1990).

Faculty Relations: Examines the relationship between how members of the faculty relate to one another and its effects on the climate of the school. This factor includes the degree to which collaboration, respect, the capacity to interact, and a sense of collective purpose exist among the members of the faculty. It also includes the explicit and clear expectations among teachers as to how decisions are made and duties are delegated and performed (Gangi, 2009).

Transformational Leadership: Leadership that moves individuals toward a level of commitment to achieve school goals by identifying and articulating a school vision, fostering the acceptance of group goals, providing individualized support, providing intellectual stimulation, providing an appropriate model, and having high-performance expectations (Jantzi & Leithwood, 1996).

Vision Identification: The degree to which the principal identifies new opportunities for the organization and develops, articulates, and inspires others with a vision of the future (Jantzi & Leithwood, 1996).

Outline of the Study

This chapter contains the overview of the study, including a brief introduction to the topic, the statement of the problem, the purpose of the study, the research questions, the limitations and delimitations of the study, and definitions. Chapter 2 is a review of literature related to the current state of the schools, the changing role of the principal,

principal leadership, and school climate. Chapter 3 provides details about the design of the study, including information about the participants, instruments, data collection methods, and statistical analyses.

Chapter 2: Review of the Literature

The role of the principal has changed strikingly over the past few years as the focus has shifted from only managing schools and overseeing instruction, to being held fully accountable for student performance. For school leaders to lead their schools, they must be conscious not only on how they lead but also how they are impacting the climate of their schools.

The purpose of this study was to examine the relationship between the transformative leadership practices of principals and the factors of school climate. For principals to meet the increasing demands that have been placed upon them with educational reform measures and heightened accountability, the need to investigate this relationship further is indicated. The review of related literature is organized into four major sections. The first section explores the current state of the schools. The second section discusses how the role of the principal has evolved over the past few years. The third section is a review of transformational leadership and discusses the various factors of leadership considered throughout this research study. The fourth section examines the concept of school climate, and the factors of it considered in this study.

State of the School

Few would dispute the value of education. An education can afford opportunities that would have never been possible were it not for the preparation that students receive while in school. With the fluctuating economy and uncertain times, it is more important

than ever for our nation's children to receive the proper education and training that will allow them to acquire a good job and produce the means by which to live (Boyer & Hamil, 2008). Becoming a productive member of society is a long-standing American goal. Students graduate from high school then proceed to college. If they are successful, they may benefit economically, politically, and socially (Reed & Justice, 2014). Unfortunately, there are many issues facing our education system today, and several of them are having adverse effects on the caliber of the education our students are receiving. (Boyer & Hamil, 2008).

America is losing ground in producing highly intelligent; creative young adults equal to the tasks presenting themselves worldwide. Neglecting to change the system will only contribute to America losing its position as a world leader. However, because of our deteriorating system of public education, other nations are assuming leadership roles in education, innovation, skilled labor and productivity (Wright, 2012).

School districts throughout the country are also facing challenges in recruiting and retaining school administrators. Possible causative factors include: increasing retirement rates among school leaders, dwindling applicant pools, administrators who are exiting the principalship, inadequate school funding, demanding curricular standards, and role expectations for today's school leaders that need new ways of leading and managing (National Association of Secondary School Principals, 2007).

Goodwin et al. (2005) suggests that schools are also contending with other serious problems ranging from random outbreaks of violence and crumbling facilities to staff shortfalls and chronically low academic expectations for students, but many people

believe that a scarcity of capable education leaders ranks among the most severe of the problems. Without strong leaders, she suggests that schools have little chance of meeting any other challenges.

In 2012, the Obama administration began offering states options to certain requirements of NCLB in exchange for comprehensive state-developed plans designed to narrow achievement gaps, increase equity, improve the quality of instruction, and increase outcomes for students. Thus far 42 states, DC and Puerto Rico have received flexibility from NCLB (U.S. Department of Education, 2015).

Even with recent changes to the initial NCLB legislation, principals are still faced with administering batteries of annual tests, assisting struggling sub-groups of children to meet artificial goals, dealing with more rigid hiring procedures, considering scientifically based research to provide valid curricular information, and encouraging parents to become more involved in their children's education. All of this, principals say, is an unfunded federal mandate in a time of increasingly limited budgets (Goodwin et al., 2005).

Changing Role of the Principal

Since the beginning of the principalship in U.S. education, educators have struggled with the definition of the role of the school leader (National Association of Secondary School Principals, 2007). Constituents inside and outside of the school have different perceptions of and influences on the function. Researchers have repeatedly scrutinized the job and its place in the larger social and educational context, urging administrators in one decade to be "bureaucratic executives" followed ten years later by

"humanistic facilitators" and then "instructional leaders" (Beck & Murphy, 1994). The principalship has been strongly influenced by reform efforts of the last 20 years and by powerful economic and social challenges. Principals repeatedly assert that their work has changed both in its complexity and in the amount of time the work requires (Goodwin et al., 2005).

The leadership role played by the school principal is critical. Principals perform many different roles, but the most effective school principals are not only managers and disciplinarians, but also instructional leaders for the school. Successful principals provide a shared vision of what good instruction looks like, support teachers with the help and resources they need to be effective in their classrooms and monitor the performance of teachers and students, with an eye always on the overall goal—to create school climates or environments in which all children can achieve their full potentials. (Van Roekel, 2008).

The role of the principal in US schools has not always been one of significance. In fact, in the early 1800s, schools had no principals, and teachers performed the necessary administrative, clerical, and even janitorial tasks. These early teachers were supervised by local school board members who made all administrative decisions. Eventually, the need arose for a head teacher or a 'principal teacher' in each school (Goodwin et al., 2005).

The image of the principalship has shifted over the last decade from a position of pride and respect to an undesirable role to be avoided. Teachers and counselors who sought the principalship in the past are not pursuing the position today. Instead, they consider the incredibly long hours, unreasonable workload, unfair accountability, and

undue pressures from all angles and choose to avoid the once-admired seat of authority (Pierce, 2000). The role of the school leader has grown in recent years to include a staggering array of responsibilities. School leaders are expected to be educational visionaries, instructional leaders, assessment experts, disciplinarians, community builders, public relations experts, budget analysts, facility managers, special programs administrators, and guardians of various legal, contractual, and policy mandates and initiatives (National Association of Secondary School Principals, 2007).

Any change introduced to schools is often met with resistance and is doomed to failure as a result of the reform being counter to this nebulous, yet all-encompassing facet of school climate (Hinde, 2004). There is still another aspect that is vital to promoting change: the role of the principal and other school leaders. School leaders include the principal, teachers, and parents. They all play a role in shaping the climate of schools (Peterson and Deal, 1998; Hinde, 2002). School leaders determine and enact the fundamental assumptions of the school climate. They develop supportive organizational arrangements, consult, monitor and reinforce the change process. Schools with principals who have these qualities are amenable to change (Hinde, 2004).

There is no doubt that there will continue to be a focus on leadership throughout the succeeding decades. Stewart (2006) asks,

> What are the images of leadership that will take us through this period of organizational change and school reform? What kind of leadership is needed at all levels of the school system to lead schools effectively to change and advance even further than thought possible?

Training and producing effective leaders cannot be limited to imparting beneficial traits to people. There is a need for organizations and schools that support the collective form

of leadership where individuals feel safe, supported and free to think and act creatively. Huber & West (2002) assert, "The school leader, is most often cited as the key figure in the individual school's development, either blocking or promoting changes, acting as the internal change agent, overseeing the processes of growth and renewal" (p. 1072). The challenge for leaders is to move from a bureaucratic system of managing people to a professional system marked by shared problem solving and decision-making. (Bass, Avolio, Jung, & Berson, 2003).

Leaders also need to understand fully and develop their teams. Leithwood, Harris, & Hopkins (2008a) suggest that while practices in this category make a significant contribution to motivation, their primary aim is building not only the knowledge and skills that teachers and other staff need to accomplish organizational goals but also the dispositions (commitment, capacity, and resilience) to persist in applying the knowledge and skills. The more specific practices in this category are providing individualized support and consideration, fostering intellectual stimulation, and modeling appropriate values and behaviors. These particular practices not only reflect managerial actions but as more recent research has demonstrated, are central to the ways in which successful leaders integrate the functional and the personal (Leithwood et al., 2008).

The role of the school leader is complex (Parkes and Thomas, 2007) and the focus on principals as leaders for teaching and learning within the schools and their responsibility for increased student achievement has risen with recent reform efforts (Fink and Resnick, 2001; McAdams, 1998). However, leadership practices vary from

school to school and narrowing down those critical factors is difficult. In fact, "Unraveling the effects of principals and instructional leadership practice is a complicated, if not impossible, business" (Sherman and Crum, 2007). However, while it is hard to determine the direct effects principals have on student achievement, research supports the notion that principals undoubtedly impact instruction and the success of schools, albeit in indirect ways (Hallinger and Heck, 1998). Gurr, Drysdale, and Mulford found in their case study research on Australian principals that "the principal remains an important and significant figure in determining the success of a school" (Crum & Sherman, 2008).

In all research, a critical factor in effective school reform and school change is the role of the school leader, and they become the chief agent of change in improving the school (Lashway, 2000). This is not a new factor in school change efforts, but it is an essential one. Louis and Kruse (1995) found that school leaders continue to be best positioned to help guide faculty toward new forms of effective schooling. Strong actions by the administrator on behalf of organizational development are necessary to initiate school improvement, and once the initiative is underway, it is also required for the secondary school leader to share leadership, power, authority, and decision-making with the staff in a democratically participatory way (Hord, 1997). It is only through this new leadership that schools can meet the challenges of declining budgets, changing populations, more broad accountability mandates, and the ever-expanding list of issues (National Association of Secondary School Principals, 2007).

One central finding concerns the importance of leadership during the change process both as a catalyst and agent for support. For example, in recent years scholars have begun to differentiate more clearly the nature of leadership that may be needed during the turnaround stage in schools facing special measures (Hallinger & Heck, 2011).

Transformational Leadership

Stewart (2006) suggests that leadership is an important area of focus for researchers, in light of the current focus on school accountability. School leaders set the atmosphere of a campus, establishing various norms for behavior that staff members follow (Cohen & Mccloskey, 2009). In general, campus leadership can be examined as a culmination of various activities that lead to an overall responsibility and oversight of those associated with the campus (Onorato, 2013). Transformational leadership is one of the most prominent contemporary theories regarding leadership (Moolenaar, Daly, & Sleegers, 2010).

Burns (1978) provided a comprehensive assessment of leadership and distinguished among a variety of leadership styles. He suggested the existence of two common types of leadership: transactional and transformational. The relationships between most leaders and followers, according to Burns (1978), were transactional, where the main purpose of the relationship is for an exchange of things that are valued. This style of leadership is indicated when attempting to maintain the status quo (Moolenaar et al., 2010). Transactional leadership is contrasted with transformational leadership, which emphasizes a leader's ability to recognize the potential skills of an employee and engage the complete person and not just particular traits. Burns (1978) also

wrote that a transformational leader was typically focused on the end product, uniting staff in the pursuit of goals that match the leader's vision while finding ways to excite even the most disenchanted employee. Transformational leadership has been found to have an impact on teachers' perceptions of school conditions, their individual commitment to change, and organizational learning and student outcomes (Hallinger & Heck, 1998). The result of transformational leadership is the elevation of both leaders and followers to higher levels of motivation and the development of followers into leaders.

Bass (1999) and Bass and Riggio (2006) expanded upon Burns' work and described a transformational leader as one who empowers others to become leaders and who maintains goal focus among individuals, leaders, and the organization as a whole. These objectives often go beyond someone's immediate self-interest and help sustain the campus as a whole. This emphasis on goal focus was also written about by Sergiovanni (2007), who stated that a transformational leader practices "purposing" providing a clear and concise goal focus that unites the organization and encourages commitment. The idea of transformational leadership has progressively been the center of educational research and discussion (Bass, 1997; Bums, 1978; Finnigan & Stewart, 2009; Heck & Hallinger, 2005). Transformational leaders tend to focus on improving the overall school environment to restructure a campus (Stewart, 2006). Because of their role in the school improvement process, principals find themselves expected to bring visionary leadership to the campus, a task not regularly taken care of by someone who is only focused on instruction (Bogler, 2001). When a principal provides evidence that he or she understands

the need to empower teachers, there is increased motivation and commitment towards campus goals (Leithwood & Jantzi, 2005; Marks & Printy, 2003; Sergiovanni, 2007).

Factors of Transformational Leadership

As assessed by the Principal Leadership Questionnaire (PLQ), the factors of transformational leadership according to Jantzi and Leithwood (1996) are Vision Identification, Modeling, Goal Acceptance, High-Performance Expectations, Individualized Support, and Intellectual Stimulation.

Vision Identification

The degree to which the principal identifies new opportunities for the organization and develops, articulates, and inspires others with a vision of the future (Jantzi & Leithwood, 1996).

Effective leaders must be able to create a vision that others will follow or facilitate the collaborative creation of a vision. Some scholars (Fullan & Hargreaves, 1996; Stolp, 1994) suggest that creating a vision through a collaborative process is far more valuable to the school because more individuals will support an idea they helped create. The school vision also needs to be student-centric to help unite the faculty (Leithwood et al., 1999). Visioning is imperative to the establishment of the direction of an organization, but goals must also be set to achieve this school vision (Mees, 2008).

Modeling

The degree to which the principal sets an example for the organizational members to follow consistently with the values the principal espouses (Jantzi & Leithwood, 1996). Modeling behavior allows the principal to set an example for the staff by demonstrating

how one should act to facilitate the accomplishment of the school vision and goals (Jantzi & Leithwood, 1996; Lucas & Valentine, 2002). While reflected in the school vision, the principal's beliefs must also be supported by action (Leithwood et al., 2006; Schlechty, 2000). It is essential that the organization members see actions taken by the principal to model behaviors that are in line with the school's vision (Mees, 2008).

Goal Acceptance

The degree to which the principal promotes cooperation among organizational members and assists them in working together toward common goals (Jantzi & Leithwood, 1996). Goals are considered more precise, whereas the vision is thought of as more of an overarching concept (Hallinger & Heck, 2002). Goal setting can be effected by the principal or through a collaborative process, which encourages school level stakeholders to be more invested in the goals set by the school (Hallinger, 1992)

The gap between current practices and desired practices in a school are identified when schools create goals (Hallinger & Heck, 2002). Goals must be attainable and are usually quantifiable, so there is a higher degree of accountability (Hallinger & Heck, 2002; Hallinger & Murphy, 1986). The implementation of both a vision and goals help increase student achievement by setting a consistent direction for the school (Stolp, 1994).

High-Performance Expectations

The degree to which the principal establishes expectations for excellence, quality, and high performance on the part of the organization's members (Jantzi & Leithwood, 1996). Leaders can help followers accomplish school goals by setting high expectations

(Leithwood et al., 2006). High expectations help motivate teachers to work toward goal attainment by comparing current performance to future success (Leithwood et al., 1999).

Individualized Support

The degree to which the principal demonstrates respect for organizational members and concern about their personal feelings and needs (Jantzi & Leithwood, 1996). Transformational leaders have the ability to recognize each employee's potential for growth and achievement, which is described as individualized support (Bass & Riggio, 2006). This characteristic creates and sustains a climate in which innovations can grow (Bass & Avolio, 1995). Leaders pay attention to the needs of each follower and are consistently able to mentor staff to reach individual goals.

Also, transformational leaders who provide individualized support tend to demonstrate confidence in the abilities of their followers to be innovative, to share responsibilities and risks with team members, and to recognize the individual contributions of staff (Leithwood & Jantzi, 2005). In the study conducted by Hauserman et al. (2013), teachers reported that they perceived the characteristic of individualized support as the ability of their principal to empower the staff through a focus on collaboration. Teachers also perceived their principals to be their colleagues, rather than their bosses; this was exhibited when the principal worked together with teachers to solve problems (Allen, 2015).

Intellectual Stimulation

The degree to which the principal challenges organizational members to reexamine some of the assumptions about their work and rethink how it can be performed (Jantzi & Leithwood, 1996). Intellectual stimulation describes a transformational leader's ability to stimulate innovation and creativity within staff members (Bass & Riggio, 2006). New ideas and solutions to problems are requested from followers, and the leader is consistently encouraging others to try new things. Through intellectual stimulation, a transformational leader can encourage teachers to spend more time on training and professional development, which can stimulate the creation of an innovation-oriented climate (Leithwood, 1994; Moolenaar et al., 2010).

Hauserman (2013) discovered that teachers perceive the characteristic of intellectual stimulation as a principal's ability to convey ideas, honesty, and trust within a campus. Staff members reported that they believed their leaders were open and receptive to new ideas and were proactive and consistently fair when dealing with both staff and students. These principals were perceived by teachers as impacting the change process positively, especially by including the appropriate staff members in the decision-making process (Allen, 2015).

Previous Studies

Trepenier, Fernet, and Austin (2012) conducted a study that analyzed the relationship between a principal's perceptions of their workplace relationships and their transformational leadership characteristics. The results showed that principals who considered their relationships at work to be meaningful had the tendency to view

themselves as inspirational leaders with the ability to communicate a sense of mission to others. Also, the authors discovered that principals who feel a strong sense of self-efficacy were more likely to display the transformational leadership characteristics.

Goff, Goldring, and Bickman (2014) studied the extent that a principal's self-assessment of leadership characteristics matched their teachers' perceptions of the same characteristics. They discovered that there is often a large, significant gap between the two sets of perceptions, suggesting that teacher see and interpret various leadership characteristics differently than the principals do.

Finnigan and Stewart (2009) found that transformational leadership behaviors were most frequently evident in high performing schools, lending credence to the belief that transformational leadership is the most effective form of leadership. This is one example that documents that transformational leadership is an important component in the establishment of successful schools and a topic worthy of further study.

School Climate

Since the reform movement of the 1990s, a significant amount of attention has been placed on school climate and the school principal (Webster, 1994). Several studies have shown that the essential variable in shaping school climate and guiding reform efforts is the leadership of the principal (Hamilton & Richardson, 1995; Sergiovanni, 1995; Snowden & Gorton, 1998; Webster, 1994). Schein (1992) concurs and adds, "The bottom line for leaders is that if they do not become conscious of the cultures in which they are embedded, those cultures will damage them. Cultural understanding is desirable for all of us, but it is essential to leaders if they are to lead" (p. 15). Thus, it is critical for

school leaders to be cognizant of their schools' climates so they can fulfill their leadership roles effectively (Martin, 2009).

According to Levin (2001), the leader of the school can be a determinate as to whether or not a school will be successful. Also, Sergiovanni (1995) asserts that the principal is viewed as having the greatest position of power and influence in maintaining and improving the quality of the school (Martin, 2009). Many principals often do not realize that the key to influencing student achievement is by nurturing a positive school climate (Chiang, 2003; Peterson, 2002). Shaping the climate of the school is considered to be the primary responsibility of the principal (Snowden & Gorton, 1998). Principals can reinforce positive norms and values in their daily work, the words that they use, as well as the relations that they have with others (Peterson, 2002). When done in a positive manner, high levels of student performance can be achieved (Hallinger & Heck, 1998).

It is often difficult for administrators to recognize if their behaviors are positively impacting the school climate because they are consistently addressing the daily demands of their jobs. Principals are typically faced with frustration, stress, or even impairment as a result of the constant shift in their positions and leaving them little time for them to reflect on their current practices. Thus, receiving feedback from other stakeholders, especially faculty members, is essential (Martin, 2009).

In this cultural context, first, the principal is a role model in their school. The teacher has to notice and interpret the principal's necessary actions (Fullan, 1992). Likewise, teachers should observe the principal for signs of how things are going with respect to experimentation, risk-taking, courage, collaboration, and attitudes towards the

necessity of change (Deal & Peterson, 2000). Principals can promote a positive climate, by acting in a certain way that sends signals to teachers and students that they can achieve more (Sahin & Şahin, 2011).

The National School Climate Council (2007) suggests that a positive and sustained school climate is based on patterns of people's experiences of school life and reflects norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures. This climate includes norms, values, and expectations that support people feeling socially, emotionally and physically safe. People are engaged and respected. Students, families and educators work together to develop, live, and contribute to a shared school vision. Educators model and nurture an attitude that emphasizes the benefits of, and satisfaction from, learning. Each person contributes to the operations of the school as well as the care of the physical environment (Thapa, Cohen, Guffey, & Higgins-D'Alessandro, 2013).

Factors of School Climate

The variables used to measure school climate are the three factors from the School Climate Assessment Instrument (SCAI), developed by the Alliance for the Study of School Climate (2014). They are Attitude and Culture, Faculty Interaction, and Leadership Decisions.

Attitude and Culture

Examines the pervasive attitudes and cultures that operate within the school and their relationship to the climate. This factor explores the degree to which social and communal bonds are present within the school, the attitudes that the members of the

school possess, and the level of pride and ownership they feel. It includes the degree to which efforts in this area are made intentionally or left to chance (Gangi, 2009). The extent to which a positive school climate exists is considered its culture (Allen, 2015). Halpin and Croft (1963) found that some of the characteristics of a positive school climate include high morale and considerable job satisfaction among staff members. Thapa, Cohen, Higgins-D'Alessandro, & Guffey (2012) suggest that a positive school climate promotes cohesion, mutual trust, and cooperation among staff members (Allen, 2015).

Faculty Relations

Examines the relationship between how members of the faculty relate to one another and its effects on the climate of the school. This factor includes the degree to which collaboration, respect, the capacity to interact, and a sense of collective purpose exist among the members of the faculty. It also includes the explicit and unambiguous expectations among teachers as to how decisions are made and duties are delegated and performed (Gangi, 2009).

Leadership Decisions

Examines the relationships among decision-making mechanisms, how administrative authority is manifested and the climate that is created as a result. This factor includes the degree to which the collective possesses a shared sense of values and operational vision. It also explores the ways in which the quality of leadership affects school life (Gangi, 2009). Leadership describes the extent to which the principal provides instructional leadership to the staff of the campus (Allen, 2015). Halpin and

Croft (1963) and Hoy et al. (1991) found that open climates featured principals who displayed sincere, genuine behavior and a high level of consideration for teachers. Also, the policies of the principal should not hinder the ability of the teachers to do their jobs, and the principal should exhibit indirect control of staff while providing direction (Halpin & Croft, 1963). School climate can also be negatively affected by leadership style. If a principal focuses on routine busywork or attempts to run the organization in a businesslike, impersonal manner, teachers may not feel positive about their school's climate (Halpin & Croft, 1963; Hoy et al., 1991). Lastly, leaders who do not share leadership and who fail to motivate staff and model appropriately can also influence the development of a negative school climate (Allen, 2015).

Previous Studies

School climate research tends to be quantitative to better identify patterns of perceived behavior within an organization (Hoy, 1990; Owens, 2004; Stockard & Mayberry, 1992). Climate is often studied as an independent variable to determine how it influences organizational outcomes. Hoy (1990) writes that the main purpose of studying climate is to determine the most effective strategies for change.

While many factors that affect school climate are often beyond the control of local schools, such as policy and funding issues that are prevalent at the state level (Freiberg & Stein, 1999), there are several elements of school climate that can be controlled within the confines of a campus. It is important to note that there are many mediating organizational practices that play a key role in the definition and maintenance of a campus's climate (Poole, 1985). Litwan (1968) wrote that climate influences the

behavior of the whole organization through its influence on individual and small group behavior.

Leadership is a key component in the development and sustainment of school climate (Bass & Riggio, 2006; Burns, 1978). Distinct school climates can be created by varying leadership styles (Litwin, 1968). Owens (2004) and Vos (2012) found that the behavior of principals was especially influential on school climate, as the specific strategies used to manage the campus influence the experience of the teachers and the overall work atmosphere. Hoy and Woolfolk (1993) also found that principal influence was a key component in the stimulation of teacher efficacy. Bird (2009) discovered that teachers' report of their engagement levels was strongly related to their level of trust in the school, their colleagues, and their principal.

Moolenaar and his colleagues (2010) found that transformational leadership was positively and significantly related to teachers' perceptions of their school's climate of innovation. They also determined that teachers who were performing administrative tasks in support of the principal, in addition to their teaching tasks, perceived their school's climate as less innovative than those teachers who had no additional administrative tasks. Regarding the lack of significance, Bulach and Lunenberg (1995) found that there were no statistically significant differences in school climate as a result of principal leadership styles, implying that any leadership style could lead to the development of a positive school climate, especially when the staff is experienced.

Urick and Bowers (2014) found that a principal's perception of the climate of the campus was negatively related to the students' socioeconomic status and the social

disorder of the school. Also, the related effect of the principal's perception of their influence over instruction on school climate and the school's connection with the community was lessened by the extent to which the principal believed their campus's test scores and discipline were part of their evaluations.

Teacher perceptions of a principal's leadership style can also have an impact on school climate. Rhodes, Camic, Milbum, and Lowe (2009) found that principals can improve teachers' perceptions of school climate by exhibiting collaborative decision-making and attempting to remove obstacles that keep teachers from focusing on instruction. As a teacher's perception of leadership improves, they become more effective in the classroom. This implies that principals who want to affect positively school climate should focus on providing the necessary support and resources teachers need.

Vos (2012) wrote that an unhealthy school climate can lead to ineffectiveness. Discovering the climate of a campus is an important component, then, for developing strategies for management and improvement of the organization's overall health. For example, school climate has a significant effect on staff motivation, performance, and job satisfaction (Litwin, 1968). Hoy and Woolfolk (1993) discovered
that there was a reciprocal relationship between organizational climate and teacher efficacy.

Since the overall climate of a campus has a significant effect on the job satisfaction levels of staff members, it is especially important to evaluate organizational health to maintain positive work performance (Vos 2012). Lastly, a sustainable, positive school climate encourages the development and learning necessary for students to

become productive contributors to a democratic society (Cohen et al., 1999). In conclusion, as Hoy (1990) writes, organizational health and climate as a whole can be an important factor in effective change efforts.

Summary

Transformative leadership and a positive school climate collectively contribute to the overall success of a school. Although the stated objective of many reform efforts is to align content, teaching, and assessment, the chances of these programs being successful are remote unless there is a climate is in place that embraces these structural changes. Transformative leaders are viewed as being vital to improving the effectiveness of an organization. One possible method for increasing an organization's effectiveness is by identifying transformative principal leaders most effective traits, and consequently, matching those with elements of a compatible climate.

Based on the preceding review of the literature, there is ample evidence that indicates that transformative leadership and school climate are related. Attempting to understand one without having an understanding of the other will not obtain the desired results. As a result, school leaders must have a thorough understanding of their role in shaping the school climate, as well as the appreciation for which leadership style that is most appropriate for assisting them in doing so (Martin, 2009). Increasing the body of knowledge regarding which leadership style would be considered as the best fit for a school's climate could potentially lead to assisting organizations in selecting the best leaders to enhance the effectiveness of the organization. It is hoped that this research study will help schools in this process.

Theoretical Framework

Transformational leadership, as studied by Burns (1978), is one of the most prominent contemporary theories regarding leadership. Burns wrote that a transformational leader was typically focused on the end product, uniting staff in the pursuit of goals that match the leader's vision while finding ways to excite even the least interested employee. Transformational leadership has been found to have an impact on school climate and student achievement levels (Hallinger & Heck, 1998). School climate has been a component of the school reform movement since the early 1990s, and the concept encompasses teachers' shared perceptions of their overall work environment and includes the internal features that distinguish one campus from another and affect the behavior of its staff members (Hoy, 1990). Studying school climate measures helps assess organizational and individual behavior for the purpose of making changes, if necessary (Allen, 2015).

Research shows that transformational leadership is positively and significantly related to teachers' perceptions of their school's climate and can lead to positive changes in student outcomes (Finnigan & Stewart, 2009; Moolenaar et al., 2010). Research also shows that school climate has a positive influence on student achievement (Caprara et al., 2006; Ross, 1992). Given that there few studies examine the interrelated nature of transformational leadership and school climate in conjunction with site-level characteristics, there is a need for more research to be conducted.

Chapter 3: Research Methodology

The purpose of this correlational study was to examine the relationship between transformational principal leadership and school climate. Survey data were collected from a purposeful sample of three schools located in a small suburban school district in south Texas. Data were analyzed using canonical correlation analysis, Pearson's product-moment correlation analysis, and one-way analysis of variance (ANOVA) tests.

This chapter is divided into five sections. The first section restates the research questions and states the hypothesis. The second section outlines the characteristics of the subjects who participated in this quantitative study. The third section describes the measurement instruments used to gather data and explore the research questions. The fourth section describes the systematic procedures used to collect the data. The final section of the chapter describes the data analysis procedures from the Statistical Package for the Social Sciences (SPSS) utilized in this study.

Research Questions

The following research questions were examined in this study:

1. Are there significant relationships between transformational leadership and school climate in the tested Texas schools?
2. Does transformational leadership influence school climate in the tested Texas schools?
3. Are there differences in school climate means in the tested Texas schools?

Hypothesis

H_a: There is a statistically significant relationship between the factors of transformational leadership, as measured by the Principal Leadership Questionnaire (PLQ) and the factors of school climate, as measured by the School Climate Assessment Instrument (SCAI) in the examined Texas schools.

Population and Sample

The population for this study comprised three schools from a small suburban school district in south Texas. This school district is composed of fifteen campuses (nine elementary schools, four middle schools, one high school, and one alternative campus), employs 30 principals and assistant principals and 557 teachers, and has a student population of 9,689 (Texas Education Agency, 2014).

The participants for this study were Texas school teachers and support personnel. A middle school, for the purpose of this study, was a school having students in grades six through eight. A high school, for the purpose of this study, was a school having students in grades eight through twelve.

The data for this study were collected from Texas school teachers and support personnel, and the individual was the level of analysis.

Participant Demographics

Data were collected from 218 faculty and staff participants representing three schools in a small suburban school district in south Texas. During the fall of 2015, the researcher sent the Qualtrics questionnaire to the 430 faculty and staff members with email addresses in the schools' directories. Of the 218 participants who responded, 21

responses were deleted due to submitting incomplete surveys or by not completing the required consent form, leaving a total of 197 qualified participants. Table 1 represents the number of participants per research site. Tables 2 and 3 provide summary demographics of the respondents.

Table 1

Response Rate by Site

Research Site	Responses	Percentage
School "A"	112	53%
School "B"	60	28%
School "C"	40	19%
Total	212	100%

Table 2

Response Rate by Primary Role

Role	Reponses	Percentage
Administrator	14	7%
Faculty	163	77%
Staff	36	17%
Total	213	100%

Table 3

Response Rate by Tenure

Tenure in Years	Reponses	Percentage
Less Than One	8	4%
One to Three	29	14%
Three to Five	16	7%
Five to Seven	20	9%
Seven or More	141	66%
Total	214	100%

Instrumentation and Reliability

Two quantitative survey instruments were used to gather data for principal transformational leadership and school climate. The Principal Leadership Questionnaire (PLQ), developed by Jantzi and Leithwood (1996), provided data about transformational leadership. All six factors of the PLQ were used in the data collection. The six PLQ factors are (1) Vision Identification, (2) Modeling, (3) Goal Acceptance, (4) Individualized Support, (5) Intellectual Simulation, and (6) High-Performance Expectations. The PLQ has both face and construct validity. The items used to create the factors in the PLQ made sense to measure the concepts examined. Mees (2008) cited previous studies that provided evidence of construct validity for the PLQ including Prater (2004) and Schooley (2005).

The School Climate Assessment Instrument (SCAI), originally authored by Shindler et al. (2003) and published in 2004 by the Western Alliance for the Study of School Climate (WASSC) has surveys for faculty, parents, and students for elementary,

middle and high school levels, that can be administered either individually or in a group setting (Gangi, 2009). The SCAI has eight factors, but only three were used in the current study. This decision was made to decrease the overall survey length and to improve the response rate, but primarily to only use factors of conceptual interest with respect to leadership. The three SCAI factors examined in this study were (1) Attitude and Culture, (2) Leadership Decisions, and (3) Faculty Relations. The SCAI has both face and construct validity. The items used to create the factors in the SCAI made sense to measure the concepts being studied. Gangi (2009) cited studies from Shindler, Jones, Williams, Taylor, and Cadenas that provided construct validity for the SCAI and suggested that recent survey data also evidences there are high correlations among climate, achievement, and climate subfactors.

The PLQ was used to gather data concerning the principal's transformational leadership characteristics. The PLQ consisted of 24 Likert-type questions with six response options: strongly disagree, disagree, somewhat disagree, somewhat agree, agree, and strongly agree (Mees, 2008). Each of the six PLQ factors described below used the same scale.

After the factor name is a description of the factor, the number of items per factor, and the reliability for each factor expressed as a Cronbach's alpha coefficient.

Vision Identification: The degree to which the principal identifies new opportunities for the organization and develops, articulates, and inspires others with a vision of the future (Jantzi & Leithwood, 1996). This factor has four items and has a Cronbach's alpha coefficient of .96.

Modeling: The degree to which the principal sets an example for the organizational members to follow consistently with the values the principal espouses (Jantzi & Leithwood, 1996). This factor has four items and has a Cronbach's alpha coefficient of .94.

Goal Acceptance: The degree to which the principal promotes cooperation among organizational members and assists them in working together toward common goals (Jantzi & Leithwood, 1996). This factor has four items and has a Cronbach's alpha coefficient of .94.

High-Performance Expectations: The degree to which the principal establishes expectations for excellence, quality, and high performance on the part of the organization's members (Jantzi & Leithwood, 1996). This factor has four items and has a Cronbach's alpha coefficient of .95.

Individualized Support: The degree to which the principal demonstrates respect for organizational members and concern about their personal feelings and needs (Jantzi & Leithwood, 1996). This factor has four items and has a Cronbach's alpha coefficient of .94.

Intellectual Stimulation: The degree to which the principal challenges organizational members to reexamine some of the assumptions about their work and rethink how it can be performed (Jantzi & Leithwood, 1996). This factor has four items and has a Cronbach's alpha coefficient of .92.

The SCAI was used to gather data concerning the schools' climate factors. Instead of the typical Likert response type (5 choices ranging from strongly disagree to

agree strongly), or simple yes/no responses, actual statements that reflect different levels of functioning are given as choices for each item. To further describe, there are three different statements offered to the participant for each of the 80 items, each reflecting low (Level 1 / accidental), medium (Level 2 / semi-intentional) or high levels (Level 3 / intentional) of performance. For each item, the participant can rate what they perceive best reflects their reality in the school, e.g., low, middle-low, middle, high-middle, or high (Gangi, 2009). Each of the three SCAI factors described below uses the same scale. After the factor name is a description of the factor, the number of items per factor, and the reliability for each factor expressed as a Cronbach's alpha coefficient.

Attitude and Culture: Examines the pervasive attitudes and cultures that operate within the school and their relationship to the climate. This factor explores the degree to which social and communal bonds are present within the school, the attitudes that the members of the school possess, and the level of pride and ownership they feel. It includes the degree to which efforts in this area are made intentionally or left to chance (Gangi, 2009). This factor has ten items and has a Cronbach's alpha coefficient of .90.

Faculty Relations: Examines the relationship between how members of the faculty relate to one another and its effects on the climate of the school. This factor includes the degree to which collaboration, respect, the capacity to interact, and a sense of collective purpose exist among the members of the faculty. It also includes the explicit and unambiguous expectations among teachers as to how decisions are made and duties are delegated and performed (Gangi, 2009). This factor has eleven items and has a Cronbach's alpha coefficient of .92.

Leadership Decisions: Examines the relationships among decision-making mechanisms, how administrative authority is manifested and the climate that is created as a result. This factor includes the degree to which the collective possesses a shared sense of values and operational vision. It also explores the ways in which the quality of leadership affects school life (Gangi, 2009). This factor has eleven items and has a Cronbach's alpha coefficient of .95.

Cronbach's alphas were calculated to determine the reliability or internal consistency of six factors of the PLQ and the three factors of the SCAI. Table 4 shows the comparison between the Cronbach's alpha coefficients for the PLQ in this study and the reliability coefficients reported by Jantzi (1996). Table 5 illustrates the comparison between Cronbach's alpha coefficients for the SCAI in this study and the reliability coefficients reported by Gangi (2009). Fraenkel and Wallen (2006) suggest that reliability coefficients greater than .70 are considered acceptable.

Table 4

Cronbach's Alpha Reliability Coefficients for the PLQ

	Cronbach's Alpha (α) Lane (2015)	Cronbach's Alpha (α) Jantzi (1996)
Vision Identification	.96	.88
Modeling	.94	.86
Goal Acceptance	.94	.86
High Performance	.95	.86
Individualized Support	.94	.82
Intellectual Stimulation	.92	.77

Table 5

Cronbach's Alpha Reliability Coefficients for the SCAI

	Cronbach's Alpha (α) Lane (2015)	Cronbach's Alpha (α) Gangi (2009)
Attitude and Culture	.90	.88
Faculty Interaction	.92	.89
Leadership Decisions	.95	.96

Data Collection Procedures

The researcher gained approval from the University of Denver's Institutional Review Board (IRB) and the school district in which the study took place before any data were collected.

Both survey instruments were administered using Qualtrics, along with the required consent document, and a brief demographic questionnaire. The questionnaire did not request any personal or sensitive information. Respondents were asked to identify only the school in which they currently work, their primary role, and approximate time in their profession. The resulting instrument had 24 questions regarding transformative leadership and 32 questions about school climate. The last question was an email capture if respondents wanted to be entered into a drawing for a $50 gift card per school and one overall chance at an iPad.

The researcher created school specific email panels from the publically available directory listings on each participating schools' website. Each of the school principals was sent a sample email meant to alert the faculty and staff of the impending survey and to review its purpose and mention the possible incentives. On the targeted

commencement date of survey collection, emails were sent to each panel member recapping what was outlined in the principal emails and providing the researcher's contact information. Two reminder emails were sent to either those who had started, but not finished the survey, or those who had not started it at all.

At the end of the data collection period, the researcher downloaded the respondent data into the IBM Statistical Package for the Social Sciences (SPSS) version 23.0 and analyzed it for errors. All electronic consent forms were secured to preserve confidentiality and data was stored on a password protected computer and software program to protect respondent privacy. Following the completion of the project, the resulting data set was stripped of all school level identifiers.

Statistical Analyses

Data for this study were quantitative in nature. The level of significance for all statistical tests was set at $\alpha = .05$. The data set was first scanned for and then adjusted to account for any missing data. Responses that were incomplete were removed from the analysis. The appropriate analyses were then run to ensure the data set met the expectations for normality, linearity, and homoscedasticity. This included reviewing the mean scores for each variable, their corresponding values for skewness, and kurtosis, and then by inspecting their histograms.

This first research question used canonical correlation analysis (CCA) to test the relationship between the two groups of variables. CCA was used for several reasons. First, the use of CCA minimized the risk of Type I error because the variables were assessed simultaneously as opposed to assessed in many univariate statistical tests

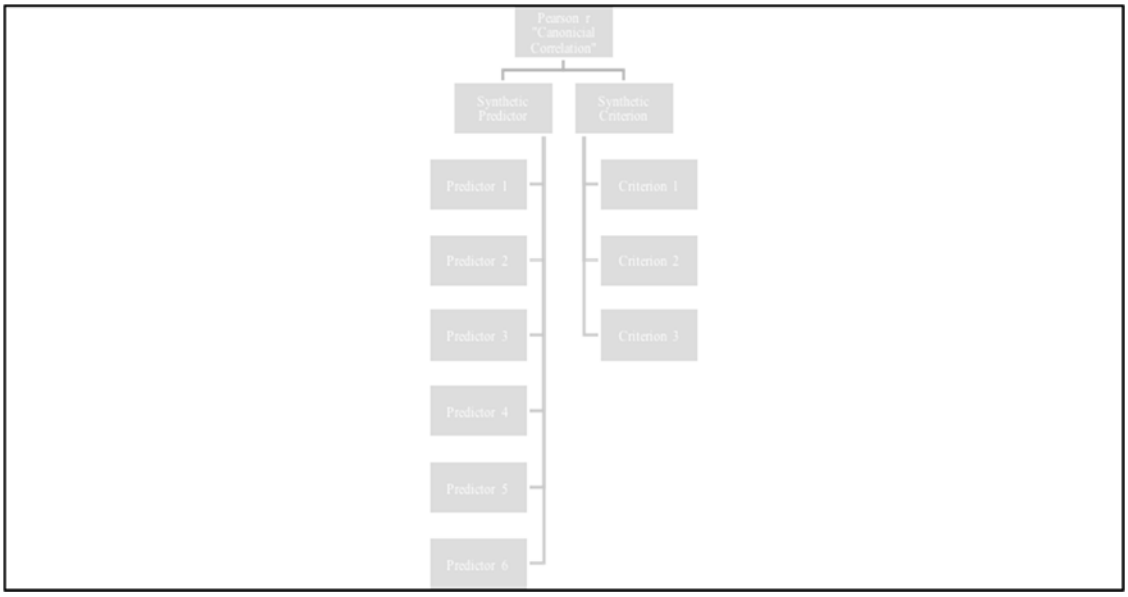


Figure 1. Illustration of the first function of the canonical correlation analysis with six predictors and three criterion variables. The canonical correlation is the simple Pearson r between the two synthetic variables, which were linearly combined from the observed variables.

Second, CCA tested for correlations, not causality. As a result, CCA used two groups of variables commonly referred to as "predictor" and "criterion" variables as opposed to "independent" and "dependent" variables that are often used in experimental models. Figure 1 outlines the canonical model employed in this study (Sherry & Henson, 2005).

Testing a correlational model was appropriate in this study because this model examines the reciprocal (bidirectional), not unidirectional, relationships between transformative leadership aspects and elements of school climate. Third, CCA, like other multivariate tests, tested for the complexity that exists in human behavior. Investigating a complex relationship through a series of isolated univariate methods may have failed to reveal significant multivariate relationships (Sherry & Henson, 2005). Testing a multivariate model allowed for correlations between and within the sets of predictor and

criterion variables, and was appropriate in this study because principal leadership is a complex topic with multiple causes and multiple effects (Szymendra, 2013).

The first step of data analysis explored whether a relationship existed between the groups of variables. Wilks' lambda (λ) was used to determine if a significant relationship existed, as well as the extent of the relationship. Second, each individual canonical correlation was evaluated to determine if it explained a reasonable amount of variance between the variable sets. The second step of data analysis focused on identifying which specific variables contributed to the relationship between the groups of variables. Standardized canonical function coefficients, structure coefficients, and squared structure coefficients were then analyzed to determine the amount of variance each variable contributed to its respective group (Szymendra, 2013).

The second research question was explored by using a Pearson's product-moment correlation. This coefficient measures the strength and direction of a linear relationship between continuous variables. Its value can range from -1 for a perfect negative linear relationship to +1 for a perfect positive linear relationship. A value of 0 (zero) indicates no relationship between two variables (Lund Research Ltd., 2013).

Data plotting did reveal a linear relationship between these variables and also did not reflect any outliers. As testing for normality had already been performed, it was concluded that the resulting data were normally distributed.

The third research question was explored by using a one-way analysis of variance (ANOVA) test. This test was appropriate for the following reasons. It can be used to determine whether there are any statistically significant differences between the means of

two or more independent groups, in our example the factors of the school site, primary role, and tenure and their relationship with the examined climate factors.

It is important to realize that the one-way ANOVA is an omnibus test statistic and cannot indicate which specific groups were significantly different from each other; it only indicates that at least two groups were different (Lund Research Ltd., 2013). This determination can be made by examining the results of either the Tukey or Games-Howell posthoc test.

The data were already screened and adjusted for outliers and tested for normality. Homogeneity of variance was examined by using the Levene's test of equality of variances.

Chapter 4: Results

This study examined the relationship between perceptions of the degree to which a principal displays the factors of transformational leadership (Vision Identification, Modeling, Goal Acceptance, Individualized Support, Intellectual Simulation, and High-Performance Expectations) and the school climate elements (Attitude and Culture, Leadership Decisions, and Faculty Interactions). The purpose of this chapter is to present the quantitative findings of the study. This chapter presents the results of data analysis and findings related to each of the research questions. This chapter closes with a summary of the findings.

Research Question One

Are there significant relationships between transformational leadership and school climate in the tested Texas schools? This was tested by conducting a canonical correlation analysis using the six leadership variables as predictors of the three climate variables to evaluate the multivariate-shared relationship between the two variable sets (i.e., transformative leadership and school climate). Table 6 presents the summary descriptive statistics of the variables used in this study.

Table 6

Descriptive Characteristics of Variables

	Vision	Model	Goal	Expect	Support	Intel	Culture	Faculty	Leader
N	195	195	195	195	195	195	195	195	195
Mean	4.62	4.71	4.66	4.97	4.60	4.77	3.24	3.66	3.70
Std. Dev	1.24	1.25	1.22	1.08	1.30	1.11	.69	.70	.82
Variance	1.52	1.56	1.47	1.17	1.68	1.23	.48	.49	.66
Skewness	-1.23	-1.27	-1.15	-1.67	-1.07	-1.19	-.04	-.68	-.78
SE Skew	.17	.17	.17	.17	.17	.17	.17	.17	.17
Kurtosis	.97	1.20	.94	3.12	.43	1.24	-.03	.48	.88
SE Kurt	.35	.35	.35	.35	.35	.35	.35	.35	.35
Reliability	.96	.94	.94	.94	.94	.92	.90	.92	.95

The CCA yielded three functions with a canonical R of and squared canonical correlations (R_c^2) of .70, .27, and .17 for each successive R_c^2 function. Collectively, the full model across all functions was statistically significant using the Wilks' $\lambda = .47$ criterion, $F(18, 526.57) = 9.09$, $p < .05$. Because Wilks' λ represents the variance unexplained by the model, $1 - \lambda$ yields the full model effect size in an r^2 metric. Thus, for the set of three canonical functions, the r^2 effect size was .54, which indicates that the full model explained a substantial portion, about 54%, of the variance shared between the variable sets. The dimension reduction analysis allows the researcher to test the hierarchal arrangement of functions for statistical significance. As noted, the full model (Functions 1 to 3) was statistically significant. Function 2 to 3 was also found to be statistically significant, $F(10, 374.00) = 2.01$, $p = .05$. Function 3 (which was the only

function that was tested in isolation) did not explain a statistically significant amount of shared variance between the variable sets, $F(4, 188) = 1.47$, $p = .21$. Given the R_c^2 effects for each function, only the first function was considered noteworthy in the context of this study (48% of the shared variance). The last two functions only explained .07% and .03%, respectively, of the remaining variance in the variable sets after the extraction of the first function. Detailed tables of all canonical functions are found in Appendices H through J.

Table 7 presents the standardized canonical function coefficients and structure coefficients for Function 1. The squared structure coefficients are also given as well for each variable. Looking at the Function 1 coefficients, one sees that relevant criterion variable was primarily Leadership Decisions with Attitude and Culture and Faculty Interaction making minor contributions to the synthetic criterion variable. This conclusion was supported by examining the squared structure coefficients. This climate element also had the largest canonical function coefficient.

It should be noted that Attitude and Culture and Faculty Interactions had modest function coefficients, but large structure coefficients. This result was due to the multicollinearity these variables shared with the other criterion variables. These variables' structure coefficients all had the same sign, indicating that they were all positively related.

Table 7

Canonical Solution for Transformative Leadership Predicting School Climate

Variable	Standardized Coefficient	Structure Coefficient r_s	r_s^2 (%)
		Set 1	
Attitude and Culture	-.12	-.79	61.76%
Faculty Interactions	.24	-.68	46.43%
Leadership Decisions	-1.09	-.99	97.43%
R_c^2			48.33%
		Set 2	
Vision Identification	-.36	-.93	86.31%
Modeling	-.26	-.93	86.11%
Goal Acceptance	.17	-.88	77.98%
High Expectations	.05	-.85	71.56%
Individual Support	-.23	-.92	84.65%
Intellectual Stimulation	-.43	-.95	89.80%

Regarding the predictor variable set in Function 1, Intellectual Stimulation, Modeling, Vision Identification, and Individual Support leadership variables were the primary contributors to the predictor synthetic variable, with secondary contributions by Goal Acceptance, and High Expectations. Because the structure coefficients for all of these variables were negative, they were positively related to the climate elements. These results were generally supportive of the theoretically expected relationships between transformational leadership and school climate.

Research Question Two

Does transformational leadership influence school climate in the tested Texas schools? This explored whether or not a relationship existed between respondents' perceptions of their principals' transformational leadership qualities and the observed elements of school climate. Pearson product-moment correlation techniques were used to analyze the data. Sufficient evidence was found to justify the rejection of the null hypothesis and accept the alternative (research) hypothesis. Findings indicate a statistically significant positive relationship exists between the six factors of transformational leadership (Vision Identification, Modeling, Goal Acceptance, Individualized Support, Intellectual Simulation, and High-Performance Expectations) and the three factors of school climate (Attitude and Culture, Leadership Decisions, and Faculty Interactions). Table 8 presents those results.

Table 8

Model Summary of Correlations Between Transformational Leadership and School Climate

Variable	Attitude and Culture	Faculty Interactions	Leadership Decisions
Vision Identification	.49**	.40**	.63**
Modeling	.54**	.41**	.63**
Goal Acceptance	.48**	.36**	.60**
High Expectations	.47**	.41**	.58**
Individualized Support	.52**	.42**	.63**
Intellectual Stimulation	.50**	.48**	.66**

** *p < .01 (2-tailed)*

Research Question Three

Does the individual school, employment role, and tenure influence school climate in the tested Texas schools? This explored whether or not a relationship existed between the individual school sites, employment role, and tenure interacted with the observed elements of school climate.

At the school level of analysis, the first two climate factor (Attitude and Culture and Faculty Interactions) both met the Levene's test for homogeneity of variance with respective values of $p = .56$ and $p = .09$. The last climate factor (Leadership Decisions) did not, with a value of $p = .04$. Since this was the case, the alternative Welch's ANOVA output was interpreted instead. The climate factor mean for Attitude and Culture differed statistically significantly by school with Welch's $F(2, 88.07) = 5.16$, $p < .05$. The climate factor for Faculty Interactions was also statistically significant with Welch's $F(2, 88.35) = 9.89$, $p < .05$. The final climate factor of Leadership Decisions was also significant with Welch's $F(2, 83.10) = 14.39$, $p < .05$. The school means were all found to be statistically significantly different at $p < .05$ and, therefore, I rejected the null hypothesis and supported the alternative hypothesis. Table 9 illustrates average mean scores on the observed climate factors by the individual school site.

Table 9

Average Mean Scores on the Climate Factors by School

Climate Factor	School	N	Mean	Std. Deviation
Attitude	School "A"	101	3.38	.62
	School "B"	54	3.00	.75
	School "C"	38	3.24	.62
Faculty Interactions	School "A"	101	3.86	.60
	School "B"	54	3.33	.77
	School "C"	38	3.65	.58
Leadership Decisions	School "A"	101	3.97	.65
	School "B"	54	3.27	.86
	School "C"	38	3.62	.75

At the employment role level of analysis, all three climate factors (Attitude and Culture, Faculty Interactions, and Leadership Decisions) met the Levene's test for homogeneity of variance with respective values of $p = .26$, $p = .56$, and $p = .16$. The climate factor for Attitude and Culture was not statistically significantly at the employment role level with $F(2, 192) = .91$, $p = .40$. The climate factor for Faculty Interactions was not statistically significant with $F(2, 192) = 2.01$, $p = .13$. The final climate factor of Leadership Decisions was also not significant with $F(2, 192) = .62$, $p = .44$. The employment role means did not differ statistically significantly. Table 10

illustrates average mean scores on the observed climate factors by the respondents' primary employment role.

Table 10

Average Mean Scores on the Climate Factors by Employment Role

Climate Factor	Employment Role	N	Mean	Std. Deviation
Attitude	Administrator	13	3.20	.46
	Faculty	149	3.21	.71
	Staff	33	3.39	.68
Faculty Interactions	Administrator	13	3.30	.55
	Faculty	149	3.68	.69
	Staff	33	3.73	.71
Leadership Decisions	Administrator	13	3.45	.50
	Faculty	149	3.70	.84
	Staff	33	3.74	.79

For tenure, all three climate factors (Attitude and Culture, Faculty Interactions, and Leadership Decisions) met the Levene's test for homogeneity of variance with respective values of $p = .96$, $p = .78$, and $p = .77$) The climate factor for Attitude and Culture was not statistically significantly different by employment role with $F(4, 190) = .47$, $p = .75$. The climate factor for Faculty Interactions was not statistically significant with $F(4, 190) = .21$, $p = .93$. The final climate factor of Leadership Decisions was also not significant with $F(4, 190) = .36$, $p = .84$. The tenure means did not differ

significantly. Table 11 illustrates average mean scores on the observed climate factors by the respondents' self-identified tenure in years.

Table 11

Average Mean Scores on the Climate Factors by Tenure

Climate Factor	Tenure in Years	N	Mean	Std. Deviation
Attitude	Less than 1	5	3.56	.76
	1-3	26	3.16	.73
	3-5	14	3.33	.68
	5-7	18	3.16	.70
	7 more	132	3.24	.68
Faculty Interactions	Less than 1	5	3.81	1.10
	1-3	26	3.60	.72
	3-5	14	3.76	.52
	5-7	18	3.60	.75
	7 more	132	3.67	.69
Leadership Decisions	Less than 1	5	3.96	.97
	1-3	26	3.58	.84
	3-5	14	3.81	.79
	5-7	18	3.74	.66
	7 more	132	3.68	.84

Summary of Findings

This chapter provided the results of the analysis of the quantitative data collected using the PLQ and the SCAI instruments to address the three research questions. Overall, findings revealed that the relationships between the transformational leadership factors and the school climate factors were statistically significant. Also, there were moderate positive relationships found between the perceptions of the transformational leadership factors exhibited by the principals and all of the observed school climate factors. It was also found that when considering the categories of the school site, primary employment role, and tenure that significant differences were found only for school site on perceptions of school climate.

Chapter 5: Summary and Discussion

Schools have been concerned with improving student outcomes since the passage of No Child Left Behind in 2001 began requiring more rigorous student achievement, as measured on standardized assessments. Schools in the improvement process often examine the various leadership and climate factors that play a substantial role in school effectiveness (Bruggencate, et al., 2012). Therefore, the purpose of this study was to examine the relationship between transformational leadership and school climate and consider other factors such as the school setting, employment role, and tenure.

Three schools from a small, suburban school district, participated in this study. The faculty and staff of these campuses were solicited were solicited to complete two surveys (PLQ and SCAI). This study used canonical correlation analysis, Pearson's product-moment correlations, and analysis of variance tests to investigate the relationships between (a) transformational leadership and school climate, (b) the influence of transformational leadership on school climate, and (c) the impact of school site, employment role, and tenure on school climate.

This chapter elaborates on a summary of the findings, implications, and recommendations for future research.

Summary of Findings

The research questions addressed whether there was a relationship between a principal's degree of transformational leadership and the perceived school climate,

evaluated the effect of transformational leadership on school climate, and considered factors such as school site, primary role, and tenure in relation to school climate. The following questions guided this study:

1. Are there significant relationships between transformational leadership and school climate in the tested Texas schools?
2. Does transformational leadership influence school climate in the tested Texas schools?
3. Does the individual school site, employment role, and tenure influence school climate in the tested Texas schools?

The alternative hypotheses for the corresponding research questions were the following:

1. There is a relationship between transformational leadership and school climate in the tested Texas schools.
2. Transformational leadership does influence school climate in the tested Texas schools.
3. The individual school site, employment role, and tenure do influence school climate in the tested Texas schools.

Transformational leadership has six factors (vision identification, goal acceptance, high-performance expectations, individualized support, intellectual stimulation, and modeling) and school climate has three factors (attitude and culture, faculty interaction, and leadership decisions). The same relations in the respected questions were examined for these properties as well.

Research Question One

Leadership is a key component in the success of a campus. Transformational leaders have the potential to positively impact a school's climate (Bass & Riggio, 2006). In this study, the six factors of transformational leadership all exhibited significant positive relationships with the leadership decisions factor of school climate, highlighting the importance of leadership and understanding the context in which it occurs on a campus. These results are consistent with the findings of Hallinger & Heck (1998) who found that transformational leaders have an impact on teachers' perception of school climate.

Vision Identification

The degree to which the principal identifies new opportunities for the organization and develops, articulates, and inspires others with a vision of the future (Jantzi & Leithwood, 1996). The results of this study found a significant positive relationship between the vision identification factor of leadership and the leadership decision factor of school climate. As supported by previous research (Bird et al., 2009; Rhodes et al., 2009), a teacher's perception of school climate was strongly related to their perceptions of the principal's exhibited vision. When teachers believe their principal exhibits a high level of these attributes, they identify better with their leader, and that leads them to feel more positive about the direction and climate of the campus overall (Allen, 2015).

Modeling

Leaders who display moral and ethical behavior will easily build commitment to the campus and its goals (Jantzi & Leithwood, 1996). In this study, there was a significant positive relationship between the modeling aspects of being a leader and the leadership decisions factor of school climate. Similar to the findings of Owens (2004) and Vos (2012), the teachers' perceptions of the school climate were influenced by the behavior of principals. A leader who is a role model for staff and behaves in accordance with the values they promote can easily build commitment to the campus and its goals, which can lead teachers to perceive the school climate as a positive one.

Conversely, Bulach and Lunenberg (1995) found that there were no significant differences in school climate perceptions as a result of principal leadership behaviors. They do suggest, however, that a positive school climate is dependent on the leadership style of the principal matching the maturity level of the faculty. One possible explanation for the difference in the current study's findings and those of Bulach and Lunenberg could be the different survey instruments that were used. The current study used an instrument that focused specifically on transformational leadership characteristics, while Bulach and Lunenberg used a survey that simply defined leadership style.

Goal Acceptance

The degree to which the principal promotes cooperation among organizational members and assists them in working together toward common goals (Jantzi & Leithwood, 1996). In this study, no significant relationship was discovered between the

goal acceptance traits exhibited by a leader and the leadership decisions factor of school climate.

High-Performance Expectations

The degree to which the principal establishes expectations for excellence, quality, and high performance on the part of the organization's members (Jantzi & Leithwood, 1996). In this study, no significant relationship was discovered between the high-performance expectation traits exhibited by a leader and the leadership decisions factor of school climate.

Individualized Support

The degree to which the principal demonstrates respect for organizational members and concern about their personal feelings and needs (Jantzi & Leithwood, 1996). In this study, there was a significant positive relationship between the individualized support aspect of the leader and the leadership decisions factor of school climate, similar to the previous research of Hauserman (2013) and Leithwood and Jantzi (2005). Successful principals recognize that one of the most important components in student success is the teacher. Teachers felt more positive about their school environment when their principal values them as a partner in the school program, and not just as a staff member.

Also, leaders who demonstrate individualized support exhibit more confidence in the abilities of their staff members, which positively influences school climate. Principals who provide professional development opportunities and a supportive climate will particularly influence the school climate factors of environment and collaboration. Also,

administrators can impact school climate when they choose to build trusting, cooperative relationships with teachers, particularly when they recognize the individual needs and desires of staff.

Intellectual Stimulation

The degree to which the principal challenges organizational members to reexamine some of the assumptions about their work and rethink how it can be performed (Jantzi & Leithwood, 1996). The current study found a significant positive relationship between the intellectual stimulation characteristic of a leader and the leadership decisions factor of school climate. This is consistent with the previous research completed by Leithwood (1993) and Moolenaar et al. (2010). Principals who encourage the development of teacher strengths can motivate teachers to try new instructional strategies. Also, when teachers believe that the principal will support new initiatives and will help them work through problems, they are more willing to try something new. This level of support from the principal will positively influence a teacher's view of the school climate.

Research Question Two

Shaping the climate of the school is considered to be the primary responsibility of the principal (Snowden & Gorton, 1998). Principals can reinforce positive norms and values in their daily work, the words that they use, as well as the relations that they have with others (Peterson, 2002). In this project, it was found that all six factors of transformative leadership did have a statistically significant impact on the three factors of school climate.

This though is difficult to interpret fully without having a better understanding of the role played by the conditions that tend to promote the emergence of transformative leadership. These are typically classified as antecedents.

Leithwood & Jantzi, (2005) suggest that there is little evidence about the role of antecedents and their impact on transformational leadership. They note that a restricted range of variables has been explored to date and there is no accumulation of evidence about any of those variables. This is surprising since a great deal of the educational leadership literature suggest that the context in which leaders work is of enormous importance in determining what they do (Deal, 2005). This has typically prompted research about leadership in one context at a time, for example, whole-school reform, technology, minority student populations, and social justice (Shields, 2004).

These studies tell us little about how variations in context are related to variations in leadership practices, the kind of evidence that is needed if we are to become clearer about the antecedents of transformational leadership and the impact of their effects. More evidence about an expanded array of theoretically defensible antecedents ought to be a significant item on the agenda for future transformational leadership research (Leithwood & Jantzi, 2005).

Some researchers have suggested that school organizations, especially in today's reform contexts, are likely to be hostile to the emergence of transformational leadership. But research, as well as evidence from non-school contexts, suggests the opposite. For example, Lowe et al.'s (1996) and Dumdum et al.'s (2002) metanalyses include a comparison of results in private vs. public (assumed to be more bureaucratic)

organizations. Contrary to the original hypothesis for this line of inquiry, both studies found greater evidence of transformational leadership practices in public than in private organizations. Transformational leadership may well be an effective offset to the effects of excessive organizational constraint (Leithwood & Jantzi, 2005).

Others have suggested that transformational leadership is also more likely to emerge in times of crisis. Transformational leaders do this, for example, by creating a shared sense of direction, clear goals and support and encouragement for peoples' work. Findings such as these indicate a high degree of compatibility between transformational approaches to leadership and the typical contexts in which schools currently find themselves. Beyond the few antecedents touched on in the review, there is little evidence of either comprehensive or theoretically guided research on the antecedents to transformational leadership, an area warranting future research.

Antecedents are likely to be both "interior" and "exterior." Interior antecedents include the leader motivations, self-efficacy beliefs, capacities, and personality characteristics (e.g., optimism, openness) outlined by Popper and Mayseless (2002), for example. Antonakis and House point to the "…compelling case for incorporating dispositional arguments and evidence into theories of behavior in organizations" (2002, p. 23). Educational leadership research as a whole has devoted very little energy to the study of leaders' internal lives, with the exception of their values (Begley & Johansson, 2003) and their cognitive processes (e.g., Leithwood & Steinbach, 1995). Exterior antecedents may well include early family experiences, professional socialization

experiences, as well as those policy contexts which receive most of the attention in current educational research (Judge, Woolf, Hurst, & Livingston, 2006).

Research Question Three

Research has shown definite linkages to an employees' sense of efficacy when their role in the organization and tenure is considered. School site-level moderating factors such as in-school politics, attrition, and external pressures from parents and other stakeholders can also have an impact on the perceived elements of climate.

It was found that after controlling for the disproportionate number of respondents from each site, that the only statistically significant factor was the actual school site itself in predicting the elements of climate. This is difficult to interpret without having a better grasp of the dynamics present in the individual research sites, but may explain why the previously cited works were conducted at that level of analysis. Considering the interplay between those closely related factors, examining the individual components on their own presents a theoretical challenge.

The study of transformational school leadership moderators would seem to be in its infancy, and the importance of focusing research attention on this category of variables seems yet to have been fully appreciated (Leithwood & Jantzi, 2005). They suggest that the lack of such attention is a plausible explanation for conflicting research results. Transformational leadership in schools of markedly different sizes, for example, may have quite different effects on mediating school conditions and student outcomes. In many cases, the study of moderators has been uninformed by or has not informed theory.

While school size or students' ethnicity may turn out to significantly moderate the effects of transformational leadership, at this point it is not clear why (Judge et al., 2006).

Leithwood & Jantzi (2005) offer plausible theoretical explanations for the moderating effects of most of the teacher variables, some of the organizational conditions, but almost none of the student characteristics. They suggest that much more theory-informed evidence about the moderators of transformational leadership effects is in order.

Implications

The findings of this quantitative research study have implications for the administrators involved in the study, as well as for any administrators interested in the relationships between transformational leadership and school climate, especially if they are involved in the school improvement process.

General Implications

The findings of this study can be used by school administrators and teachers to improve school climate by addressing campus strengths and weaknesses. It is also important for any district to remember that while an individual school can develop a specific climate independently of the district as a whole, any changes in school culture or climate at the district level can affect school climate at the campus level (Tableman, 2004). While making positive changes in school climate can motivate staff and students to improve, long-term improvement will not be possible without the support of district-level staff. The district should also be concerned with providing professional development opportunities that can strengthen the transformational leadership

characteristics of their campus leaders and build the efficacy of their teachers (Allen, 2015).

Implications for Principal Development

Given the importance of transformational leadership as a contributing factor to school climate, it would be reasonable to conclude that regular evaluation of a principal's leadership characteristics should be conducted. When feedback is then provided promptly, campus leaders can ensure they are providing appropriate leadership to their staff and can make changes or improvements if needed. Also, administrators who wish to improve students' work ethic and emphasis on academics should be fully aware of any school-level factors that could help or hinder student outcomes (Bevans, et al., 2007). Also, principals can work on developing their transformational leadership skills to impact positively school climate.

Implications for the Hiring Process

Another area of focus for a district should be the hiring process. District personnel should be conscious of the leadership style of potential candidates to guarantee that a principal is chosen who exhibits the transformational leadership characteristics that will impact school climate the most. The PLQ could be administered to potential hires as a means of determining the transformational leadership characteristics that person will exhibit.

Recommendations for Future Studies

Several recommendations are suggested for future research examining the relationships between transformational leadership, school climate, and student

achievement. This study should be replicated by (a) using a larger sample size of schools, (b) using elementary school campuses, (c) including qualitative data to explore the relationships between the constructs, and (d) including qualitative data collected from students and parents to understand their perceptions. This study used only three schools from a small, suburban school district and could be replicated with a larger sample size that includes campuses from all areas within the state. This study also focused strictly on middle and high schools, which could have a completely distinct environment from that of elementary schools. This implies that there is a need to replicate this study with a different level of schools to see if similar results would be found. Also, this study focused on the climate of the campus as a whole. Including qualitative data to explore the relationships among the constructs is another potential area for research. This study used strictly quantitative data. A qualitative study would allow researchers to explore more fully the perception of participants regarding leadership and school climate. Since there is little research that delineates the means by which a principal achieves an impact on school outcomes, including qualitative data may gain some insight into this area of interest Also, research could also be conducted that includes quantitative or qualitative data collected from students and parents to determine their perceptions of school climate.

Conclusion

The purpose of this study was to examine the relationship between transformational leadership and school climate. This study found that there was: (a) statistically significant relationship between the six factors of transformational leadership and the leadership decisions factor of school climate, and (b) that the factors of

transformational leadership influenced the factors of school climate, and (c) that the school site was the most significant predictor of school climate. The findings of this research were supportive of previous research cited regarding the relationship between transformative leadership and school climate.

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Appendix A: Permission to Use Principal Leadership Questionnaire

Tuesday, October 27, 2015 at 6:00:26 PM Mountain Daylight Time

Subject: Re: Request to use the Principal Leadership Questionnaire (PLQ)
Date: Friday, July 31, 2015 at 5:15:22 PM Mountain Daylight Time
From: Kenneth Leithwood
To: Eric Lane

Feel free to use the instrument.

Sent from my iPad

On Jul 31, 2015, at 4:32 PM, Eric Lane <elane4@du.edu> wrote:

> Dr. Leithwood:
> I am writing to formally request permission to utilize the instrument you designed as a research element in my dissertation. I'm working with a school district in Texas and hope to use this instrument to see if any of the examined dimensions of leadership also have an impact on staff perceptions of student college readiness. I found references to the PLQ on several academic sites and it was also used in a few other dissertations. You were listed as the primary point of contact and that's why I'm reaching out to you.
>
> Please let me know if this acceptable or what else you might require in order for me to proceed.
>
> Best regards,
>
> Eric Lane
> Senior Director of Operations / Industry Faculty
> Knoebel Events, Inc.
> Fritz Knoebel School of Hospitality Management
> Daniels College of Business – University of Denver
> 2044 East Evans Ave.
> Denver CO 80208
> 303.871.7697

Appendix B: Principal Leadership Questionnaire

Principal Leadership Questionnaire

Please respond by considering how well each statement applies to your principal.

Please use the following scale:
1=Strongly Disagree 2=Disagree 3=Undecided 4=Agree 5=Strongly Agree

		Strongly Disagree	*Disagree*	*Undecided*	*Agree*	*Strongly Agree*
1.	My principal has both the capacity and the judgment to overcome most obstacles.	☐	☐	☐	☐	☐
2.	My principal commands respect from everyone on the faculty.	☐	☐	☐	☐	☐
3.	My principal excites faculty with visions of what we may be able to accomplish if we work together as a team.	☐	☐	☐	☐	☐
4.	My principal makes faculty members feel and act like leaders.	☐	☐	☐	☐	☐
5.	My principal gives the faculty a sense of overall purpose for its leadership role.	☐	☐	☐	☐	☐
6.	My principal leads by “doing” rather than simply by “telling.”	☐	☐	☐	☐	☐
7.	My principal symbolizes success and accomplishment within the profession of education.	☐	☐	☐	☐	☐
8.	My principal provides good models for faculty members to follow.	☐	☐	☐	☐	☐
9.	My principal provides for our participation in the process of developing school goals.	☐	☐	☐	☐	☐
10.	My principal encourages faculty members to work toward the same goals.	☐	☐	☐	☐	☐
11.	My principal uses problem solving with the faculty to generate school goals.	☐	☐	☐	☐	☐
12.	My principal works toward whole faculty consensus in establishing priorities for school goals.	☐	☐	☐	☐	☐
13.	My principal regularly encourages faculty members to evaluate our progress toward achievement of school goals.	☐	☐	☐	☐	☐
14.	My principal provides for extended training to develop my knowledge and skills relevant to being a member of the school faculty.	☐	☐	☐	☐	☐
15.	My principal provides the necessary resources to support my implementation of the school’s program.	☐	☐	☐	☐	☐
16.	My principal treats me as an individual with unique needs and expertise.	☐	☐	☐	☐	☐
17.	My principal takes my opinion into consideration when initiating actions that affect my work.	☐	☐	☐	☐	☐
18.	My principal behaves in a manner thoughtful of my personal needs.	☐	☐	☐	☐	☐
19.	My principal challenges me to reexamine some basic assumptions I have about my work in the school.	☐	☐	☐	☐	☐
20.	My principal stimulates me to think about what I am doing for the school’s students.	☐	☐	☐	☐	☐
21.	My principal provides information that helps me think of ways to implement the school’s program.	☐	☐	☐	☐	☐
22.	My principal insists on only the best performance from the school’s faculty.	☐	☐	☐	☐	☐
23.	My principal shows us that there are high expectations for the school’s faculty as professionals.	☐	☐	☐	☐	☐

Adapted from Jantzi & Leithwood, Educational Administration Quarterly, (October, 1996) pp. 533-534. Used by authors’ permission.

Appendix C: Permission to Use the School Climate Assessment Instrument

Tuesday, October 27, 2015 at 6:00:52 PM Mountain Daylight Time

Subject: Re: Permission to use SCAI
Date: Wednesday, September 2, 2015 at 3:55:53 PM Mountain Daylight Time
From: Shindler, John
To: Eric Lane

Hello Eric,
We allow those doing unfunded research to use the SCAI at no cost - if we are not involved.
But many grad students elect to use our online system because it saves them a lot of time on both ends.
We ask for a small fee to process your data with our system.
Let me know how we can be of assistance,
Best,
John Shindler

From: Eric Lane <elane4@du.edu>
Sent: Wednesday, September 2, 2015 2:30 PM
To: Shindler, John
Subject: Permission to use SCAI

Hello,
I'm currently a doctoral student at the Morgridge College of Education here at the University of Denver. I'd like to see how I'd go about potentially using the SCAI in my dissertation project. I'm looking to explore the relationship between principal leadership styles and school climate and feel that this instrument would be very helpful.

Could you please let me know the steps involved in obtaining permission to do this?

I'd really appreciate it.

Thanks,

Eric Lane
Senior Director of Operations / Industry Faculty
Knoebel Events, Inc.
Fritz Knoebel School of Hospitality Management
Daniels College of Business – University of Denver
2044 East Evans Ave.
Denver CO 80208
303.871.7697

Appendix D: School Climate Assessment Instrument (Sample)

Leadership Decisions

High - Level Three
School has a sense of vision, and a mission that is shared by all staff.
Vision comes from the collective will of the school community.
School's decisions are conspicuously grounded in the mission.
Vast majority of staff members feel valued and listened to.
A sense of "shared values" is purposefully cultivated.
Staff understands selecting priority needs, and has team for "shared decision-making".
Most of the staff has a high level of trust and respect in leadership.
Teacher leadership is systematic and integral to the school's leadership strategy.
Leadership demonstrates a high level of accountability, and finds ways to "make it happen."
Leadership is in tune with students and community.
Leadership is in tune with others' experience of the quality of school climate.

Middle - Level Two
School has a set of policies, a written mission, but no cohesive vision.
Vision comes from leadership.
Policies and mission exist but are not meaningful toward staff action
Selected staff members feel occasionally recognized.
Most share a common value to do what's best for their students.
There is a SDM committee but most real power is in a "loop" of insiders/decision makers.
Some staff have respect for leadership.
Some teachers take leadership roles when they feel a great enough sense of responsibility.
Leadership is highly political about how resources are allocated and often deflects responsibility.
Leadership has selected sources of info about the community and students.
Leadership makes pro forma statements about wanting good school climate.

Low - Level One
School has policies that are used inconsistently.
Vision is absent.
Mission may exist but is essentially ignored.
Administration is seen as playing favorites.
Guiding school values are in constant conflict.
Decisions are made autocratically or accidentally.
Most staff feel at odds with the leadership.
Leadership is seen as solely the domain of the administration.
Leadership seems disconnected to outcomes and find countless reasons why "it can't happen."
Leadership is isolated from the students and community.
Leadership does not see school climate as a necessary interest.

Appendix E: University of Denver Institutional Review Board Approval

UNIVERSITY of DENVER
RESEARCH & SPONSORED PROGRAMS

DATE:	October 5, 2015
TO:	Eric Lane, PhD
FROM:	University of Denver (DU) IRB
PROJECT TITLE:	[801140-1] EXAMINING THE RELATIONSHIP BETWEEN PRINCIPAL LEADERSHIP AND SCHOOL CLIMATE
SUBMISSION TYPE:	EXEMPT FROM IRB REVIEW
ACTION:	EXEMPTION GRANTED
DECISION DATE:	October 5, 2015
EXEMPTION VALID THROUGH:	October 4, 2020
RISK LEVEL:	Minimal Risk
REVIEW CATEGORY:	Exemption category # *2*

Exemption Category 2: Anonymous Educational Tests, Surveys, Interviews, or Observations - Research involving the use of educational test (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observations of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

Thank you for your submission of Exemption Request materials for this project. The University of Denver IRB has determined this project is **EXEMPT FROM IRB REVIEW** according to federal regulations. This exemption was granted based on appropriate criteria for granting an exemption and a study design wherein the risks have been minimized.

Exempt status means that the study does not vary significantly from the description that has been provided and further review in the form of filing an annual Continuing Review/Progress Report is not required.

Please note that maintaining exempt status requires that (a) risks of the study remain minimal; (b) that anonymity or confidentiality of participants, or protection of participants against any increased risk due to the internal knowledge or disclosure of identity by the researcher, is maintained as described in the application; (c) that no deception is introduced, such as reducing the accuracy or specificity of information about the research protocol that is given to prospective participants; (d) the research purpose, sponsor, and recruited study population remain as described; and (e) the principal investigator (PI) continues and is not replaced.

If changes occur in any of the features of the study as described, this may affect one or more of the conditions of exemption and may warrant a reclassification of the research protocol from exempt and require additional IRB review.

Generated on IRBNet

Appendix F: Data Collection Letter to Principal

Tuesday, October 27, 2015 at 7:10:25 PM Mountain Daylight Time

Subject: FW: Principal Leadership / School Climate Survey
Date: Tuesday, October 27, 2015 at 7:09:42 PM Mountain Daylight Time
From: Eric Lane

From: Eric Lane
Date: Friday, October 2, 2015 at 11:08 AM
To:
Cc: Ashley Chohlis, Reyes Patricia
Subject: Principal Leadership / School Climate Survey

Good Morning Everyone,
Ashley asked that I send you a copy of the survey instrument that I'd like to send out to your faculty and staff as a component of my doctoral research project. I'm trying to see how the various elements of transformational leadership exhibited by school principals interact with the observed elements of school climate. It is hoped that these results can better inform administrator practice and see what is generating the most positive results for you.

The survey consists of a consent form, a brief demographic questionnaire, and 24 questions on principal leadership and 32 questions on school climate. The actual survey component is 5 pages on a computer screen and should take only about 10 minutes to complete. The attached print version of the survey is longer due to formatting. I'm offering a $50 gift card to one respondent from each school and the chance for one respondent to win a new iPad. The survey is completely anonymous and respondents can opt out on the consent form or just shut down the survey at any point during the process.

The level of analysis for this project will be at the individual respondent level. Even though the data can be linked to the participating schools, that is not the focus of this project. The District will be identified in the resulting paper, but the individual schools will not. I would be more than happy to share the results of the project with you, once it's complete.

I will be responsible for distributing the survey to all your faculty and staff. I would just ask that you let them know it's coming and support it's completion, once a date range has been decided upon. I would run the survey for a week, with a reminder halfway through to non-responders.

Please let me know if you have any comments or questions and thanks again for considering being a part of my study.

Best,

Eric Lane
Senior Director of Operations / Industry Faculty
Knoebel Events, Inc.
Fritz Knoebel School of Hospitality Management
Daniels College of Business – University of Denver
2044 East Evans Ave.
Denver CO 80208
303.871.7697

Appendix G: Data Collection Letter to Faculty and Staff

Send Date: October 12, 2015 @ 6:00 AM

Link Type: Individual Link Show Link Options

From Address: noreply@qemailserver.com

From Name: Eric Lane

Reply-To Email: elane4@du.edu

Subject: Principal Leadership / School Climate Survey

Message:

ECISD Faculty_Staff Email

Hello Faculty and Staff,
As your principal has made you aware, I am a student researcher from the Unviersity of Denver and I'm conducting a study that seeks to explore the connection between transformative principal leadership and school climate. The following survey will first obtain your consent, ask you a few background questions, and then present you with 24 questions about leadership and then 32 questions about school climate. I want to stress again that your school information, role, and tenure selections will not be linked to your survey reponoses. The survey is also voluntary - you may end your particpation at any time. Each respondent is entered into a drawing for a $50 gift card per school and one respondent will have a chance to win a new iPad. Prizes will be awarded sometime in early December of this year. If you have any questions about this process, you can contact me at eric.lane@du.edu or 303.956.5174.

The survey should only take a few minutes of your time and I would really appreciate your participation.

Thanks,

Eric Lane
Senior Director of Operations / Industry Faculty
Knoebel Events, Inc.
Fritz Knoebel School of Hospitality Management
Daniels College of Business – University of Denver
2044 East Evans Ave.
Denver CO 80208
303.871.7697

Appendix H: Research Question 1 Solution Tables

Table 12

Statistical Significance Tests for the Full CCA Model

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.58	7.58	18.00	564.00	.05
Hotellings	1.04	10.71	18.00	554.00	.05
Wilks	.46	9.08	18.00	526.57	.05
Roys	.48				

Note. Effect…Within Cells Regression Multivariate Tests of Significance (S=3, M=1, N=92)

Table 13

Canonical Correlations for Each Function Separately

Root No.	Eigenvalue	Pct.	Cum Pct.	Canon Cor.	Sq. Cor.
1	.94	89.65	89.65	.70	.48
2	.08	7.35	97.00	.27	.07
3	.03	2.99	100.00	.17	.03

Table 14

Factor Reduction Analysis

Roots	Wilks L.	F	Hypoth. F.	Error DF	Sig. of F
1 to 3	.46	9.08	18.00	525.50	.05
2 to 3	.90	2.01	10.00	374.00	.03
3 to 3	.97	1.47	4.00	188.00	.21

Note. Hierarchal Statistical Significance Tests in Which the Only the Last Canonical Function is Tested Separately

Table 15

Standardized Canonical Correlations for Dependent Variables

Variable	1	2	3
Attitude and Culture	-.12	1.24	.92
Faculty Relations	.24	-1.10	1.15
Leadership Decisions	-1.08	-.23	-1.52

Note. Standardized Weights for all Functions for the Criterion Variable Set

Table 16

Correlations Between Dependent and Canonical Variables

Variable	1	2	3
Attitude and Culture	-.79	.36	.50
Faculty Relations	-.68	-.48	.55
Leadership Decisions	-.98	-.14	.07

Note. Structure Coefficients for all Functions for the Criterion Variable Set

Table 17

Standardized Canonical Correlations for Covariates

Covariate	1	2	3
Vision	-.36	-1.05	-1.44
Modeling	-.26	1.33	2.17
Goal Acceptance	.17	.83	-1.63
HP Expect	.05	-.21	.05
Support	-.22	1.16	.12
Intellectual	-.43	-2.00	.64

Note. Standardized Weights for all Functions for the Predictor Variable Set

Table 18

Correlations Between Covariates and Canonical Variables

Covariate	1	2	3
Vision	-.93	.06	-.25
Modeling	-.93	.24	.06
Goal Acceptance	-.88	.20	-.29
HP Expect	-.85	-.03	.07
Support	-.92	.14	.03
Intellectual	-.95	-.20	.05

Note. Structure Coefficients for all Functions for the Predictor Variable Set

Appendix I: Vita

Curriculum Vitae

Eric S. Lane

5602 Jaguar Way • Littleton CO 80124
Home: 720.877.1594 • Cell: 303.956.5174
Email: ericslane95@gmail.com

PROFESSIONAL PROFILE

- Effective communicator with excellent planning, organizational, and negotiation strengths as well as the ability to lead, reach consensus, establish goals, and attain results.
- Extensive experience in the creation and design of successful student programs with a track record of delivering positive results.
- Proven ability to build innovative programs and coursework that foster learning and meet the needs of diverse groups.

EDUCATION

- **PhD, Educational Leadership – Curriculum and Instruction**, University of Denver, Denver, CO, Fall 2015
  DISSERTATION: *Examining the Relationship Between Principal Leadership and School Climate*
- **MHM, Hospitality Management,** Hilton College – University of Houston, Houston, TX, 2004
- **BA**, Social Sciences – Psychology and Sociology, University of Houston, Houston, TX, 1995

TEACHING EXPERIENCE

Industry Faculty, University of Denver, Denver, CO, 2007 to Present
- Teach a wide range of hospitality courses to classes ranging in size from 20 to 50 students.

COURSES DEVELOPED / TAUGHT

Managing the Restaurant Operation
Hospitality Technology
DU Vin Wine Festival Course
Exploring the World of Hospitality
Managing the Resort Operation
Managing the Food and Beverage Experience
(Senior Capstone)
Wines of the World

HIGHLIGHTS OF PROFESSIONAL EXPERIENCE

Senior Director of Operations, Fritz Knoebel School of Hospitality Management, University of Denver, Denver, CO, 2006 to Present
- Oversee all aspects of the conference and event center embedded within our school and program. Manage all salaried personnel and provide supervision for hourly staff, when required.
- Serve as the department's controller, human resources liaison, and technology systems administrator.
- Other duties include developing budgets and forecasts, managing projects, providing academic support and curriculum integration opportunities, and facility management.

Director of Hospitality Services, Isle of Capri Casinos, Blackhawk, CO, 2004-2006

- Led two casino properties' hospitality operations – hotel, food and beverage, and retail. Supervised a team of over 30 salaried managers and 400 hourly staff, and we accommodated several thousand guests daily.
- Had full accountability and oversight for an annual budget well in excess of $20 million dollars.
- Assisted with the acquisition of another casino property during my tenure and supervised the conversion of their hospitality operations to our branded concepts. We opened a hotel, several restaurants, and bars during this period.

Operations Manager, Isle of Capri Casinos, Blackhawk, CO, 2003-2004

- Oversaw all operational departments in the absence of an on-site director. Was a Colorado Key Gaming Employee and reported directly to the property General Manger.

Executive Chef / Food and Beverage Manager, Isle of Capri Casinos, Blackhawk, CO, 2002-2003

- Directed all food and beverage operations for a large, high volume casino property with a 500 seat buffet, 100 seat fine dining steak house, 24 hour deli, casino beverage, banquet center, and employee dining facility.
- Supervised all salaried and hourly staff in these areas.
- Other duties included recipe and menu development, training, and quality management.

Corporate Executive Chef, Isle of Capri Casinos, Biloxi, MS, 2000-2002

- Managed culinary operations for a regional casino company with fourteen properties in six states.
- Directed recipe and menu development, established product specifications, and oversaw our first companywide centralized procurement program.
- Conducted quarterly audits at each property to evaluate levels of service, product quality, and cleanliness / organization. Worked directly with property management teams and their staffs on training and development opportunities.
- Opened numerous restaurants, bars, and even properties during this time frame.
- Played a key role in creating and then implementing our company's first ever position specific training program.

PROFESSIONAL DEVELOPMENT

Certifications

- Senior Professional in Human Resources (*HR Certification Institute*)
- Certified Food and Beverage Executive (*American Hotel and Lodging Association*)
- Food Service Management Professional (*National Restaurant Association*)
- Food Protection Manager (*ServSafe*)
- Advanced Alcohol Service Training (*ServSafe*)
- ServSafe Food / Alcohol Proctor & Instructor (*ServSafe*)
- American Culinary Federation Member
- Introductory Sommelier Certification (*Court of Master Sommeliers)*