Principal Influence on School Climate: A Networked Leadership Approach

Dissertation

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By

David M. Fultz, M.Ed.

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Dissertation Committee:

Dr. Belinda Gimbert, Advisor

Dr. Helen Marks

Dr. Jerome D'Agostino

Dr. Anika Anthony

Abstract

As processes and contexts for educating students alter, principals are expected to shift their leadership styles to effectively cultivate school climates that proactively accelerate student academic success. Previous models of educational leadership have shown positive results under certain circumstances, but fail to consistently produce a recurring link from a leadership platform to student academic success.

Espoused leadership platforms focusing on instruction, teacher collaboration and parental involvement have been implemented in an effort to directly influence student success. Although some studies have shown that the principal's focus on instruction (Bamberg, & Andrews, 1990; Goldring, & Pasternack, 1994; Hallinger, & Heck, 1996a, 1996b, 2002; Hallinger, & Murphy, 1986) and collaboration (Conley, & Goldman, 1994; Gronn, 2002; Harris, 2005; Spillane, 2005; Timperley, 2005) have positively influenced student academic success, other studies have suggested no relationship on student success with either of these styles without being moderated through the teachers influence on student achievement (Bottery, 2001; Day, Harris, & Hadfield, 2001; Fullan, 2002; Hallinger, & Heck, 1996a, 1996b; Leithwood, & Jantzi, 1999a; 1999b). Likewise, the influence on the role that parents play within the educational environment has shown both significant (Brabeck, & Shirley, 2003; Epstein, Sanders, Simon, Salinas, Jansorn, & Van Voorhis, 2002; Fan & Chen, 2001; Herman & Yeh, 1983; Jeynes, 2003, 2007; Leana & Pil, 2006) and non-significant (Bobbett, 1995; Ford, 1989; Keith, Reimers, Fehrmann,

Pottebaum, & Aubey, 1986) impact on student academic success. Ultimately, it is the principal's impact on school climate that influences student academic outcomes.

This study explored the amalgamated influence of instruction, collaboration and parental involvement on the teachers' perceptions of school climate through a newly conceptualized networked leadership model. Within such a model, how the principal instructionally leads, collaborates, and secures parental involvement to leverage gains in a positive school climate guides this inquiry. This study predicts an increase in the measure of networked leadership is positively associated with an increase in the teachers' perceptions of school climate.

The target population for this study consisted of public school elementary principals and teachers across the United States of America who were identified to participate by the National Center for Educational Statistics (NCES, 2010). Nationally, the sampled included 5,250 public school districts, 9,800 public schools, 9,800 public school principals, and 47,440 public school teachers. The sample identified for this study consisted of 2,761 public elementary principals and 10,293 teachers. The average number of years the teachers were at the current school site where this study took place was 8.7 years. The principals' tenure were approximately half as long (4.6 years). There was a substantially larger number of teachers who were female (9,149) than male (1,144). Likewise, a larger portion of elementary principals were female (1,667) than male (1,094). The average age of teachers (43.5 years) in the study was slightly lower than the average age of principals (50.2 years).

The National Center for Educational Statistics collected information from public school districts, principals and teachers in the 2007-2008 Schools and Staffing Survey

(SASS). For the 2007-2008 school year survey, SASS used a stratified probability-proportionate-to-size sample. SASS data is collected on a four year cycle, making the 2007-2008 the most recent dataset. Items on the SASS allowed the researcher to determine the principal's degree of focus on instruction, teacher collaboration, and parental involvement, as well as the teachers' perceptions of the school climate. The primary statistical analysis used for this model was multiple linear regression using hierarchical forced entry to better understand how each of the specific constructs within the networked leadership model impacts on school climate.

As the networked leadership model shows, the principal's engagement in this networked approach to leadership had a significantly positive influence on student academic success. However, the correlation was weak ($r = .072$, $p < .05$). Likewise, when the principal's focus on instruction is entered into the model alone, it is positively correlated ($r = .103$, $p < .01$) with the teachers' perceptions of school climate. The principal's influence on collaboration and parental involvement did not display significant correlations with the teachers' perceptions of school climate.

While it initially appeared that the networked leadership approach held promise to leverage positive influences on teachers' perception of school climate, further analysis revealed that the construct of instruction was predominantly impacting significance. When the individual constructs were parceled out, only the construct of instruction retained significance. This significance was also maintained regardless of which of the other constructs were entered into the model. However, these results must be tempered with the fact that this significance is weak and the entire model only accounts for 3.1% of the variability in school climate.

The limited application and statistical significance of the results should not diminish interest in future configurations of networked leadership. The foundation of this concept is a viable approach to school leadership. The notion of networked leadership needs to be explored using appropriate instrumentation and research to identify unique attributes and combinations of actions that may ultimately lead to a stout leadership model. Further theorization of networked leadership may yield better research and result in outcomes that facilitate leadership development and implementation in the field of education and principal preparation.

Dedication

This dissertation is dedicated to my wife and children for accepting an imposed vow of poverty, and allowing me at times to be an absent parent as I achieved enlightenment at The Ohio State University. I also dedicate this dissertation to my parents who selflessly gave up their dreams so that I could achieve mine. In honoring their sacrifice, I will be ever vigilant in my service to education and continuously strive to make them eternally proud!

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Achievement of this magnitude cannot be obtained without the continued support of professors, colleagues, friends and family. I first would like to acknowledge my advisor and committee chair, Dr. Belinda Gimbert. The knowledge and experience that I gained through our journey together transformed how I approach education and scholarly research. As my mentor, she facilitated my learning environment and provided opportunities for me to acculturate into the world of higher education academia. I am forever grateful for her kindness, guidance, and friendship.

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Vita

1995	B.A. Interdisciplinary Social Sciences, The University of South Florida
1999	M.A. Educational Guidance and Counseling, The University of South Florida
2003	M.Ed. Educational Leadership and Administration, The University of South Florida
2003 to 2007	Elementary School Administrator, School Board of Sarasota County, Florida
2007 to Present	Graduate Research Associate The Ohio State University

Publications

Gimbert, B. & **Fultz, D**. (2009). Effective principal leadership for beginning teacher development. *International Journal of Educational Leadership Preparation, 4*(2), 1-15.

Gimbert, B. & **Fultz, D**. (2009). Top 10 actions a principal can do to make my first year successful. *Principal's Office.* http://principalsoffice.osu.edu/files/staff.9.09.php.

Field of Study

Major Field: Education

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Chapter 1: Introduction

The No Child Left Behind Act (NCLB) (U.S. Department of Education, 2001) was designed to enhance the quality of academic instruction in core curricular areas, and hold our educational system accountable for equitably addressing the needs of all students. This policy primarily focuses on student academic success and the teachers' qualifications and ability to deliver meaningful instruction. It also influenced how teacher preparation programs design the academic experience of their developing teachers, including identifying what knowledge, skills, and dispositions are needed to be successful under NCLB. Furthermore, this policy influenced how state departments write and enforce state level policies regarding education (2001). As NCLB approaches revision and reauthorization, educators and policy-makers have an opportunity to address the shortcomings of the initial policy. One of these areas is the role of the building administrator in impacting the climate of their schools, which translates to student academic success.

The focus of this study is to better understand how the combination of different facets of influence in the principal's leadership arsenal impacts school climate, knowing that climate has a direct impact on student academic success. Included in chapter one of this study are information pertaining to the background, problem statement, purpose of

study, research questions, definition of terms, significance of the study, assumptions, initial limitations, and an overview of the organization of chapters to come.

Background of the Study

In 1983, the publication of *A Nation at Risk* (U.S. Department of Education, 1999) prompted a school reform movement calling for effective ways in which school leaders provide an appropriate educational environment that facilitates student growth and learning. As leadership models were developed and tested, gaps in its effectiveness on cultivating a positive educational environment and student success began to emerge (Bottery, 2001; Day et al., 2001; Firestone, 1996; Fullan, 2002; Hallinger & Heck, 1996a, 1996b; Leithwood & Jantzi, 1999a; 1999b; Marks & Printy, 2003). As educational reform shifted the procedures and processes of best practices in educating students, leadership styles also evolved. Through this evolution, prevailing theories in the literature retained focus on the principal's influence on the individual constructs of instruction, collaboration, and the cultivation of parental involvement onto the educational environment.

Instructional leadership (Barth, 1986; Edmonds, 1979; Hallinger & Murphy, 1986; Leithwood & Montgomery, 1982) addressed the need for a strong, directive leader in the principal position. This leader is responsible for facilitating curriculum, supervising instruction, and conducting evaluations in order to increase student academic success (Chrispeels, 2002; DuFour, 2002; Hallinger, 2003; Hallinger & Murphy, 1985, 1987; Lashway, 2002; Whitaker, 1997). Studies have suggested that the principal's influence on school structures does correlate to some degree with school climate and

student academic success (Bamberg & Andrews, 1990; Goldring & Pasternack, 1994; Hallinger & Heck, 1996a, 1996b, 2002; Hallinger & Murphy, 1986). However, conflicting studies have shown that no direct relationship exists between instructional leadership and student success (Hallinger, 2003; Hallinger & Heck, 1996a,; Murphy & Hallinger, 1987). These studies suggest that failure to link leadership style to positive school environment and student outcomes is due to the model's negligence to share power or distribute leadership.

On the other hand, transformational leadership focuses on education as a collegial effort where collaboration is paramount in the educational process (Bass, 1990; Blase & Blase, 2000; Burns, 1979; Hallinger, 2003; Gill, 2003; Jung & Sosik, 2002; Marks & Printy, 2003; Spillane, Camburn, & Pareja, 2007; Yukl, 1999). This allows the principal to maintain control of the educational environment and impact student academic success, while delegating authority and empowering teachers and staff. While some researchers found that this type of leadership had a positive effect on student success (Conley & Goldman, 1994; Harris, 2005; Spillane, 2005), other researchers found that the influence is more directly associated with school conditions affecting teacher perception and motivation, such as school climate, rather than student achievement (Bottery, 2001; Day et al., 2001; Fullan, 2002; Leithwood & Jantzi, 1999a; 1999b).

The Elementary and Secondary Education Act of 1965 (ESEA, 1965) legislated parental involvement by requiring parents to serve on school advisory boards, while encouraging parents to participate in their child's classroom. NCLB (U.S. Department of Education, 2001) further solidified the importance of parental and community involvement with the school environment. Research findings have suggested that parents

and communities play a significant role in creating a positive school climate and in student academic success (Brabeck & Shirley, 2003; Epstein, 2005; Fan & Chen, 2001; Henderson & Berla, 1994; Henderson & Map, 2002; Jeynes, 2003, 2007; Leana & Pil, 2006). However, other studies indicate that parental involvement has no significant effect on aspects of school climate or student success in the classroom (Henderson, 1988; Keith, Reimers, Fehrmann, Pottebaum & Aubey, 1986; Zellman & Waterman, 1998; Bobbett, 1995).

Statement of the Problem

Espoused leadership platforms that focus on instruction and teacher collaboration have been implemented in an effort to directly influence student success. Although some studies have shown that the principal's focus on instruction (Bamberg & Andrews, 1990; Goldring & Pasternack, 1994; Hallinger & Heck, 1996a, 1996b, 2002; Hallinger & Murphy, 1986) and collaboration (Conley, & Goldman, 1994; Gronn, 2002; Harris, 2005; Spillane, 2005; Timperley, 2005) have positively influenced student academic success, other studies have suggested no relationship on student success with either of these styles without being moderated through the teachers influence on student achievement (Bottery, 2001; Day et al, 2001; Fullan, 2002; Hallinger & Heck, 1996a, 1996b; Leithwood, & Jantzi, 1999a; 1999b). Likewise, the influence on the role that parents play within the educational environment has shown both significant (Brabeck & Shirley, 2003; Epstein et al, 2002; Fan & Chen, 2001; Herman & Yeh, 1983; Jeynes, 2003, 2007; Leana & Pil, 2006) and non-significant (Bobbett, 1995; Ford, 1989; Keith et al, 1986) impact on student academic success. Ultimately, this influence is associated with school climate

than student academic outcomes. The principal's impact on school climate is the most direct way for them to impact student academic success. Therefore, how the principal influences the school climate, through the focus on instruction, collaboration, and parental involvement is worth further investigation.

Purpose of Study

Previous research in this field has typically focused on instruction, collaboration and parental involvement either individually or in a loosely coupled format through the facilitation of the principal. Research has yet to to explore the amalgamated influence of the three leadership constructs: instruction, collaboration, and parental involvement. Combining these three constructs as they dynamically engage with the educational setting guides leadership theory toward a networked leadership model. Within such a model, how the principal instructionally leads, collaborates, and secures parental involvement to leverage gains in a positive school climate guides this inquiry. This study predicts an increase in the measure of networked leadership is positively associated with an increase in the teachers' perceptions of school climate.

Research Questions

1. Is there a relationship between principals' degree of networked leadership within the school environment and teachers' perception of school climate?

2. Is there a relationship between principals' degree of influence on instruction and teachers' perception of school climate?

3. Is there a relationship between principals' degree of influence on collaboration and teachers' perception of school climate?

4. Is there a relationship between principals' degree of influence on parental involvement and teachers' perception of school climate?

Definition of Terms

Instruction. The principal makes purposeful and meaningful decisions regarding curriculum and instruction as a primary way of positively impacting school climate and increasing student academic success (Chrispeels, 2002; DuFour, 2002; Hallinger, 2003; Hallinger & Murphy, 1985, 1987; Lashway, 2002).

Collaboration. The principal shares in the decisions making regarding the educational environment by soliciting input and influence from the teaching staff. By sharing in decision-making, teachers gain substantial influence over the educational environment and increase their satisfaction within the school climate (Blankstein & Noguera, 2004; Burnette, 2002; Garmston, 2006; Hallinger, 2003; Hudson, 2005).

Parental Involvement. The principal provides pathways that encourage parents to be more involved in the educational environment and engages parents in continuous, meaningful communication regarding student success and school activities (ESEA, 1965).

***Networked Leadership*.** The process in which the principal instructionally leads, collaborates, and secures parental involvement to leverage gains in a positive school climate.

School Climate. "The enduring quality of the school environment that is experienced by participants, affects their behavior, and is based on their collective perceptions of behavior in schools" (Hoy, 1990, p. 152).

Basic Assumptions

1. Individuals who completed the 2007 – 2008 Schools and Staffing Survey (SASS) did so while functioning as the building principal for the school in which they were referring to when completing the items.

2. Individuals completing the SASS held a current administrators license in the state where they reside, completing all coursework necessary for licensure.

3. Individuals who completed the SASS maintained the integrity of their perceptions by responding honestly to each item on the Schools and Staffing Survey.

Initial Limitations

1. The population from which this sample was drawn included only public schools principals and teachers. The effective influence of the principal's leadership and the teachers' perceptions of school climate do not reflect relationships that might appear within the private school sector.

2. The population from which this sample was drawn included only elementary school principals and teachers. Responses from middle and high school principals and teachers regarding the constructs in the model may impact leadership influence and school climate outcomes differently that at the elementary level. However, they are not reflected in this study.

3. Response information was only included in the study if principals and teacher data could be matched where at least one teacher could be paired with one principal. Data points without matching principal-teacher data were not included in the study.

4. The data collected for this study were exclusively based on principal and teacher self-report data, and absent of any objective observable data. The data is contingent upon the principals' and teachers' perception of their influence and interactions within the school environment.

Significance of the study

If it is possible to identify the most pertinent attributes that principals possess and actions that they engage in, which correlates to higher teacher perception of school climate and ultimately student academic success, policy makers at both the state and federal level can then include principal standards that reflect these attributes and actions in state level policy as well as in the reauthorization of NCLB. By adding these standards of leadership, educational policy will take great strides in holding principals directly accountable cultivating a school climate that ultimately impacts the achievement of all

students in the school building, compelling them to be a more active and engaged participant in the educational process. Principal preparation programs will then be able to fine-tune their practices and course requirements to adequately accommodate best practices in developing these new attributes and actions in novice principals. This advancement in the current state of knowledge in educational administration will facilitate principal awareness of their leadership style, as well as effectiveness in providing an environment that promotes teacher cohesion and satisfaction, and provide an environment that is conducive to optimal learning for all students.

Organization of the Dissertation

Chapter one introduced the need for such a study, along with what specific research questions are necessary in order to adequately assess the constructs contained in this study. Chapter two presents scholarly research that outlines the theoretical components and empirical investigations associated with the principal's influences on the teachers' perceptions of school climate. Chapter three addresses the methodological process used in this study. Chapter four presents the research findings. Chapter five contains a summary and discussion of the findings, as well as recommendations for further research of these specific constructs.

Chapter 2: Review of the Literature

The publication of *A Nation at Risk* in 1983 (U.S. Department of Education, 1999) prompted a school leadership reform movement that primarily focused on increasing the effectiveness of school leadership. Student academic success became the standard for which principal effectiveness was measured. Leadership models were developed and tested in order to cultivate efficient and effective ways in which to influence the educational environment for the purpose of facilitating continuous student success. As educational reform continued to shift the way educators provided instruction to students, it also forced the evolution of the principal's style of leadership (Bottery, 2001; Day et al., 2001; Firestone, 1996; Fullan, 2002; Hallinger & Heck, 1996a, 1996b; Leithwood & Jantzi, 1999a; 1999b; Marks & Printy, 2003).

What has maintained through this evolution of leadership style is the principal's focus on instruction and collaboration within the learning environment. A portion of the current literature has supported the relationship between the principal's focus on instruction and the learning environment (Bamberg, & Andrews, 1991; Goldring & Pasternack, 1994; Hallinger & Heck, 1996a, 1996b, 2002; Hallinger & Murphy, 1986), as well as how their engagement in collaboration elicits positive outcome from both the teachers and students (Conley & Goldman, 1994; Gronn, 2002; Harris, 2005; Spillane, 2005; Timperley, 2005). However, other studies have shown that the principal's focus on instruction and collaboration have no meaningful relationship on teacher and student

success (Bottery, 2001; Day et al., 2001; Fullan, 2002; Hallinger & Heck, 1996a, 1996b; Leithwood & Jantzi, 1999a; 1999b).

Additionally, parents began increasing their role in the educational environment. The principal's leadership style had to accommodate active participation by the parents and cultivate a learning environment where teachers, parents, and students were engaged in the processes of learning (Christenson, Rounds & Gorney, 1992; Edwards, 1995; Egan, O'Sullivan & Wator, 1996; Epstein, 1991; Merttens & Vass, 1993; Patterson, 1994). While some researchers suggest that the involvement of parents in the educational environment increases teacher and student academic success (Brabeck & Shirley, 2003; Epstein et al., 2002; Fan & Chen, 2001; Herman & Yeh, 1983; Jeynes, 2003, 2007; Leana & Pil, 2006), others found that little connection between parental involvement and student success (Bobbett, 1995; Ford, 1989; Keith et al., 1986).

Empirical analyses has suggested a somewhat tenuous relationship between leadership styles that focus on the individual constructs of instruction, collaboration and parental involvement and their impact on the learning environment, as well as student academic success (Andrews & Soder, 1987; Blase & Blase, 2000; Hallinger, 2003; Hallinger & Heck, 1996a, 1996b; Leithwood, 1992; Marks & Printy, 2003; Sergiovanni, 1990). However, there is an absence of research that assesses how the principal engages in these three theoretical constructs simultaneously in order to produce an inter-correlated or networked effect on the educational environment that ultimately impacts student academic success. The combined successful aspects of these three constructs may negate their individual shortcomings and result in a model that produces sustained success within the educational environment. Therefore, how the principal influences the

educational environment, through the focus on instruction, collaboration, and parental involvement is worth further investigation.

Focus on Instruction

The leader of the school plays a significant role in creating an environment where students can achieve. Leithwood, Seashore-Louis, Anderson, and Walstrom (2004) identify leadership as the pivotal point in improving student learning.

> Leadership is widely regarded as a key factor in accounting for difference in the success with which schools foster the learning of their students. Indeed, the contribution of effective leadership is largest when it is needed most: there are virtually no documented instances of troubled schools being turned around in the absence of intervention by talented leaders. While other factors within the school also contribute to such turnarounds, leadership is the catalyst. (p.17)

Likewise, Lezotte (1994) identifies the principal as the dominant power that influences student academic success. He states:

> When one asks who decides how resources such as time and limited money get allocated, the answer in most schools is, "the principal". If one asks who decides what and who gets praised and sanctioned, the answer in most schools is, "the principal". When someone asks who places students in different settings, sets priorities for the future, creates the climate and expectations for the school, and

> recruits and socializes new teachers, again the answer is, "the principal". Taken together, these elements constitute a force powerful enough to alter what has been the normal flow of that school. (p. 22)

Instructional Leadership

The concept of instructional leadership emerged from the effective schools literature (Andrews & Soder, 1987; Chrispeels, 2002; Hallinger & Murphy, 1986) as a means to increase student academic success. In order to identify and implement common effective teacher practices, a need existed for a strong, directive leader in the unitary role of the principal (Barth, 1986). Instructional leadership identified the principal as the center of learning, and trained leaders who would take a direct approach in curriculum development and instructional supervision as the dominant way of improving student academic success (Chrispeels, 2002; DuFour, 2002; Hallinger, 2003; Hallinger & Murphy, 1985, 1987; Lashway, 2002).

Instructional leadership was born out of research conducted by Edmonds (1979), Leithwood and Montgomery (1982) and Hallinger and Murphy (1985). Edmonds focused on effective schools for the urban poor and found that the instructional leader is the one who provides resources and support focused on student academic. Leithwood and Montgomery found that the principal's behaviors or strategies interconnected with school-related factors and classroom-related factors such as school climate that ultimately influenced student learning. Hallinger and Murphy found that instructional leaders take the lead in defining the school mission, managing the instructional program, and promoting a positive school environment.

Other scholars have expounded upon this construct by providing a plethora of conceptualizations regarding instructional leadership. DuFour (2002) stated that effective leaders need to have a focus on identifying curricular outcomes, implementing multiple common assessments, analyzing assessment results, and developing strategies for student improvement. He added that instructional leaders have a strong working knowledge of curriculum, instruction and assessment. Principals understand the purposes and processes of curriculum and how it is connected to students' cognitive development. This includes identifying effective curricular tools, as well as ways to improve curricular integration into the lesson.

DuFour (2002) also discussed how instructional leaders have a firm grasp on effective teacher instructional strategies. Leaders comprehend the knowledge, skills and dispositions necessary to formulate lesson plans and to deliver instruction in a differentiated model in order to meet the diverse needs of individual students. From pedagogy to practice, effective instructional leaders are cognizant of appropriate instructional strategies and are able to model and evaluate them for their teachers. Instructional leaders understand the importance and process of assessing student learning. Instructional leaders acknowledge that student academic success is their top priority and that using assessment tools are the means by which to measure that achievement. They not only understand formative, summative, standardized and alternative assessment techniques, but also know when to implement them into the learning environment. Although DuFour advocated for a re-branding of the term *instructional leader* to *lead learner*, the attributes of curriculum development, implementation of instruction and data assessment remained the focus of skills necessary for effective instructional leaders.

Lashway (2002) re-conceptualized the construct of instructional leadership into four skills: interpersonal communication skills, planning to achieve a goal skills, strong observation skills, and effective research and evaluation skills. Lashway believed that instructional leaders have good interpersonal skills in order to effectively communicate with teachers. In this conceptualization, the purpose of the creation and delivery of the lesson is to use instructional practices to improve student academic success. Instructional leaders have planning skills that allow them to identify clear goals, and the process that it takes to attain those goals. Within the planning process, they are able to plan for enrichment or remediation if their goal does not come to fruition during its first implementation. Lashway also stated that instructional leaders have strong observation skills. As leaders of instruction, they feel comfortable observing the delivery of a lesson and identifying areas to praise the teacher, as well as offer suggestions to improve instruction. Finally, Lashway identifies that instructional leaders have effective research and evaluation skills. They are able to evaluate student achievement using researched methods of analysis. Being able to use the appropriate tools at various times during the learning process allows instructional leaders to assist the teacher in making modifications and accommodations in the delivery of instruction for the purpose of improving student achievement.

Similar to Lashway, Whitaker (1997) conceptualized instructional leaders by identifying their need to be strong educational resource providers, instructional resource providers, great communicators, and have a visible presence in the learning environment. Instructional leaders are educational resource providers, focusing on the overall needs of their building. They recognize teacher and student needs, and find resources to fill those

needs. Instructional leaders are instructional resource providers, focusing on supporting teachers' needs in the classroom. They understand effective instructional practices, current trends in student learning, and effective pedagogy in instruction and assessment. Instructional leaders are great communicators, conveying messages such as their vision, mission, and instructional practices so that teachers are clear on their role in the learning process. They also engage in quality communication with students, parents, and community members as a way to disseminate the achievement and expectations of their students. Finally, Whitaker identified visible presence as a crucial element of instructional leadership. In other words, the instructional leader needs to be more "hands-on" in the learning process. These leaders model appropriate learning, behavior and lesson delivery, as well as focus on programs and activities that reflect appropriately chosen learning objectives.

Marks and Printy (2003) narrowed previous conceptualizations into a construct that more lucidly linked research to practice. They identified an instructional leader to be a principal who focused on curriculum resources, instructional resources, and strong communication, and maintained a visible presence to monitor student achievement. They posited that, through the coordination of curriculum and supervision of the learning process, instructional leaders could better monitor student achievement. They noted that "instructional leadership, emphasizing the technical core of instruction, provides direction and affects the day-to-day activities of the school" (p. 377).

One of the most frequently cited construct of instructional leadership was the model conceptualized by Hallinger (2003). His model intertwines the previous constructs and highlights commonalities that are pertinent to the leadership attributes necessary to

promote student academic success. Hallinger's construct consisted of three dimensions: defining the school mission, managing the instructional program, and promoting a positive school learning climate (Hallinger & Murphy, 1985).

In the first dimension, Hallinger (2003) addresses defining the school mission. In this dimension, instructional leaders spend time "framing the school's goals and communicating the school's goals" (p. 332). The leader makes sure that these goals are clearly defined, accurately targeted, and measure the academic processes of student learning. The second dimension is managing the instructional program. In this dimension, instructional leaders are appropriately "supervising and evaluating instruction, coordinating the curriculum, and monitoring student progress" (p. 332). The leader is central in the development and delivery of instruction, facilitating what is addressed academically and keeping the success of the curricular plan in place.

Hallinger's third dimension of instructional leadership addresses the promotion of a positive learning climate. In this dimension, instructional leaders take on the responsibility of "protecting instructional time, promoting professional development, maintaining high visibility, providing incentives for teachers, and providing incentives for learning" (p. 332). The leader establishes a culture conducive to learning that focuses on instruction implementation and academic success. This includes having a strong presence, where the leader intervenes in the daily activities of instruction in the classroom.

Principals are responsible for having knowledge of the curriculum and instructional strategies in order to assist teachers in facilitating instruction (Leithwood & Riehl, 2003). Marzano, Waters, and McNulty (2005) found that student achievement is

influenced by principal focus on instruction. They stated that "Principals must be knowledgeable about curriculum and instructional practices, knowledgeable about assessment practices and provide conceptual guidance for teachers regarding effective classroom practice" (p.55).

Empirical evidence demonstrating that instructional leadership can influence student achievement has been met with mixed results. Research conducted by Blase and Blase (2002) indicates supportive evidence that instructional leadership has a positive effect on teachers and classroom instruction. Similarly, Hallinger (2003) states that "The preponderance of evidence indicates that school principals contribute to school effectiveness and student achievement indirectly through actions they take to influence what happens in the school and in the classrooms" (p. 333). Other inquiries suggest that a consistent comprehensive mission statement as well as the influence the principal puts on school structures, such as curriculum and instructional standards both play a role in correlating instructional leadership to positive school climate and student academic success (Bamberg & Andrews, 1990; Goldring & Pasternack, 1994; Hallinger & Heck, 1996a, 1996b, 2002; Hallinger & Murphy, 1986).

Meek (1999), analyzing the principals' instructional management characteristics and student outcomes of 300 elementary schools in North Carolina found a positive correlation between instructional leadership and student academic success. Of the actions that had the most meaningful impact were: framing and communicating school goals, coordinating the curriculum, monitoring student progress, and protecting instructional time. Likewise, Marzano, Waters, and McNulty (2003) conducted a meta-analysis of leadership involving 70 classrooms and identified 21 attributes and actions of leadership.

These areas are heavily identified as attributes and actions associated with instructional leadership. Principals are responsible for having knowledge of the curriculum and instructional strategies in order to assist teachers in facilitating instruction (Leithwood & Riehl, 2003). Marzano, Waters, and McNulty (2005) stated that "Principals must be knowledgeable about curriculum and instructional practices, knowledgeable about assessment practices and provide conceptual guidance for teachers regarding effective classroom practice" (p.55).

Research conducted by Leithwood, Seashore-Louis, Anderson, and Walstrom (2004) concluded that leadership was in fact a dominant factor in influencing school climate and student academic success. They found that, "leadership is second only to classroom instruction among all school-related factors that contribute to what students learn at school" (p.17). They identified successful leadership as a principal engaging in (a) setting the direction of the school, (b) developing people and (c) redesigning the culture and structure of the organization.

Hallinger and Heck (1998) conducted a meta-analysis of 40 empirical studies and found that the studies fell into three common effects outcomes: (1) direct effects, (2) mediated effects, and (3) reciprocal effects. They concluded that mediated effects such as school climate seemed to have the most influential statistical significance between principal leadership and student achievement. They expected this stating, "The fact that leadership effects on school achievement appear to be indirect is neither cause for alarm or dismay. Achieving results through others is the essence of leadership. A finding that principal effects are mediated by other school variables does nothing whatsoever to diminish the principal's importance" (p. 44).

Likewise, Cotton (2003) found similar results with regard to indirect leadership. Cotton concluded:

> In general, these researchers find that, while a small portion of the effect may be direct- that is, principals' direct interactions with students in or out of the classroom may be motivating, inspiring, instructive, or otherwise influential- most of it is indirect, that is, mediated through teachers and others. (p.58)

The principal, through the cultivation and facilitation of the climate and educational environment, influences teachers, who in turn influence the academic development of students. This process lends itself to an indirect influence from principal to student with regard to student outcome measures (Gurr, 1997).

However, a study conducted by Andrews and Soder (1987) revealed a direct link between the principal's leadership and student academic success. From this study, a framework of instructional leadership was developed that focused on four specific actions of engagement. In order to be an effective instructional leader, principals had to (1) be a resource provider, (2) provide specific instructional resources, (3) be a good communicator, and (4) be a visible presence in the school building on a daily basis.

Studies also exist that contradict such findings, asserting that there is no effect between Instructional Leadership and student achievement (Hallinger & Heck, 1996a, 1996b). A synthesis of studies conducted by Witziers, Bosker, and Kruger (2003) found that a direct link between instructional leadership and student achievement was nonexistent. Despite research studies that have shown positive mediated or indirect

connections between instructional leadership and student academic success, a consistent causal relationship between the two has yet to be established and maintained through replications of research (Hallinger, Bickman, & Davis, 1996; Witziers et al., 2003).

Because of the hierarchical structure of instructional leadership, which focuses on the principal as the dominant leader of curriculum and instruction, if principals lacked pertinent knowledge and skills about how to evoke student academic success in their school, the school as a whole suffered (Murphy & Hallinger, 1987). A primary critique of instructional leadership is that it neglected to share power and distribute leadership (Hallinger, 2003). As it became clear that modifications to instructional leadership were necessary in order to better address student needs, a shift began toward a more collaborative and distributed approach to leadership. As a part of the school restructuring movement, principals had to transform their ways of leadership both inside and outside the school building to maximize the resources and support necessary to make a positive, sustained, and equitable difference in their approach to the school environment and the academic success of all students (Marks & Louis, 1997).

Focus on Teacher Collaboration

Effective principals create an environment where they can tap into the collective intelligence of their staff (Johnson, 2005). The principal facilitates a community of educators dedicated to addressing student needs and improving student achievement through collaboration and communication (Blankstein & Noguera, 2004; Burnette, 2002; Garmston, 2006; Hudson, 2005). One such leadership model that promotes collaboration

between the principal and teacher as the dominant force in educating students is the Transformational Leadership model.

Transformational Leadership

As we have seen, a primary critique of instructional leadership neglected to share power and distribute leadership (Hallinger, 2003; Murphy & Hallinger, 1987). Consequently, collaboration with shared leadership that promotes innovation and social-relational capacity with teachers lends itself to the conceptualization of the transformational leadership construct (Bass, 1990; Blase & Blase, 2000; Burns, 1979; Gill, 2003; Jung & Sosik, 2002; Marks & Printy, 2003; Spillane et al., 2007; Yukl, 1999). Building upon the foundation established by Bass, Leithwood is credited with bringing Transformational Leadership into the educational setting (Bass, 1990; Hallinger, 2003; Leithwood, 1992).

Transformational leaders improve organizational performance by working collaboratively with teachers, parents and the community. Through this collective effort, all educational stakeholders work together to identify and address issues or concerns, thereby continually transforming the educational process to provide a meaningful educational environment conducive for learning (Hallinger, 1992; Marks & Printy, 2003). Leadership is not distributed from the principal to the teachers; rather, it is shared as teachers accept leadership roles (Leithwood & Jantzi, 2000a; Louis & Marks, 1998; Ogawa & Bossert, 1995). As they accept leadership roles, teachers are encouraged to subordinate their own self-interest for the greater good of the organization (Bass & Avolio, 1993; Leithwood, Tomlinson, & Genge, 1996; Silins, Mulford, Zarins, & Bishop,

2000). In regards to the definition of transformational leadership, Hallinger (2003) states that:

> Transformational leadership focuses on developing the organization's capacity to innovate. Rather than focusing specifically on direct coordination, control and supervision of curriculum and instruction, transformational leadership seeks to build the organization's capacity to select its purposes and to support the development of changes to practices of teaching and learning. (p. 330)

Avolio and Bass (1988) separated the behaviors of transformational leaders into four categories: idealized influence, inspirational influence, intellectual stimulation and individualized consideration. Idealized influence most notably reflects the followers desire to emotionally identify and model the actions and behaviors of the leader (Avolio, 1999; Yukl, 1999). Conviction, trust, purpose and risk taking within a solid foundation of moral and ethical guidance are necessary behavioral components in modeling leadership with idealized influence (Avolio, 1999; Bass & Avolio, 1997).

Inspirational motivation centers on the leader providing inspiration and motivation in order to challenge their followers to take part in a more meaningful engagement in student learning (Avolio & Bass, 1988). Through communication and collaboration, leaders and teachers work together to develop a shared vision that targets high standards. Then, this vision is optimistically implemented with encouragement and enthusiasm (Avolio, 1999; Bennis & Goldsmith, 1997; Donohue & Wong, 1994; Fullan, 1997).

Intellectual stimulation is where the transformational leader, "stimulates their followers' efforts to be innovative and creative by questioning assumptions, re-framing problems, and approaching old situations with new methods and perspectives" (Avolio, 1999, p. 46). This category was designed to create a paradigm shift on how teachers recognize and conceptualize a problem while facilitating new and innovative ways to approach changing trends in education (Bass, 1985; Leithwood, Jantzi, & Steinbach, 1999). Meanwhile, individualized consideration focuses on the specific needs of individuals as it pertains to their professional growth and development. This includes fostering a supportive environment where teachers are treated fairly, provided opportunity for growth, and acknowledged for their successes (Bass, 1985; Leithwood et al., 1999).

Jantzi and Leithwood (1996) built upon this list by identifying categories that recognize behaviors elicited by transformational leaders. Their research created six dimensions of leadership practice: identifying and articulating a vision, fostering the acceptance of group goals, providing individualized support, support intellectual stimulation, providing an appropriate model, and promote high performance expectations. Identifying and articulating a vision focused on identifying new educational opportunities and developing a vision that inspires others to accept and become involved in that vision. Fostering the acceptance of group goals focused on developing cooperative and collaborative pathways to build common goals. Providing individualized support focused on the leader taking time to get to know teachers in order to provide them with appropriate support and encouragement in a very respectful manner.

Jantzi and Leithwood (1996) aligned with Avolio and Bass (1988) when they created and defined their intellectual stimulation dimension. As with Avolio and Bass, this conceptualization focused on challenging teachers to shift their paradigm about the practices and processes they used to teach. Thus, teachers would be encouraged to find innovative ways to improve upon their effectiveness and increase student academic success. Jantzi and Leithwood's (1996) category of providing an appropriate model focused on the importance of the leader to set a good example for teachers and to hold themselves up to a high ethical and moral standard. Finally, the high performance expectations dimension focused on "the leader's expectations for excellence, quality, and high performance on the part of the staff" (p. 515).

Hallinger (2003) further conceptualizes transformational leadership. He delineates instructional and transformational leadership using three distinct differentiations. The first differentiation has to do with a "top-down versus a bottom-up approach to school improvement" (p. 337). In a top-down approach, the principal is at the center of instruction and controls the flow of instruction (Barth, 1990; Cohen & Miller, 1980; Day et al., 2001; Heck, Larson, & Marcoulides, 1990). On the other hand, the bottom-up approach is where transformational leadership shares control and decision-making with the players that are closest to the situation, allowing teachers to facilitate instructional resources and lesson implementation (Day et al., 2001; Jackson, 2000; Marks & Printy, 2003).

The second differentiation involves "managerial or transactional versus transformational relationship to staff" (Hallinger, 2003, p. 337). Departing from the instructional leadership model, principals adopted a transactional approach to leadership.

This approach reinforced the management and control of followers to maintain the status quo of the day-to-day activities (Blase & Anderson, 1995; Howell & Avolio, 1993; Silins, 1994). Transformational leadership and transactional leadership are on opposite ends of a leadership continuum. Transformational leadership promoted collaboration, cooperation, motivation and a shared commitment to perform at high levels to impact student learning (Barnett, McCormick, & Conners, 2001; Burns, 1978).

The third differentiation between instructional and transformational leadership is "First-order versus second-order target for change" (Hallinger, 2003, p. 337). Instructional leaders are in first-order processes. They facilitate school goals, curriculum, and delivery of instruction to target ways in which knowledge is transferred to students (Hallinger et al., 1996; Leitner, 1994; Marks & Printy, 2003). Transformational leaders focus on second-order processes such as collaboration, cooperation, motivation, and inspiration to facilitate teachers' eliciting first-order effects on student achievement (Lambert, 1998).

Empirical evidence exploring transformational leadership's effects on the educational environment and student academic success has also been met with mixed results. While researchers will argue that Transformational Leadership has a positive effect on student development, they also note that this effect occurs in school conditions that directly influence teacher perception, motivation, and way of work (Bottery, 2001; Day et al., 2001; Fullan, 2002; Leithwood & Jantzi, 1999a; 1999b). Therefore, the transformational leader's effect on student achievement is only through an indirect pathway. Transformational Leadership has also shown positive results when linked to other models like Instructional Leadership through a shared leadership approach (Marks

& Printy, 2003). In a study conducted by Leithwood and Steinbach (1991), they found that when teachers collaborated with their principals, a more pronounced commitment to the collective goals and shared vision of the school were attained. Teachers were committed to enhancing student learning and solving any problems that limited the students' ability to learn. Although learning may have been enhanced through student engagement, a lack of direct effect on student achievement scores still exists (Leithwood, 1992; Silins et al., 2000).

Transformational leadership focuses more on the growth and innovation of the organization than directly on curriculum and instruction (Hallinger & Leithwood, 1998; Marks & Printy, 2003). With a diminished focus on instruction and curriculum in the transformational leadership model, principals are forced to take on a more meticulous leadership role to facilitate student achievement (Sebring & Bryk, 2000; Sheppard, 1996). Transformational leadership has spawned multiple leadership models including distributed leadership and shared instructional leadership.

Distributed Leadership

One major component of the educational reform movement is the shared leadership approach to educating students. A popular form of shared leadership is the conceptualization of a Distributed Leadership construct (Camburn, Rowan, & Taylor, 2003; Spillane, 2005). Distributed leadership is grounded in the idea that leadership cannot exist in isolation and that in order to maximize the benefits to student learning, leadership must be distributed widely across the organization to those individuals in a position to make the decisions that will elicit the greatest improvement (Elmore, 2000;

Timperley, 2005). By combining expertise, individuals create a synergistic relationship that increases the effect of achievement in a larger context of learning (Elmore, 2000; Gronn, 2002; Harris, 2005; Spillane, 2005; Timperley, 2005). Ultimately, the principal maintains control of the school, but utilizes the teachers' respective knowledge, skills and dispositions by delegating authority, empowering teachers while continuously cultivating a system conducive to student achievement (Elmore, 2000; Harris, 2005; Spillane, 2005).

Spillane (2005), Gronn, (2002), and Elmore (2000) each provide a conceptualization of distributed leadership. Spillane approached distributed leadership not by the attributes of the individual leader, but rather by the common practices of many leaders. Multiple actors take part in the leadership actions of the school and it is the inter-relational aspects of these actions that define leadership practice. Spillane's use of artifacts includes the vision and goals of the school as well as tangible learning materials and resources that guide instruction. Finally, Spillane conceptualized distributed leadership through daily tasks and activities that the leader performs in relation to the other two attributes. This focuses on the actions of the leader, the tools and resources that the leader uses to provide instruction in alignment with the school's mission and vision, and the context in which leadership is distributed.

Like Spillane, Gronn (2002) espoused that leadership in a distributed context must include multiple leaders within the organizational structure. Leadership within the organization could be vested in a few, many, or all of the individuals, given the circumstances in the local context. Gronn also detailed distributed leadership as a way to develop or enhance the vision and mission of the organization by understanding the necessary tasks at hand, identifying individuals suited to the tools and technological

capabilities needed to address the task, and delegating leadership to those individuals. Gronn also identified the importance in people working in concert to facilitate sustained increases in student academic success. He outlined three forms of actions that can be effectively implemented in a distributed leadership model: spontaneous collaboration, intuitive working relations and institutionalized practices. Spontaneous collaboration is an unplanned collaborative effort between two or more individuals who use their knowledge of the situation and their respective skill sets to collaborate on solving a problem.

Intuitive working relationships are a product of two or more individuals having built a close working relationship where each can predict the needs of the other and provide a means to satisfy those needs without being asked (Gronn, 2002). Finally, institutionalized practices refer to the formal structures of the organization. When processes are effective in a valid and reliable manner, they are absorbed into the climate of the school as normal ways of work. As distributed actions prove successful, they are repeated and eventually institutionalized within the processes of the organization.

Elmore (2000) conceptualized distributed leadership by focusing on the improvement of instruction and student academic success. Multiple individuals work together through a common climate and culture of leadership and collaboration. The expertise of the members of the organization in order to connect appropriate individuals to situations that need addressed. This highlights the necessary function of instructional leadership in order to elicit large scale improvement.

Recently, research conducted by Robinson (2008) identifies distributed leadership by two dimensions: delegation of leadership tasks and distribution of influence. She

stated that, "By embedding leadership in tasks, attention is given to its content and purpose" (p. 245). The performing of multiple tasks throughout a school day are necessary to provide an environment where teaching and learning flourish. The principals, using their knowledge of the situation and of the skill sets of their teachers, delegate leadership responsibilities to complete the tasks. These tasks focus both on direct curriculum and instructional activities, as well as larger building management activities (Camburn, et al, 2003). The delegation can be in a collaborative, rotating or straight forward manner until the task is completed, depending on what the principal deems necessary for the current situation (Robinson, 2008).

Once a task is delegated, the principal uses a variety of influences to facilitate task completion (Robinson, 2008). According to Robinson, influence is strictly used through the filters of, "positional authority, personal qualities, and rational persuasion" (p. 247). This is overtly contrary to a power relationship that consists of "force, coercion, and manipulation" (p. 247). The role of leader and follower can change multiple times within an organization, depending on the current situation: therefore, cooperation and transient hierarchical processes must be ingrained in the culture of the school (2008).

Harris and Spillane (2008) offer three reasons why distributed leadership is so popular. First, it has normative power. As leadership models continue to transform from a principal-centered instructional leadership approach to a more collaborative model, principals must meaningfully and purposefully distribute leadership and responsibilities in order to continue to maintain a high level of academic focus. Second, distributed leadership has representational power. As alternative approaches to leadership that engage in complex collaborative organizational structures arise, principals must distribute

leadership that encourages multiple shared interaction and support to compensate for the increasing demands placed upon the school or district (Wenger, McDermott, & Snyder, 2002). Finally, Harris & Spillane (2008) stated that distributed leadership is a popular leadership model because it has empirical power. Although research investigating the effects of this model on student achievement is relatively new, available research has shown a positive correlation between distributed leadership and positive changes in the climate and organization of the school (Harris, Leithwood, Day, Sammons, & Hopkins, 2007; Leithwood, Mascall, Strauss, Sacks, Memon, & Yashkina, 2007).

Empirical research on distributed leadership influencing the school climate and student academic success is still relatively new (Harris et al., 2007; Harris & Spillane, 2008; Lashway, 2003: Spillane, 2005). However, findings have suggested that distributed leadership has improved teaching and learning (Harris, 2005; Spillane, 2005; Timperley, 2005). Similarly, Robinson (2008) concurred that success associated with distributed leadership is more aligned with teacher perceptions of school climate.

Spillane, Camburn, and Pareja (2007) found that, although a distributed model would be more effective in serving the roles and activities of a building principal than an instructional leadership model, it does not focus explicitly on curriculum, instruction, and assessment. Merely distributing leadership roles to others capable of taking them on in the school building does not necessarily have a direct influence on student improvement (Robinson, 2008). Organizational morale may improve but without student achievement improving, then, according to Robinson, the primary focus on instruction and learning is diluted.

Shared Instructional Leadership

One way to alleviate the lack of explicit focus on curriculum, instruction, and assessment found in shared leadership models is to glean the specific attributes from transformational leadership models and blend them into an instructional leadership approach that affects student achievement. The process creates the shared instructional leadership model (Marks & Printy, 2003; Printy & Marks, 2006).

In shared instructional models, principals leverage interrelationships and collaboration to maintain the educational program at their respective schools (Conley & Goldman, 1994). Although shared instructional leaders focus on instructional support and resources, they share the instructional leadership process with teachers in a reciprocal manner in both formal and informal actions (Ogawa & Bossert, 1995; Pounder, Ogawa & Adams, 1995; Prestine & Bowen, 1993).

Fletcher and Kaufer (2003) identify three aspects of shared leadership development that are absorbed into the shared instructional leadership model. The first aspect focuses primarily on what was discussed earlier regarding distributed leadership. Leadership in this instance is defined by the accumulative practices that the teachers and principals engage in on a daily basis, not simply the individual principal's delegation of responsibility and leadership opportunities (Firestone, 1996; Spillane, Halverson, & Diamond, 2001; Harris & Spillane, 2008; Spillane, 2005). The second aspect of shared leadership focuses on social interaction. Shared leadership is an interactive process in which the players have a desire to collaborate and solve an issue or achieve a goal. Fletcher and Kaufer's third aspect focuses on learning. Developing skills, both at the individual and group level, as well as how to implement them in a manner that potentially

increases student success is a focus of this shared, interactive process (Argyris & Schon, 1996).

Printy and Marks (2006) absorbed facets of shared leadership and incorporated them with pertinent instructional leadership attributes to conceptualize "shared instructional leadership." They use five observation points to articulate their findings with regard to their conceptualization of shared instructional leadership. Their first observation focuses on interaction being the basis for learning and leadership (2006). Schools where teachers interactively shared their expertise, worked toward a common vision and mission, and openly supported each other tended to rate more favorably on measures of quality of teaching and learning (Marks & Printy, 2003; Printy & Marks, 2006). The second observation focuses on how teachers make important contributions to instructional leadership. Through predominantly informal processes, teachers meet and discuss curriculum and instructional issues, concerns, and procedures in an attempt to better serve the individual and collective needs of students. Through the process of sharing and focusing on instructional development, teachers facilitate visions, establish goals and encourage each other in their implementation. Often, teachers who have more experience or who are willing to openly share and support their colleagues will rise to leadership within the group as they help their colleagues understand, cope and adjust their focus to improve student achievement (2006).

Printy and Marks' (2006) third observation focuses on how principals play a pivotal role in instructional leadership. Formulation of committees, representatives on those committees, and establishing an environment conducive for collaborative endeavors are created and maintained through the office of the principal. The success of these

interactions depends heavily on the commitment of the principal to facilitate an environment conducive for these types of processes (Printy, 2002; Printy & Marks, 2006). Principals also are responsible for keeping rigorous and relevant focus on matters of curriculum, instruction and student achievement. When leadership and decision-making is shared within these areas, significant attention is placed on achieving a desired outcome (Printy & Marks, 2006). Also, principals who model positive, inspirational and motivational ideologies about student learning, while linking it to practice through their vision and mission, will more likely increase teacher buy-in and find teachers more willing to accept leadership roles (2006).

Printy and Marks' (2006) fourth observation focuses on how shared leadership provides coherence and clarity. As principals and teachers share leadership responsibilities, a norming process occurs, and a common understanding materializes where academic standards and processes become engrained in the culture of the school. Finally, the fifth observation focuses on how shared leadership is essential for innovation. Uniting teachers from various backgrounds and facilitating innovative conversations focused on problem-solving leads to school improvement (Coburn, 2001; Hargreaves & Macmillian, 1995; Marks & Printy, 2003).

Although shared instructional leadership brings a collaborative aspect to instructional leadership, it lacks significant representation in building organizational capacity through a more transformative construct (Firestone, 1996; Marks, & Printy, 2003). Depending upon the needs of the school, the principal must find an equitable balance between shared instructional leadership and transformational leadership

properties through a more integrated leadership approach that facilitates student achievement.

Integrated Leadership

Research conducted by Marks and Printy (2003) recognized the strengths and weaknesses of both instructional and transformational leadership models, and identified pertinent attributes that they believe positively impacted leadership and student success. Through research analysis and conceptual synthesis of these identified attributes, they created a new leadership model, "Integrated Leadership." They believe that "when the principal elicits high levels of commitment and professionalism from teachers and works interactively with teachers in a shared instructional leadership capacity, schools have the benefit of integrated leadership; they are organizations that learn and perform at high levels" (p. 393).

Integrated leadership draws upon a shared sense of instructional leadership. Principals and teachers share ideas on how to address student achievement with regard to the development and implementation of curriculum, instruction, and evaluation. Integrated leadership also encompasses facets of transformational leadership. Principal and teachers engage in collective capacity building by encouraging collaborative support through personal and professional growth opportunities. Teachers are empowered through inspiration, innovation and influence to develop and embrace organizational goals, viewing them as more important than the individuals' success or accomplishments (Marks & Printy, 2003).

Regardless of the leadership model, a dominant factor in student academic success is the ability of principals and teachers to collaborate. By working together and sharing their intellectual capacity, they have the ability to facilitate a school climate necessary to address the individual needs of their students and promote a positive learning environment.

Focus on Parental Involvement

In the era of educational accountability, the school leaders focus on instruction and collaboration with teachers in the educational environment, as well as cultivate an environment that promotes and supports parent and stakeholder involvement in the education process. The school and community connection is essential in the learning process of the student. Parental involvement in the education of children has been at the center of the educational movement since the early 19th century in America. Parents and community stakeholders recruited teachers into their towns to provide an education that they deemed necessary for their children to be successful (Berger, 2008; Epstein, 1986; Katz, 1971). During the turn of the 20th century, teaching began to take on more of a professional structure and parents began deferring their involvement to the professionalism of the teacher (Berger, 2008; Epstein, 1996; Henderson, 1988; Katz, 1971; Zellman & Waterman, 1998). By the 1960s, however, federal legislation began emphasizing the importance of parental involvement in the school setting (Zellman & Waterman, 1988).

President Lyndon Johnson signed the Elementary and Secondary Education Act of 1965 (ESEA, 1965) into law, reconnecting parents to schools by providing them with a

mandated pathway to serve on school advisory boards and encouraging them to participate within the classroom. The Elementary and Secondary Education Act provided federal funding to schools for the purpose of strengthening student success through professional development, funding instructional materials and resources, and promoting parental involvement. Title I of the Act established a purposeful focus on schools identified as having a high percentage of students from low socio-economic families. Understanding the importance of parental involvement in the success of children's education, as well as the challenge of facilitating a comprehensive parental involvement plan in traditionally low-income communities, the Elementary and Secondary Educational Act mandated funds to target and facilitate parental involvement in high need educational environments (ESEA, 1965). Research published in the Coleman Report (Coleman, 1966) further emphasized how the influence of parents was more likely to affect student success than any other specific variable in the school environment.

A focus on parental involvement continued to play a role in the development of student success through the 1980s and 1990s. A major form of federal legislation intended to increase student achievement in American school systems, Goals 2000: Educate America Act, was signed into law by President Bill Clinton (Goals 2000: Educate America Act, 1994). Title IV of the act focused specifically on parental assistance and involvement. Goals 2000 allocated funds for parent training, support programs, and assistance in preparing them to support their children through the education process. This act also established partnerships between schools and parents as a national goal for public educational environments (Epstein, 1995; Goals 2000: Educate America Act, 1994).

Policy initiatives from both the Elementary and Secondary Education Act and Goals 2000: Educate America Act were absorbed into the No Child Left Behind Act of 2001 (U.S. Department of Education, 2001). With this integration, the No Child Left Behind Act further solidified the importance of parental and community involvement in the educational experience. The No Child Left Behind Act (NCLB) of 2001 (2001) absorbed the Goals 2000 act and reauthorized the Elementary and Secondary Education act when it was signed into law by President George W. Bush. NCLB focused on accountability for student achievement, local and flexible control of the educational environment, greater influence of parental involvement and choice, and the implementation of educational curriculum and programs that are research-based and have shown to be successful in facilitating student achievement (Cowan, 2003; U.S. Department of Education, 2001).

Title I, Part A of the reauthorized version of ESEA specifically focuses on communities, schools and parents working in collaboration to improve teaching and learning. This includes establishing and facilitating parental involvement processes that are rigorous enough to connect to student academic success, but flexible enough to adapt to local needs in high need, low performing schools within high poverty communities (Cowan, 2003; ESEA, 1965

Federal policy has purposefully targeted parental involvement and influence in their statutory laws, supporting the importance they believe parents play in the education of their child. Although the focus seems to be tied more to impoverished communities that receive Title I funding, the U.S. Department of Education have consistently advocated that all schools need robust participation by parents in order to increase student

achievement. With this mandated policy, principals and teachers must establish and maintain pathways in which parents have the opportunity to be involved in their child's education, as well as collaborate on the development and implementation of the vision and mission of the school. As the school leader, the principal is charged with creating and cultivating a collaborative environment that supports parental influence and participation.

Parental Involvement and Student Academic Success

Research findings have suggested that parents and communities play a pivotal role in a student's academic success (Brabeck & Shirley, 2003; Jeynes, 2003, 2007; Leana & Pil, 2006). These studies affirm the positive influence of parental involvement in affecting student success indicators such as higher grades, attendance and graduation rates (Epstein et al., 2002; Fan & Chen, 2001; Herman & Yeh, 1983). A similar positive correlation has also been recognized between parental involvement and student well-being with respect to self-esteem, behavior, and positive life goals (Epstein, 2005; Fan & Chen, 2001). Henderson and Map (2002) concluded that academic achievement was higher when parents were engaged and involved within the school environment. Likewise, Henderson and Berla (1994) found that the level of student success was often contingent on the level of parental involvement within the school setting. Such studies suggest that parents want someone who creates a warm and inviting atmosphere where they feel welcomed to participate as a partner in the educational process. They want a principal who is open, honest, and trustworthy, and who finds value in the involvement of parents (Abrams & Gibbs, 2000; Mawhinney, 2004; Miretzky, 2004).

Fan and Chen (2001) conducted a meta-analysis of quantitative research related to parental involvement and student achievement. They found that although there were inconsistencies between the different research analyses, there was a positive relationship between the amount of parental involvement and the level of student achievement.

The interest in better understanding the involvement of parents in their child's educational environment has lead researchers to conclude that parents contribute a critical role in the education of their child (Austin Independent School District, 1977; Edwards, 1995; Egan et al., 1996; Merttens &Vass, 1993; Patterson, 1994; Christenson et al., 1992; Epstein, 1991). Parental involvement can be mitigated by the socio-economic background of the parent, parental attitudes and satisfaction, and parental participation in school-supported workshops.

Socio-Economic Influences

A longitudinal study by Hart and Risley (1995) found that the socio-economic status of the family plays a significant role in parental involvement and child development. These researchers concluded that parents of impoverished families, when compared to their more affluent counterparts, spend less time interacting with their children. In turn, this reduces the amount of time these parents dedicate to their child's growth and development. Lower levels of student academic success in traditionally impoverished and high minority schools has lead researchers to focus on cultivating parental involvement (Davies, 1985, 1991). When this effort is employed, parental involvement increases and schools demonstrate student achievement gains.

Research by Henderson and Berla (1994) found that parents play a critical role in influencing achievement for their children. They found that,

> Regardless of income, education level, or cultural background, all families can and do contribute to their children's success… When schools encourage families to work with their children and provide helpful information and skills, they reinforce a positive cycle of development for both parents and students… If schools disparage parents, or treat them as negative influences, or cut them out of their children's education, they promote attitudes in the family that inhibit achievement at school. (p. 14)

Research has suggested that negative impacts associated with impoverished families can be mitigated when parents are involved in learning activities, experience consistent two-way communication with the school, and support student learning at home (Epstein, 1991a, 1991b; Henderson & Berla, 1996).

Using data collected through the National Committee for Citizens in Education (NCCE), Henderson (1988) performed a meta-analysis with 35 studies on parental influence on student academic success. Her conclusion supports the generalization that parental involvement in all facets produces positive gains in student academic success, clarifying that parents make a critical difference in their child's education. These studies revealed that when schools were offering similar academic programs and processes, the students in schools with a strong parental involvement component outperformed students at schools that did not focus on making the parents a part of the educational process.

Likewise, when comparing families with similar aptitudes and socio-economic backgrounds, parents with whom schools shared a positive relationship had students who outperformed their counterparts in low parent-involvement schools. Not only did these measures include higher grades and test scores, but also positive student attitudes and behaviors increased when relationships with parents were cultivated to involve them as partners in the education of their child.

Mattingley, Prislin, McKenzie, Rodriguez, and Kayzar (2002) analyzed 41 studies that assessed parental influence on K-12 educational institutions in order to determine if there is a correlation between parental involvement and student academic. Since parental involvement programs seemed to be more prevalent in at-risk communities (communities identified as urban, low income and/or high minority populations), Mattingley et al., decided to focus their attention on research that encompassed these demographics. They found that within the at-risk context, a large number of correlational studies showed improvement in student academic success when parents were involved in the educational process. In more rigorous studies, parental involvement programs have been somewhat successful in changing parent behaviors and student behaviors. However, they found no causal relationship between the two in two of the four more rigorous studies.

Desimone, Finn-Stevenson, and Henrich (2000) conducted a quasi-experimental evaluation on 53 teachers and 630 students in a predominantly African American, low-income community. They found that when teachers placed a high value on parental participation, parental involvement increased as well as student academic success. They also found that it was the cultivation of a positive school climate that promoted the shared involvement of teachers and parents in the decision-making of educational processes.

Regardless of income or background, when parents are heavily involved in their child's education, their children are more likely to have increased grades and achievement scores, attend school regularly, and go on to post-secondary education (Cowan, 2003; Henderson & Mapp, 2002; U.S. Department of Education, 2001).

Attitude and Satisfaction.

Research conducted by Zellman and Waterman (1998) also found that parents who are involved in their child's educational development tend to see higher outcomes within their child's academic success. However, they did see a stronger correlation between involvement and parental attitude and enthusiasm than involvement and student academic success. Researchers have shown that parental involvement in school-related activities that promote their child's academic success are positively correlated with achievement, attendance and parents' overall satisfaction with the school (Abrams & Gibbs, 2000; Chavkin & William, 1993; Dauber & Epstein, 1993; Henderson, 1987).

Another positive finding from Henderson (1988) was that parents themselves, when included as partners in the education of their children, improved their attitudes and beliefs about the effectiveness of teachers and the school. They also began to seek more education so that they could make a more concerted difference in assisting their children with school-related activities at home. However, Henderson found that parental involvement at home was not sufficient to bring about a significant change in student achievement. Parents also need to be part of the school climate for students to increase their achievement.

Herman and Yeh (1983) analyzed parental involvement and student achievement data from 256 schools in California. The results of teacher and parent questionnaires revealed that parental engaged involvement in the child's education was positively related to achievement. When parents were satisfied with their level of involvement with the educational decision-making for their children, they were also satisfied with the quality of instruction.

Research has shown both significant and non-significant results with regard to parental involvement and student academic success (Moles, 1982). Although there are studies that have shown positive relationships between student academic success and parental involvement with school, there is another body of evidence that shows parental involvement has little to no effect on student outcomes (Bobbett, 1995; Ford, 1989; Keith et al., 1986). While there seems to be a focus on the need for strong parental involvement in the child's education with regard to school work completed at home, evidence shows that this assistance alone does not make a large difference in student academic success as a whole (Henderson, 1988).

With regard to achievement levels in at-risk populations, although parents do make an effort to improve student academic success through their influence, it is not enough to overcome other disadvantages associated with low socio-economic status as it relates to student success (Henderson, 1988). Research also indicates that the parents' interaction with their child regarding their education may be a better predictor of student success than their involvement with the school (Zellman & Waterman, 1998).

The principal promotes an educational environment that cultivates parental involvement. Without such an environment, teachers feel that parents will not become

involved in their child's school or be intimidated and withdrawn when they attend school functions (Desimone et al., 2000). Parents may face challenges and obstacles and their efforts may be thwarted as they seek to be involved in processes that support their children's academic achievement within the school learning environment (Becker & Epstein, 1982; Hobbs, Dokecki, Hoover-Dempsey, Moroney, Shayne & Weeks, 1984; Lightfoot, 1978; Moles, 1982). Often, a school's organizational structure does not appear to welcome or invite parental input. Corwin and Wagenaar (1976) found that when schools are bound by strict controls and predominately hierarchical structures, parental involvement occurred less often.

Likewise, teachers perceive parents and community members to lack understanding of the intricacies of education, regarded parents as unable to significantly provide appropriate academic support within the classroom, and thereby de-value the parental role in facilitating student academic success (Jacobson, 2002). Parents and community members seek to be active participants in children's education, but often lack processes and access to make a significant contribution without the support of the principal (Blackmore, 2002; Goldfarb & Grinberg, 2002; Kumashiro, 2000; Riehl, 2000). Further, parents and school staff may have conflicting perceptions of what constitutes parental involvement (Abrams & Gibbs, 2000).

Research conducted by Mattingley et al., (2002) found mixed results when investigating whether or not parental involvement has an impact on student learning. A meta-analysis of 41 studies revealed a lack of a rigorous theoretical framework or structure. Although many of the studies were targeting minority and low-income populations, their analysis did not address these demographics, especially considering

that evidence has shown that socio-economic status, race and family structure have demonstrated correlations with parental involvement (Cowan, 2003; Desimone et al., 2000; Henderson, 1998; Henderson & Mapp, 2002). Mattingly attributes this to a flawed theoretic structure rather than ineffectiveness of the concept of parental involvement.

Fan and Chen (2001) found that many studies that affirm a positive relationship between student academic success and parental involvement in the educational setting are qualitative, non-empirical and lack proper structure to repeat with consistency. Fan and Chen state that even when Epstein's (1987, 1992) and Hoover-Dempsey and Sandler's (1994) theoretical frameworks are used to gauge parental involvement, major aspects of the research are either nonoperational or unable to be quantitatively measured. When parental involvement is not operationally defined differently from other studies, it becomes difficult to generalize that the construct of parental involvement correlates with student achievement (Fan & Chen, 2001; Bobbett, French, Achilles, & Bobbett, 1995; Ford, 1989; Keith et al., 1986).

Defining Parents and Parental Involvement

In order to better understand the role that parents or, more specifically, parental involvement plays in the success of the educational environment, it becomes prudent to define these two constructs. The ESEA (1965), reauthorized by NCLB (U.S. Department of Education, 2001), expanded the definition of parents to include:

> in addition to a natural parent, a legal guardian or other person standing in *loco parentis* (such as a grandparent or stepparent with whom the child lives,

or a person who is legally responsible for the child's welfare) (*Section 9101(31), ESEA*).

Berger (2008) went on to further clarify the construct of parent as, "Those who act in a primary caregiver role whether they are the biological parent, a relative, adoptive parent, foster parent or non-relative parent" (p. 2). Both definitions speak of an adult who has some official influence over the child and whose actions are focused on the primary best interest of the child. For this dissertation, the ESEA definition of parent will be used as it is founded in federal policy.

Much like the definition of parent, parental involvement is often a generalized construct whose meaning has relative inconsistencies across research studies (Fan & Chen, 2001). For example, Bloom (1980) describes parental involvement as parental behaviors associated with student aspirations and achievement, while Christenson, et al., (1992) and Epstein (1991a, 1991b) describe parental involvement as a focus on parental communication with the school. Furthermore, Stevenson and Baker (1987) see parental involvement as the physical involvement of parents as they participate in school activities.

The ESEA (1965), reauthorized by NCLB (U.S. Department of Education, 2001), defined parental involvement as:

> the participation of parents in regular, two-way, and meaningful communication involving student academic learning and other school activities, including ensuring—

- that parents play an integral role in assisting their child's learning;
- that parents are encouraged to be actively involved in their child's education at school;
- that parents are full partners in their child's education and are included, as appropriate, in decision-making and on advisory committees to assist in the education of their child (Section 9101(32), ESEA.)

For the purpose of this study, parental involvement is defined by the definition outlined by ESEA. Moreover, this study contends that it is the responsibility of the school, more specifically the principal, to provide opportunities for parental involvement by establishing inclusive processes and removing barriers between the parent and the school. This may involve having staff members work directly with parents, providing electronic services for parents to monitor their child's academic progress, providing workshops for parents to gain tools to assist their children with homework, or simply a resource center that supplies parents with materials or services that allow them more time to focus on their child's academic success. Providing an opportunity for parents does not guarantee that parents will become more involved with the school in order to assist in their child's success. However, if principals do not establish consistent pathways and support structures for parental involvement, the parents' ability to become involved is severely limited. Simultaneously, the principal risks devaluing the importance of parental involvement in the child's education (Becker & Epstein, 1982; Blackmore, 2002;

Goldfarb & Grinberg, 2002; Hobbs et al., 1984; Kumashiro, 2000; Lightfoot, 1978; Moles, 1982; Riehl, 2000).

Types of Parental Involvement

The inconsistencies of research on the effectiveness of parental involvement in education may be due to the lack of agreement on processes that constitute parental involvement. Fan and Chen (2001) stated that these inconsistencies are due to a lack of atheoretical framework that guides empirical research. Without an agreeable structure on what actions or processes constitute parental involvement, it would be difficult to achieve uniform results. Epstein (1986, 1987) outlined a typology to better identify types of parental involvement. Initially, she classified parental involvement into four types: (1) involvement in basic obligations, (2) school-to-home communications, (3) parental involvement at school, and (4) involvement with learning activities at home.

Involvement in basic obligations consisted of making sure their child had appropriate school supplies and adequate support and supervision at home with all things school related. School-to-home communications consisted of reading what the teacher sent home and discussing progress reports and other communications with their children as teachers disseminated information to the home. Research conducted by Epstein (1987) found that 16% of parents never received any form of correspondence from the school, while 60% of parents admitted that they never had a phone conversation with their child's teacher. Involvement at school consists of parents attending their child's school and participating as volunteers either in the classroom, library or cafeteria. Epstein (1987) found that 88% of parents have never assisted in this fashion at their child's school.

Finally, involvement in the learning activities includes engaging the parents in the learning activities that the teachers are facilitating in the classroom.

In 1995, Epstein revised this framework to include 6 types of parental involvement activities. These six activities, which support the interconnection between parents and the school and facilitate positive student academic success are: (1) engagement in positive parenting techniques, (2) clear two-way communication between the school and the parents, (3) physical presence at the school through volunteerism, (4) assisting students with their homework and other aspects of learning at home, (5) being a part of school decision-making teams, and (6) being a positive link to the larger community that supports the school. Creating and implementing a sustained plan of action that involves these six steps allows parents and schools to partner together in the education of children and maintain a comprehensive focus on the importance of a quality education.

Differing from Epstein, Hoover-Dempsey and Sandler (1995) proposed a parental involvement framework that not only looked at types of involvement but also the reasoning as to why parents want to be involved and to what extent their involvement produced favorable outcomes. In their model, they focused on three main issues: (1) why parents become involved, (2) what types of involvement do parents engage in, and (3) why parental involvement is effective with regard to student achievement. Mixed results accompanied the implementation of this model, which led researchers to question its empirical validity (Fan & Chen, 2001; Hoover-Dempsey & Sandler, 1998).

Research conducted by Becker and Epstein (1982) and Epstein and Becker (1982), focused on the responsibility of the schools and teachers to establish parental

involvement opportunities. Their research on 3,700 public school teachers in 600 schools in Maryland found that to build strong parental involvement, teachers have to overcome bias and misperceived roles of parents. Some of their participants initially believed that parents were generally undependable, too busy, or lacked the same skill set or values to adequately support the teacher in educating their children. There was no time to provide parents with training or child care needs so that the parents could spend a significant amount of time on supporting their child through the educational process.

Becker and Epstein (1982) and Epstein and Becker (1982) found that, specifically in Title I schools, parent coordinators were used to elicit more involvement from parents in the school environment. This included investing time to train parents on educational techniques that teachers use in the classroom so that they were better prepared to volunteer in the classroom or continue the learning process at home with their children. By having an individual in the school focused directly on developing opportunities and training as a way to increase involvement, parents became more actively involved in the learning processes of their children (Becker & Epstein, 1982; Cowan, 2003; Epstein & Becker, 1982; Zellman & Waterman, 1998).

Teachers' Perceptions of Parental Involvement

From the teachers' perspective, parental involvement tends to be seen as either a positive collaborative endeavor (Anfara, Jr. & Mertens, 2008; Becker & Epstein, 1982; Bronfenbrenner, 1979; Desimone, et al., 2000; Epstein, 1995; Epstein, 1986; Epstein & Becker, 1982; Henderson and Mapp, 2002; Leichter, 1974; Litwak & Meyer, 1974) or simply as an inconvenience or distraction from their job as the primary educator of

students (Becker & Epstein, 1982; Desimone, et al., 2000; Epstein, 1995; Epstein & Becker, 1982). Epstein (1986) stated that there are two main opposing theories of how teachers approach parental involvement. One theory consists of the teachers viewing their roles as very different than the roles of parents. Teachers are responsible for the education of students at the school while parents are responsible for the education of the child at home (Epstein, 1986; Waller, 1965; Weber, 1947). When the schools see children as only students to instruct, they solidify this separation between the product of education and the influence of the family (Epstein, 1995). When teachers and parents had a weak collaborative relationship, teachers rarely requested support or assistance from the parents (Epstein 1986). In this view, the roles between the teacher and parent are very distinct and the line between them should not be compromised in any way.

Epstein (1986) indicates that another theory exists where teachers and parents work collaboratively, cooperating and developing processes that focus on best practices for student achievement. The education of the child is a shared responsibility where teacher and parent engage equally in goals necessary to significantly improve the child's success in the educational environment (Bronfenbrenner, 1979; Epstein, 1986; Leichter, 1974; Litwak & Meyer, 1974). When schools see children as children and not merely as students, they are likely to see parents and community members as partners in the educational environment (Epstein, 1995). When teachers and parents had a strong collaborative relationship, teachers frequently requested support or assistance from the parents (Epstein 1986). By integrating responsibilities and roles, parents and teachers create a comprehensive learning environment where learning is not limited to occurring only within the school building walls.

When addressing teachers' perceptions about parental involvement, common themes that emerged in the scholarly literature centered on: time constraints (Becker & Epstein, 1982; Desimone et al., 2000; Epstein, 1995; Epstein & Becker, 1982), skill development (Anfara, Jr. & Mertens, 2008; Becker & Epstein, 1982; Desimone et al., 2000; Epstein, 1995; Epstein & Becker, 1982; Henderson & Mapp, 2002), communication (Anfara, Jr. & Mertens, 2008; Epstein & Dauber, 1991; Henderson & Mapp, 2002), and parent coordinators (Becker & Epstein, 1982; Desimone et al., 2000; Epstein & Becker, 1982).

Time. Teachers have always been very protective of their time with students. Developing and implementing curriculum and instruction in a differentiated format can be very demanding, however necessary to assist all students in achieving. Teachers who have positive relationships with parents see their involvement as a way to maximize time with specific students in order to increase their effectiveness. Whether support in the classroom as volunteers or support with homework at home, when parents have the time and skill to support the teacher, the teacher can spend quality time with more struggling students (Becker & Epstein, 1982; Epstein & Becker, 1982). Conversely, teachers with limited relationships with parents see their involvement as time consuming. Taking the time to train parents on what they need to do in order to support their child's success, or even explaining how to volunteer in their classroom takes away valuable time from the learning process (Becker & Epstein, 1982; Epstein & Becker, 1982). In this scenario, teachers see this as unnecessary and a waste of their most precious commodity: time.

Skill Development. Attached to the issue of time is the teacher's perceived lack of parental knowledge and skills necessary to assist teachers in facilitating student

achievement. If the parent were to be involved in the classroom, training had to take place to arm parent volunteers with the knowledge, skills, and methods to assist them in facilitating student achievement (Becker & Epstein, 1982; Desimone et al., 2000; Epstein & Becker, 1982). Teachers see taking the time to train and develop parents to be supporters in the classroom, especially if parents cannot commit to a significant consistent volunteer schedule throughout the year, as a waste of valuable time and resources (Becker & Epstein, 1982; Desimone et al., 2000; Epstein, 1995; Epstein & Becker, 1982). However, for those teachers who find value in preparing parents by facilitating their knowledge and skill development to assist them in the classroom and at home, they affirm that parents are vital assets in the academic development of the students (Anfara, Jr. & Mertens, 2008; Becker & Epstein, 1982; Desimone et al., 2000; Epstein, 1995; Epstein & Becker, 1982; Henderson and Mapp, 2002).

Communication. Communication affects the amount of parental involvement in the education of children. For parents to be effective in collaborating with teachers, communication must be a two-way process where teachers and parents are sharing information in a clear and concise manner (Anfara, Jr. & Mertens, 2008; Henderson & Mapp, 2002). For instance, research conducted by Epstein and Dauber (1991) found that communicating with parents about school processes and programs showed a positive correlation specifically with parents who are labeled hard to reach. Analyzing 171 teachers in 8 inner-city schools, they found that communication was a crucial element in parental involvement. Whether it be face-to-face, over the telephone, or through informal notes, teachers who actively cultivated parental communication had higher response rates from parents than teachers who did not perceive parent communication as important in

the education of the student. In addition, they found that a significantly higher level of parent involvement occurred in elementary schools rather than middle schools. High schools were not included in this research. When parents and teachers have a healthy communication structure, students will receive common messages about the importance of school and common messages about what it takes to be successful (Epstein, 1995).

Parent Coordinators. Parent coordinators, especially in Title I schools, have shown success in soliciting parental involvement in the school setting (Epstein & Becker, 1982). Parent coordinators may be teachers with this additional assignment or parents who take on this role in order to increase the involvement of parents in the school. Parent coordinators are dedicated to creating processes and pathways for parents to feel accepted and valued in the school environment. They develop training programs and coordinate with teachers to fill volunteer gaps that teachers need. When a school has an effective coordinator, the students benefit from the additional adult support in the classroom (Becker & Epstein, 1982; Desimone et al., 2000; Epstein & Becker, 1982). However, if there is not sufficient support for parent coordinators by the teachers or principals, the results will be less effective. Teachers who view parent coordinators as ineffective tend to see this position as unstructured and a waste of financial resources (Epstein & Becker, 1982).

Conclusion. Teachers' perceptions of effective parental involvement were underscored by the educational environment. Teachers who felt that the principal cultivated a school environment conducive for high levels of parental involvement, and whose belief in the level and necessity of parental involvement matched that of their principal, scored their school as positively creating an environment that promotes and

welcomes parental input and collaboration (Epstein & Dauber, 1991). Conversely, when there is a discrepancy between the teachers' and principal's beliefs of the level and importance of parental input, the amount of parental input was lower than when the teachers and principal aligned their belief (Epstein & Dauber, 1991). Therefore, it is the principal's responsibility to build a community of common understanding between teachers and parents in order to support teachers actions in the classroom and facilitate student academic success.

Lack of parental involvement and the inability of the teacher to engage parents lead to a sense of teacher power and control over the parent. By involving the parents in the education of the child, teachers gain support and encouragement when targeting the child's needs and areas of weaknesses without making the parents and students feel that it is a negative attack directed toward them (Lightfoot, 1978).

Parents' Perceptions of Opportunity for Involvement

Involvement from the parent perspective also sheds light on their role in the educational environment. As with teachers having their perception about parents' ability to assist and support, parents also have their own perception of how teachers include them in the facilitation of their child's learning. Parents want to feel welcome, share in the educational goals of their child, and experience clear communication with their child's teacher (Abrams, & Gibbs, 2000; Cowan, 2003; Mawhinney, 2004; Miretzky, 2004; Zellman & Waterman, 1998).

Research conducted by Epstein (1986) demonstrated that, when schools make a concerted effort to include parents in the education of their child, parents generally felt

that the school was welcoming to their involvement. They identified schools as well run and comfortable and that the attitude of the teachers and staff were warm and positive. Likewise, schools that seemed to have a focus on a significant parental involvement piece were identified by the parents as having similar goals as the parents regarding the development of their children.

Clear communication is necessary for parents to understand where their child is with respect to their academic development, as well as what they can do to support the teacher and facilitate their child's growth and development both at school and at home (Abrams, & Gibbs, 2000; Cowan, 2003; Mawhinney, 2004; Miretzky, 2004; Zellman & Waterman, 1998). In Epstein's (1986) study, 58% of parents were rarely or never asked directly to participate in the learning activities both in school or at home. Likewise, over 80% of parents indicated that they would be more effective at helping their children with work at home if their child's teacher taught them how to do the activities with their children.

Clear two-way communication allows the teacher to share pertinent knowledge and learning skills so that parents will be able to continue the learning process at home. Parents' communication back to the teacher allows the parents to share if their child is being successful with the current assignments, or if he is struggling to comprehend the curriculum. This would allow the teacher to differentiate their instruction to meet the specific child's needs. Clearly, concise communication allows students to receive a consistent, common message that their teacher and their parent are working together to facilitate a positive educational experience (Epstein, 1995).

Epstein (1995) found that, “Parents with children in the classroom of teachers who built parental involvement into their regular teaching practice were more aware of teachers' efforts, received more ideas from teachers, knew more about their child's instructional program, and rated the teachers higher in interpersonal skills and overall teaching quality” (p. 291). By teachers including parents in the educating of their child, teachers have a unique opportunity to influence parenting style and transform ways in which parents approach their child with regard to education (Zellman & Waterman, 1998).

Research conducted by Desimore et al., (2000), analyzing data received from 72 parents and 63 teachers, found that the culture of the school is an important factor in cultivating parental involvement. Schools that have programs that promote parent involvement, shared decision-making, and outreach and engagement have positive results in engaging parents in their child’s learning environment. They found that school culture is especially effective with low-income, high minority populations which have traditionally been associated with low parental outreach or low levels of parental engagement. The principal is responsible for the creation and maintenance of the school culture.

Administrator’s Role in Parental Involvement

For parents to be involved in the education of their children through parenting, volunteering, communicating, decision-making, and being positive conduits to the larger community, principals must establish pathways and opportunities for parents to be interconnected to the school (Berger, 2008; Epstein, 1995, 1996). Effective parental support involves two-way communication, open collaboration and meaningful input to

the school improvement process (Cowan, 2003). Within a context of community involvement, a principal must have the knowledge and skills to embrace input from parents and guardians, as well as the sensitivity to cultivate trust relationships that advocate parental involvement in the learning environment.

Research conducted by Epstein (1996) found that, "At the elementary, middle, and high school levels, surveys of parents, teachers, principals, and students reveal that if schools invest in practices that involve families, then parents respond by conducting those practices, including many parents who might not have otherwise become involved on their own" (p.217). Berger (2008) discussed five types of school-parent interaction that were directly affected by the principal's leadership within the school. Besides stewarding the culture of the school, designing the educational program, and managing committees charged with decision-making authority, the principal also successfully garnered parental involvement by establishing an environment that makes parents feel welcome, valued, supported. Principals who engage in actions that support the mutual respect and influence between the school and the parents cultivate an environment that lends itself to a more collaborative effort on improvement of student achievement.

Principals are responsible for creating an educational environment that recognizes children as children and not merely students. By perceiving them as children, the school is more likely to embrace parent and community involvement in the shared development of their education (Epstein, 1995). Epstein (1995) identifies schools that have adopted a culture where parents are partners in the education of their children as "family-like schools." In family-like schools, children are treated as family members and parents and teachers partner in their differentiation and development of instruction. They share in the

development of curriculum and process of instruction, continuing the learning activities outside of the traditional educational day.

Unfortunately, schools often find themselves in positions where they want to engage parents as partners in education, but lack the knowledge to establish and cultivate such a relationship. According to Epstein's (1995) research,

> Just about all teachers and administrators would like to involve families, but many do not know how to go about building positive and productive programs and are consequently fearful about trying. This creates a "rhetoric rut," in which educators are stuck, expressing support for partnerships without taking any action. (p. 703)

Principals are the leaders in developing these pathways and discovering ways in which to engage parents in the learning environment.

When principals take the initiative and develop educational environments that have a collaborative culture, parental involvement increases at the school (Epstein & Dauber, 1991). Principals are able to provide training to teachers through staff meetings and workshops on the techniques and the importance of parental involvement both in the classroom and at home as a way to continue the educational learning process for their children (Becker & Epstein, 1982).

When teachers adopt this culture and, similar to the principal, make a conscious effort to build and maintain partnerships with parents, the resulting parental involvement is high. When there is a discrepancy between teacher and principal focus on parental involvement, parent participation in programs and practices reduces significantly. Likewise, principals cannot simply dictate that teachers need to create relationships with parents or themselves be the conduit for the parent-teacher relationship (Becker &

Epstein, 1982). They must establish a culture and environment where teachers find value in parental involvement and empower themselves to build positive partnership with parents that have a positive impact on student achievement.

Schools offer a unique opportunity to assist parents in being involved in the lives of their children. By collaborating with the parents, schools are able to receive additional support from the family unit, as well as have partners in the growth and development of their students (Hobbs et al., 1984). Ultimately, families contribute to their child's ability to achieve academically. If principals create an environment and culture where the school partners with parents and involves them in multiple aspects of student achievement, they create a positive collaborative relationship that benefits the parent, teacher and student. Conversely, if principals fail in establishing such an environment, parental involvement and collaboration may be inhibited, leading to parents' minimal influence on the academic outcomes of their children (Desminone et al., 2000; Henderson & Berla, 1994).

Conclusion

Much of the scholarly literature reveals that parental involvement in their child's educational environment leads to improved achievement and behaviors and lower dropout rates (Ellis, et al, 1983; Henderson, 1987; Menard, 1993; Shuck, 1983; Siders & Sledjeski, 1978; Swick & Land, 1984). Policy-makers, principals and teachers have agreed that a program that cultivates parental involvement will provide parents with the opportunity to share in the academic development of their child (Prindle and Resinski, 1989; Van Meter, 1994; Wagner & Sconyers, 1996; Khan, 1996; Roach, 1994; Wanat,

1994; Allen, 1996; Matzye, 1995). Empirical evidence has shown this to be the case (Christenson et al., 1992; Epstein, 1991; Singh, Bickley, Trivette, Keith, Keith, & Anderson, 1995). Parental involvement in the child's educational development has been shown to be a contributing factor to increased student academic success (Epstein, 1991; Henderson & Berla, 1996).

Since the introduction of theoretical frameworks of parental involvement, researchers have been able to further analyze parental involvement and its effects on student academic success (Fan & Chen, 2001; Epstein, 1987, 1992; Hoover-Dempsey & Sandler, 1995). Researchers have not only identified types of parental involvement, but also have indicated why parents choose to be involved in their child's educational growth and development. When parents and schools work together to strengthen a caring and supporting environment for children to function in, children's sense of belonging and positive physical and mental well-being increase (Berger, 2008). Likewise, when families and schools work together to facilitate a positive academic environment, students receive a common message both at school and at home regarding the significance of an education (Epstein, 1995).

School Climate

The actions and interactions of principals and teachers within the educational environment are encompassed within the concept of school climate. Researchers have focused on this concept as a phenomenon that occurs within the school setting that facilitates positive student academic success (Goddard, Sweetland, & Hoy, 2000; Hoy & Hannum, 1997; Hoy & Miskel, 2005; O'Donnell & White, 2005; Smith & Piele, 2006).

The principal, as the leader of the educational environment has a direct impact on the climate of the school (Blase & Blase, 2002; Cotton, 2003; Gurr, 1997; Hallinger, 2003; Hallinger & Heck, 1998; Hoy & Clover, 1986). Understanding school climate is critical in the process of improving student achievement, as the health of the school environment impacts the students' ability to demonstrate academic success (Haynes, Emmons, & Ben-Avie, 1997; Howard, Howell, & Brainard, 1987; Hoy, 1990; Hoy & Clover, 1986; Hoy & Hannum, 1997; Hoy and Miskel, 2005; Hoy, Smith, & Sweetland, 2002; Sergiovanni, 2000). However, solidifying a single comprehensive definition of school climate has been quite nebulous.

Definition. Schools are perceived as communities where the principal plays an important role in facilitating the movement and direction of that community (Sergiovanni, 2000). Within these educational environments, perceptions of the climate drive the day-to-day direction of the school (Van Houtte, 2005). In order to infer the relationship between school climate and student academic success, it is necessary to have a clear definition of the characteristics that comprise school climate (Hoy & Hannum, 1997). School climate has been defined using attributes of action and behavior. Climate has been defined as a set of distinguishable characteristics within the school that accentuate its unique properties (Hoy & Hannum, 1997; Hoy & Miskel, 2005). These properties shape teacher perception of the work environment (Hoy & Clover, 1986).

School climate has also been defined as an atmosphere of attitudes and emotional bonding. Howard, Howell, and Brainard (1987) state that "A school's climate is its atmosphere for learning. It includes the feelings people have about school and whether it is a place where learning can occur" (p. 5). School climate focuses on the general

atmosphere of the school, centering on teacher attitudes and perceptions of a collegial work environment (Hoy, Smith, & Sweetland, 2002). Teachers who interact within positive school climates express optimistic accolades about "their school, enjoy working with their colleagues, and are enthusiastic, accepting, and mutually respectful of their colleagues" (Hoy & Clover, 1986, p. 101). This includes intimate professional socializations with colleagues, as well as a sense of community support for each other.

For the purpose of this study, the construct of school climate will be defined as the "enduring quality of the school environment that is experienced by participants, affects their behavior, and is based on their collective perceptions of behavior in schools" (Hoy, 1990, p. 152). It is prudent, however, to mark a clear distinction between school climate and school culture. Often used interchangeably in the literature, it is important to understand the difference in order to have a better understanding of the construct of school climate.

Climate Versus Culture

When school climate and school culture are not clearly differentiated, it becomes more difficult to understand how it affects student academic success (Van Houtte, 2005). Although climate and culture at some level both deal with morale, ways of practice and organizational success (Glisson, 2007), they are, in fact, distinct constructs describing the educational environment. Van Houtte (2005) identifies the difference between climate and culture using the concept of time. Culture is steeped in heritage and ways of practice that spans across tenures of principals. It survives disruptions and maintains the long-term vision and direction of the school. Climate is more focused on how teachers and

principal currently feel about their school. It typically is short in duration and is flexible to fit the current needs of the students, school and community. Climate, over time, does affect the culture of the school (Glisson, 2000, 2007; Glisson & Green, 2006; Hobby, 2004).

Culture can be understood through an anthropological examination of the artifacts of the school, whereas climate focuses more on the subjective nature of the principal and teacher's perceptions of the current learning environment (Deal & Peterson, 1994; Glisson, 2000, 2007; Stolp, 1994; Van Houtte, 2005). Van Houtte further delineated between climate and culture when he stated, "culture concerns values, meanings and beliefs, while climate concerns perceptions of those values, meanings and beliefs" (p. 75). Ultimately, consensus in the research details that culture is about how things occur in the school environment, whereas climate is about how principals and teachers perceive those occurrences influencing their ability to be successful at increasing student academic success (Glisson, 2000, 2007; Glisson & Green, 2006; Lindahl, 2006; Schein, 1993; Schneider, Brief, & Guzzo, 1996; Schneider & Hall, 1972).

Principal Influence on School Climate

School climate is directly impacted by the leadership practices of the principal. The principal's ability to motivate the staff and to facilitate the development of quality instructional practices, impacts the success of the students (Howard et al., 1987; Hoy & Hoy, 2003; Marzano, Waters, & McNulty, 2005). Principals are responsible for maintaining a climate that is collegial, interactive and focused on supporting the teacher and student throughout the educational process (Hallinger, 1987). By setting the tone of

the building, principals cultivate teacher morale, parent partnerships, and professional collegiality, which in turn influences the delivery of instruction to students (Hoy & Clover, 1986; Hoy, Smith, & Sweetland, 2002; Witcher, 1993). High teacher morale increases job satisfaction and sense of school cohesiveness and pride.

School climate is not a stagnant concept, but, rather, a continuously changing condition that needs to be monitored and cultivated (Hoy & Hoy, 2003). The principal as the school leader monitors the climate and adjusts process and practices in order to keep the environment healthy and flourishing. Mitchell and Castle (2005) stated that principals are motivated to develop and maintain positive school climates because they share in the high morale of the school and find interaction with the teachers and community an asset in the development and implementation of instruction. Having a staff want to come to work and engage with students and parents lays the foundation of a cognitive climate where learning is valued and plentiful.

Kelley, Thornton, and Daugherty (2005) found that the most important aspect to maintaining a successful educational environment is effective leadership. A large aspect of that leadership is the principal's ability to create and maintain a positive school climate. A positive school climate allows teachers to adequately address student academic needs and support the process of learning (Smith & Piele, 2006).

Researchers found that when principals attend to the individual needs of their staff and facilitate knowledge and skill development within the complex community of educators, their leadership style has a positive effect on school climate (Bulach, Lunenburg, & McCallon, 1995; Kelley et al., 2005). Whitaker & Turner (2000) found that principals understood the connection between school climate and student

achievement, and worked diligently to create a positive climate conducive to learning. Out of 1,801 principals surveyed in Indiana, building and maintaining a strong school climate was a top priority for them. They felt that maintaining a positive school climate positively impacted student learning.

When principals engage in processes where teachers are empowered to influence the aspects of instruction, collaboration, and support, they increase their ability to have a positive impact on school climate and student success (Leithwood, 1992; Pepper & Thomas, 2002). Haynes et al., (1997), at the Yale Child Study Center, found that school climate influences the students' ability to achieve, the involvement of parents and teachers in the decision-making process, parent participation in school, the sharing of building resources, and the overall caring atmosphere of the school. Likewise, Howard et al., (1987) stated that school success was related to the level of productivity and satisfaction that the principal and teachers perceive within the school environment. This includes the perpetuation of academic growth, collaboration, and the support of parents within the school climate. When assessing climate, researchers assess the principal's and teachers' influences upon characteristics such as instructional time-on-task, collaboration on professional development, and maintaining a presence where interaction with the teachers and parents is open and convenient (Hallinger & Murphy, 1987). Inservice activities are designed around professionally developing the teacher to support student academic success.

Schools striving for excellence or decreasing on impact on student academic success can be linked to the actions of the principal on the school climate (Howard et al., 1987). Principals create a climate where they either take a prominent role in controlling

the development of a positive environment or facilitate a work environment where teachers and staff participate in cultivating a healthy work atmosphere (Smith & Piele, 2006). Either way, the principal is that figure who facilitates the school climate and is held to the responsibility of making that climate successful in meeting the needs of its teachers and students (Kelley et al., 2005; Smith & Piele, 2006). In summation, the principal positively impacts school climate (Hoy & Hoy, 2003; Smith & Piele, 2006), which then allows teachers to positively impact student academic success (Kelly et al., 2005; Norton, 2002; Smith & Piele, 2006).

School Climate Influence on Teacher and Student Success

Healthy school climates are linked to teacher job satisfaction and positive student outcomes (Hoy, Tarter, and Bliss, 1990). Smith and Piele (2006) stated that school climate directly influences how teachers and students perceive their educational environment. Positive climates exude warmth, belonging and collegiality. This type of atmosphere promotes a safe, trusting and meaningful environment that encourages academic and personal growth and development (Maninger & Powell, 2007). The principal is responsible for maintaining such an environment so that teaching and learning can occur (Goddard et al., 2000; Hoy & Hoy, 2003).

School climate and student academic success have a bi-directional correlation. Research conducted by Hoy and Hannuum (1997) found that school climate and student achievement are intertwined. In their study on 86 middle schools, they found that climate and achievement are dependent upon each other. Similarly, O'Donnell and White (2005) studied teacher perceptions of their principal's focus on school climate in Pennsylvania

middle schools. They found a correlation between the principal's leadership behaviors and student achievement through positive school climate. Like Hoy and Hannum, O'Donnell and White found this symbiotic relationship between climate and achievement.

Positive school climates allow teachers to build what Goddard et al., (2000) identify as academic emphasis. Academic emphasis is where teachers believe students have the capability to achieve and provide academic instruction that supports that belief. Standards are high and learning is differentiated to support the students' individual needs so that students work diligently to succeed and meet their teacher's expectations. Goddard et al., identified that a climate where academic emphasis flourishes supports not only teachers individually but also the school community as a whole. Principals are responsible for this focus on academic emphasis by maintaining an environment where teachers can provide that support to students.

During the 1970s and 1980s, school effectiveness research began looking at the structure of the school and interactions between the teacher and principal as factors influencing student achievement (Hellriegel & Slocum, 1974; Halpin & Croft, 1963; Van Houtte, 2005). Within effective schools research, school climate has been associated with student academic success. Research conducted by Brookover, Schweitzer, Schneider, Beady, Flood and Wisenbaker (1978) found that school climate had a larger impact on student achievement than ethnicity and socio-economic status. In their study, they found that 72% of the variance in student achievement was explained by variables associated with climate.

Conclusion

School climate is a prominent factor that mediates principal influence and teacher interaction on student academic success (Brookover et al., 1978; Gilmer, 1966; Halpin & Croft, 1963; Hoy, 1990; Lindahl, 2006; Van Houtte, 2005). Research has substantiated that the principal's influence on student academic success is indirect, as it is the influence on the school climate that ultimately impacts achievement (Blase & Blase, 2002: Cotton, 2003; Gurr, 1997; Hallinger, 2003; Hallinger & Heck, 1998; Hoy & Hannum, 1997; Hoy, Tarter, & Bliss, 1990). The principal's influence is mitigated through his impact on the school climate. Therefore, in order to influence student academic outcomes, the principal must engage in actions and processes that promote a positive school climate.

Networked Leadership

Network leadership may provide another framework to isolate the impact that principals may have on school climate and student performance. Networked leadership was conceptualized out of a review of the United States military literature detailing their engagement in network-centric operations. Network-centric operations is a new approach to strategic operations that shifts the paradigm of power and decision-making from a hierarchical structure to a more grass-roots approach, using a connection of networked resources and support (Cebrowski, 2003; Garstika, 2003; Office of Force Transformation, 2005; Surry & Ely, 2002). In other words, it allows dispersed individuals to, "Share the same battle-space awareness to achieve strategic, operational, and tactical objectives. The linking of people, platforms, weapons, sensors, and decision aids into a single network creates a whole greater than the sum of its parts" (Gonty, 2007,

p. 6). Leaders function as the hubs of these networks, monitoring the situation, keeping support and resources flowing where it is needed, and maintaining the vision of the mission (Alberts & Hayes, 2003; Atkinson & Moffat, 2005; Luddy, 2005; Stone, 2004). Through relationship building and trust, they empower the individuals on the ground to make the best decisions and remove obstacles that may have otherwise impeded support and resources.

Garstka (2003) describes network-centric actions as those that bring a, "combination of strategies, emerging tactics, techniques, and procedures, and organizations that a fully or even a partially networked force can employ to create a decisive war-fighting advantage" (p. 58). More than just acquiring these combination of factors, Luddy (2005) further emphasized that this information must be in the hands of the "right" people, "who in turn can take the right action, faster, against the right objective" (p. 3). Network–centric operations have four sequential processes of practice (Alberts & Hayes, 2003). It improves the sharing of information, which in turn prompts collaboration to develop quality information, enabling the participants to increase awareness and implement a more comprehensive plan, which ultimately increases the effectiveness of the mission (Alberts, 2002).

The network itself can both be defined as a noun and a verb (Cebrowski, 2003). As a noun, the network encompasses all of the information and technological platform and infrastructure that supports the flow of information through human interaction. At the same time, the network can be considered a verb in that it also encompasses the human action and interaction of the exchange of information and data. In essence, it is the physical resources and intellectual exchanges that define and conceptualize the term

network. Network centricity then describes the degree to which that network is central to the operations of the organization in order to bring about effective change in an efficient manner (Stone, 2004). It is the combination of people, processes and technologies working together to effectively and efficiently build trust, share information and be both individually and collectively aware of how to connect available resources to student needs.

Network centricity, re-conceptualized into the field of education as networked leadership, offers principals a new interactive way to engage the educational environment and positively impact student academic success. A principal who utilizes networked leadership engages in the learning environment, monitors teacher practices, maintains the flow of support and resources to where they are needed, develops innovative process for learning, and stewards the vision and mission of the school. This process will support teacher success within the educational environment, as well as potentially increase student academic success.

Summary

A review of the scholarly literature solidifies the impact that principals have on school climate and student academic success success (Blase & Blase, 2002; Cotton, 2003; Goddard et al., 2000; Gurr, 1997; Hallinger, 2003; Hallinger & Heck, 1998; Hoy & Clover, 1986; Hoy & Hannum, 1997; Hoy & Miskel, 2005; O'Donnell & White, 2005). The principal's focus on instruction has positive effects on the school environment and student outcomes (Bamberg & Andrews, 1991; Goldring & Pasternack, 1994; Hallinger & Heck, 1996a, 1996b, 2002; Hallinger & Murphy, 1986). Likewise, the principal's

engagement in collaboration with teachers impacts the collegial learning environment (Bass, 1990; Blase, & Blase, 2000; Burns, 1979; Hallinger, 2003; Gill, 2003; Jung & Sosik, 2002; Marks & Printy, 2003; Spillane et al., 2007; Yukl, 1999). Additionally, the principal's facilitation of an environment where parents feel welcomed and accepted as partners in the education of their children has also shown positive connections to educational climate and student success (Brabeck, & Shirley, 2003; Epstein, 2005; Fan & Chen, 2001; Henderson & Berla,1994; Henderson & Mapp, 2002; Jeynes, 2003, 2007; Leana & Pil, 2006). Previous research in this field has typically focused on instruction, collaboration and parental involvement either individually or in a loosely coupled format through the facilitation of the principal's actions on the school environment.

However, there is a gap in the literature, vis-à-vis how combined configurations of these constructs elicit positive outcomes on the educational environment, which, in turn may impact student academic success. Combining these three constructs as they dynamically engage with the educational setting guides leadership theory toward a networked leadership model. Within such a model, how the principal instructionally leads, collaborates, and secures parental involvement to leverage gains in a positive school climate guides inquiry. Within the purview of the principal's leadership style, instruction, collaboration and parental involvement are networked together, influencing the principal's facilitation of the educational environment. The subject of this research is to determine if or to what extent these constructs are amalgamated to yield positive results. By exploring networked influences on school climate, this study hypothesizes that a networked leadership model is positively associated with the teacher's perceptions of school climate.

Chapter 3: Methodology

Through a review of the current scholarly literature, it is evident that during the evolution of leadership theory and its key variables, the principal's influence on instruction, collaboration, and parental involvement has been identified as key influences on student academic success. Therefore, this influence becomes a paramount variable in this study. Chapter 3 now documents the plan of action, including: this project's research design, conceptual model, and research questions. Additionally, sample demographics, instrumentation, and data analysis are discussed.

Research Design

This study uses a descriptive survey research design to perform an exploratory analysis on the effects of the principal's leadership influences on the school climate. Data for this study was extracted from the 2007-2008 Schools and Staffing Survey data warehouse at the National Center for Educational Statistics. This study addressed the following research questions:

1. Is there a relationship between principals' degree of Networked Leadership within the school environment and teachers' perception of school climate?

2. Is there a relationship between principals' degree of influence on instruction and teachers' perception of school climate?

3. Is there a relationship between principals' degree of influence on collaboration and teachers' perception of school climate?

4. Is there a relationship between principals' degree of influence on parental involvement and teachers' perception of school climate?

Conceptual Model

Principals focus on instruction, collaboration and parental involvement to impact school climate. Figure 3.1 represents a model to illustrate how these three constructs as separate processes may elicit positive school climate. The interaction of instruction, collaboration and parental involvement within an educational environment may maximize a positive learning environment which may ultimately impact student academic success.

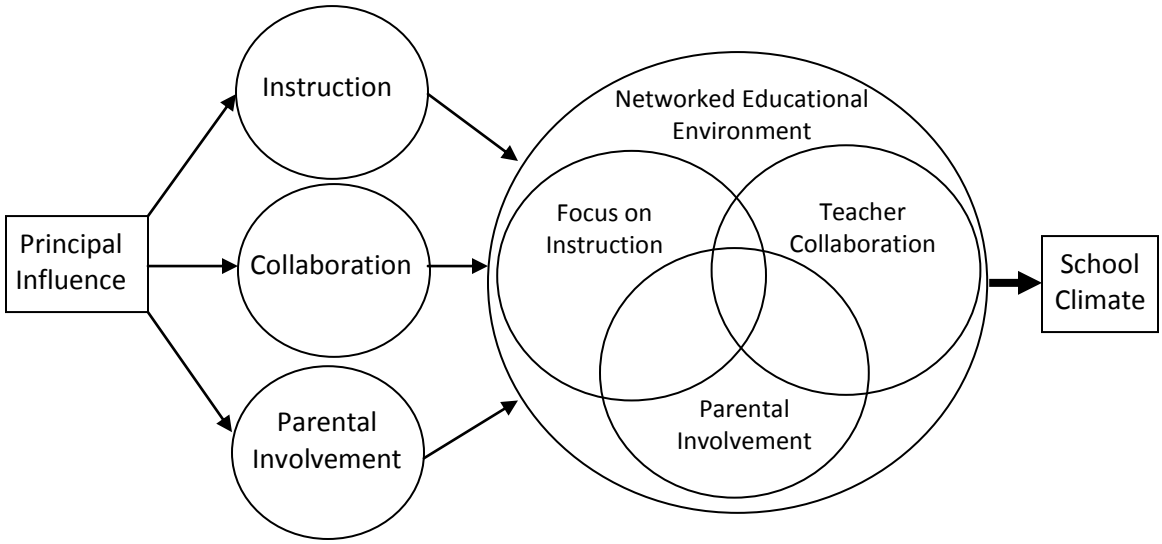

Figure 3.1. Conceptual Model of Principal's Influence on School Climate

Population and Sampling

The target population for this study was public school elementary principals and teachers across the United States of America who were identified to participate in the 2007 – 2008 Schools and Staffing Survey collected by the National Center for Educational Statistics (NCES, 2010). Nationally, the Schools and Staffing Survey sampled 5,250 public school districts, 9,800 public schools, 9,800 public school principals, and 47,440 public school teachers.

Demographic Characteristics

The sample identified for this study was public elementary principals (n = 2,761) and associated teachers (n = 10,293). Table 3.1 details their demographic characteristics. The average number of years the teachers have been teaching in the field of education is 15.9 years. Approximately half of that time (8.7 years) has been at the current school in which their data was collected for this study. The average number of years that the selected principals have been in the administrative position is 8.3 years. Similar to the teachers, almost half of that time (4.6 years) has been at the current school in which their data has been collected for this study.

A substantially larger number of teachers were female (n = 9,149) compared to male (n =1,144). Likewise, a larger portion of elementary principals were female (n = 1,667) with their male counterparts (n = 1,094). Both teachers and principals who identified themselves as Caucasian dominate the ethnicity in this sample. Although other ethnicities were represented, the total numbers were small. The average age of teachers (43.5 years) in the study were slightly lower than the average age of principals (50.2 years).

Demographic information regarding the schools in which the principals and teachers work is outlined in Table 3.2. Of the 2,761 elementary schools included in the study, the mean enrollment was 436.4, the average percent of economically disadvantaged student equaled 47.2%, and the percent of students who identified themselves as other than white/Caucasian was 37.9%. The majority of schools selected in this study were identified as suburban (4,607), followed by urban (2,730) and rural (2,983) educational settings.

	Teachers	Principals
N	10,293	2,761
Mean Years in this Professional Role	15.9	8.3
Mean Years at this School	8.7	4.6
Gender		
Male	1,144	1,094
Female	9,149	1,667
Ethnicity		
Caucasian	9,267	2,256
African American	553	257
Hispanic	45	141
Asian	180	33
Pacific Islander	33	10
Native American	121	38
Multi-Selected	94	26
Mean Age	43.5	50.2

Table 3.1. Demographics for Principals and Teachers Responding to the 2007 – 2008 Schools And Staffing Survey Questionnaire.

Variable	N	Mean	SD
Percent Econ. Dis.	2,761	47.2	28.4
Percent Minority	2,761	37.9	33.7
Enrollment	2,761	436.4	228.9
Urbanicity	2,761		
Urban	712		
Suburban	1,194		
Rural	855		

Table 3.2. Demographic Information for the Schools where the Principal and Teachers Responded to the 2007 – 2008 Schools And Staffing Survey Questionnaire.

Instrument Description

The National Center for Educational Statistics (NCES) (2010) collected information from public school districts, principals and teachers in the 2007-2008 Schools and Staffing Survey (SASS). For the 2007-2008 school year survey, SASS used a stratified probability-proportionate-to-size sample. SASS data is collected on a four year cycle, making the 2007-2008 the most recent dataset. One of the purposes of SASS is to provide a representative sample of elementary and secondary school information, including detailed information from public school system staff (Aritomi, Coopersmith & Gruber, 2009). SASS (NCES, 2010) targeted information regarding "principal demographic characteristics, training, experience, salary, goals and decision making, judgments about the seriousness of school problems, and, new to 2007–08, instructional time, and teacher and school performance" (website). The SASS data allowed the researcher to determine the principal's degree of focus on instruction, teacher collaboration, and parental involvement, as well as the teachers' perceptions of the school climate. For comparative purposes, the data collected from the selected variables were converted to composite scores.

Independent Variables

Focus on Instruction. From the SASS, 4 items were selected to represent the construct of instruction (Appendix A). This is measured on a 4-point Likert scale ranging from no influence to major influence. The mean score of the 4 interval items determines the principal's focus on instruction. The 4 items were selected from question 12 on the 2007 – 2008 Public School Principal SASS. Principals were asked to select their

influence as the principal on performance standards, curriculum, professional development and teacher evaluation. Table 3.3 lists the selected instructional items.

12.	How much actual influence do you as the *principal* have on decisions concerning:
12.(4).a	Setting performances standards for students of this school?
12.(4).b	Establishing curriculum at this school?
12.(4).c	Determining the content of in-service professional development programs for teachers of this school?
12.(4).d	Evaluating teachers of this school?

Table 3.3. 2007 – 2008 Principal SASS Items from Question 12 Selected to Represent Instruction.

A higher rating on this scale inferred that principals perceived themselves has having a meaningful impact on instruction within their school environments. A lower rating indicated that their focus on instruction was not a high priority in cultivating their educational environment.

Collaboration. From the SASS, 4 items were selected to represent the construct of collaboration (Appendix B). This is measured on a 4-point Likert scale ranging from no influence to major influence. The mean score of the 4 interval items determines the principal-teacher collaboration score. The 4 items were selected from question 12 on the 2007 – 2008 Public School Principal SASS. Principals were asked to select their

influence as the principal on performance standards, curriculum, professional development and teacher evaluation. Table 3.4 lists the selected collaboration items.

12.	How much actual influence do you think the *teacher* has on decisions concerning:
12.(5).a	Setting performances standards for students of this school?
12.(5).b	Establishing curriculum at this school?
12.(5).c	Determining the content of in-service professional development programs for teachers of this school?
12.(5).d	Evaluating teachers of this school?

Table 3.4. 2007 – 2008 Principal SASS Items from Question 12 Selected to Represent Collaboration.

In a collaborative environment, the principal would rate teacher's influence on the organizational operations at the higher end of the Likert-scale. In contrast, in a non-collaborative environment, the principal would perceive the teachers as having little to no influence on decisions of organizational operations.

Parental Involvement. From the SASS, 4 items were selected to represent the construct of parental Involvement (Appendix C). This is measured using a nominal scale of 0 and 1. If the participant answered yes to the item, they received a score of 1. If they answered no then they received a score of 0. The scores were then summed to represent a possible response range from 0 – 5. This total represented the principal's parental involvement score. The 4 items were selected from question 22 on the 2007 – 2008

Public School Principal SASS. Principals were asked to identify what procedures or services that they have in place at their school that facilitate parental involvement. The 4 items included in this study addressed having a liaison, workshops, support process, and a drop-in center where parents could access support for their individual needs. Table 3.5 lists the selected parental involvement items. These items, rather than measuring the level of parental involvement, identifies if the principal has established an environment that facilitates opportunities for parental involvement.

22.	This school year (2007-2008) does the school have the following:
22.a	a staff member assigned to work on parent involvement (Liaison)?
22.b	workshops or courses for parents or guardians?
22.c	services to support parent participation, such as transportation and child care?
22.d	parent drop-in center or lounge?

Table 3.5. 2007 – 2008 Principal SASS Items from Question 22 Selected to Represent Parental Involvement.

***Networked Leadership*.** Networked Leadership is a construct that identifies principals that facilitate an educational environment in which they leverage a purposeful focus on instruction, perceive a high level of teacher collaboration, and establish an environment that facilitates opportunities for parental involvement. Through the interconnectedness of these three areas, functioning within an educational environment

that is perceived, facilitated and influenced by the principal, the teachers' sense of positive school climate will significantly increase. The principal's networked leadership scores were averaged from composite scores of the constructs of instruction, collaboration, and parental involvement.

Dependent Variable

School Climate. From the SASS, 9 items were selected to represent the construct of school climate (Appendix D). This is measured on a 4-point Likert-scale ranging from strongly agree to strongly disagree. The mean score of the 9 interval items determines the teachers' sense of positive school climate. The 9 items were selected from question 55 on the 2007 – 2008 Public School Teacher SASS. Teachers were asked to provide their opinion regarding aspects of the educational environment in which they work. This included aspects of communication, collaboration, mission, cooperation, support, recognition, and overall general satisfaction with their environment. Table 3.6 lists the selected school climate items.

55.	To what extent do you agree or disagree with each of the following statements:
55.a	The school administration's behavior toward the staff is supportive and encouraging.
55.g	My principal enforces school rules for student conduct and backs me up when I need it.
55.h	Rules for student behavior are consistently enforced by teachers in this school, even for students who are not in their classes.
55.i	Most of my colleagues share my beliefs and values about what the central mission of the school should be.
55.j	The principal knows what kind of school he or she wants and has communicated it to the staff.
55.k	There is a great deal of cooperative effort among the staff members.
55.l	In this school, staff members are recognized for a job well done.
55.o	I am given the support I need to teach students with special needs.
55.q	I am generally satisfied with being a teacher at this school.

Table 3.6. 2007 – 2008 Teacher SASS Items from Question 55 Selected to Represent School Climate.

Covariates

Percent Economically Disadvantaged. This is determined by the percent of students at each of the principals' schools that come from families who have been identified as falling below the poverty level. This data is collected by NCES and included as a percentage in the SASS reports.

Percent Minority. This is determined by the percent of students at each of the principals' schools that has been identified as an ethnicity other than "White/ Caucasian". This data is collected by NCES and included as a percentage in the SASS reports.

Urbanicity. This is determined by the physical location of the school where the principal and teacher serve according to the SASS questionnaire. The three units of urbanicity selected for this study were urban, suburban, and rural. This data is collected by NCES and included as a total number in the SASS reports.

Enrollment. This is determined by the total number of enrolled students at each of the principal's schools. This data is collected by NCES and included as a total number in the SASS reports.

Data Collection

Data concerning the principal's focus on instruction, collaboration, and parental involvement were extracted from the SASS restricted use data set. NCES (2010) collected SASS data through mail-based surveys and followed-up with connections via telephone. Once schools were identified in the sample, in July of 2007 the principals were initially sent a letter to verify their contact information as well as to confirm their agreement to participate in the survey. Once the principal responded, NCES sent out a package containing the questionnaire and all pertinent information on how to fill it out and return it. Teachers were also mailed surveys and were followed-up with telephone calls to complete and return the surveys. NCES, accessing federal department of education databases, aligned the principal's responses with other school demographic information such as percent economically disadvantaged, enrollment, urbanicity, and percent minority. A restricted license use for the SASS data was obtained in order to access all of the confidential identifiers.

Data Analysis

All analyses were conducted using the Statistical Package for the Social Sciences (SPSS) version 19 (SPSS, 2010). Preliminary analysis using Principal Component Analysis confirmed individual items within each construct loaded to one factor. Next, Chronbach's Alpha was used to determine the level or reliability of the items in each construct. A one-way ANOVA was also conducted on each covariate to determine if they significantly accounted for any of the variance in the model and should therefore either be included or excluded from the analysis.

A multiple linear regression analysis was applied. Multiple linear regression is a multivariate statistical technique for examining the linear correlations between two or more independent variables and a single dependent variable (Hinkle, Wiersma & Jurs, 1979). In order to provide a more detailed analysis on how the identified constructs influence outcomes through their presence in the model, this study employed multiple linear regression using hierarchical forced entry to analyze the model.

Multiple linear regression using forced entry requires an explanation as to the order in which variables are entered into the model. Initially, the covariates were vetted using the one-way ANOVA to determine if they will be included in the overall model. Then, multiple linear regression was used to address the first research question.

1. Is there a relationship between principals' degree of Network Leadership within the school environment and teachers' perception of school climate?

The order in which instruction, collaboration, and parental involvement are entered into the hierarchical forced entry analysis are based on previous scholarly research and literature.

2. Is there a relationship between principals' degree of influence on instruction and teachers' perception of school climate?

Developed out of the effective schools literature, instructional leadership emerged as the first major leadership model where the principal applied influence on school climate and student academic success. Instruction was the pinnacle of this focus and the principal was identified as the center of driving the agenda of learning (Andrews, & Soder, 1987; Chrispeels, 2002; DuFour, 2002; Edmonds, 1979; Hallinger, 2003; Hallinger, & Murphy, 1985, 1987; Lashway, 2002; Leithwood & Montgomery, 1982). Therefore, the principal's focus on instruction is the first variable entered into the model.

3. Is there a relationship between principals' degree of influence on collaboration and teachers' perception of school climate?

The next major leadership model to emerge was transformational leadership. The central component of this leadership style was the principal's ability to collaborate with teachers and staff on the many facets of student learning and school climate. Principals and teachers became partners in the development and implementation of student learning. Therefore, the principals' focus on collaboration became the next variable entered into

the model. (Bass, 1990; Blankstein & Noguera, 2004; Blase, & Blase, 2000; Burnette, 2002; Burns, 1979; Garmston, 2006; Gill, 2003; Hallinger, 2003; Murphy, & Hallinger, 1987; Hudson, 2005; Jung, & Sosik, 2002; Marks, & Printy, 2003; Spillane et al.,, 2007; Yukl, 1999).

4. Is there a relationship between principals' degree of influence on parental involvement and teachers' perception of school climate?

Parental involvement has recently emerged as a major component of influence on positive school climate and student academic success. Principals, who build pathways for parents to become involved in the education of their children, positively impact parent-school relations as well as parent-teacher relations. Therefore, the principal's focus on parental involvement is the final variable entered into the model. Chapter 4 will detail how each variable entered into the model affected the overall outcome relationship between networked leadership and school climate.

Chapter 4: Results

The results for an exploratory analysis conducted to address this study's research questions unfold in Chapter Four. In order to begin a discussion about results of the analysis, it is first prudent to address the assumptions of multiple linear regression. Next, the data analyses conducted are detailed through multiple linear regression using hierarchical forced entry to test the hypotheses. Finally, the results are summarized.

Assumptions

Independent Sample

One primary assumption of multiple linear regression is the integrity of the independent sample. The National Center for Educational Statistics (NCES) collected data using the Schools and Staffing Survey (SASS) from public school principals and their corresponding teachers during the school year, 2007 – 2008. NCES used a stratified probability-proportionate-to-size sample to identify participants for the SASS data collection. Although participation was voluntary, NCES followed up with each principal and teacher to facilitate survey completion. The purpose of this follow-up process was two-fold: to ensure a comprehensive sample that was representative of each state; and to document an appropriate national sample. Therefore, the level of structure and process

used in data collection support the inference that an appropriate independent sample was used in this SASS dataset.

Normal Distribution

A second assumption of multiple linear regression analysis is an inherent normal distribution of the data. Table 4.1 displays the demographic characteristics of the original 2,783 principals and aggregated teacher responses included in the model. Thus, there was an initial threat to the assumption of normal distribution of the data due to large skewness and kurtosis ratios. Consequently, an analysis of the distribution of the residual values was warranted.

	n	Mean	Stand. Dev.	Skewness	Kurtosis
Networked Score	2783	.004	.993	-23.52	9.98
Instruction	2783	.005	.991	-28.22	16.88
Collaboration	2783	.003	.997	-18.08	2.15
Parental Involvement	2783	-.001	.999	-.46	-10.83
Climate	2783	.017	2.029	-12.39	8.03

Table 4.1. Demographic Characteristics

Since the skewness and kurtosis level for networked score, instruction, collaboration and parental involvement were beyond the range of normality, the distribution of the residuals was assessed in order to determine if the data was in fact normally distributed. The regression standardized residuals tended towards a normal distribution ($M = -1.05 \times 10^{-17}$, $SD = .999$), however a slight skew was noted (Figure 4.1).

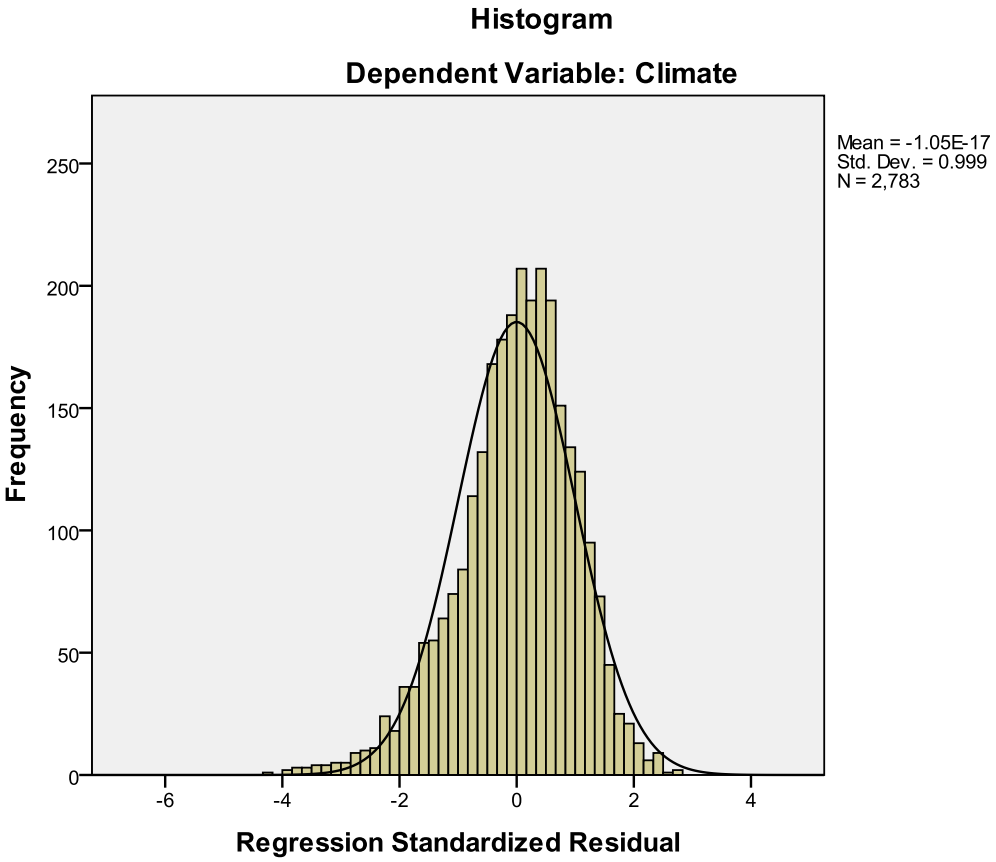

Figure 4.1 Histogram of Regression Standardized Residuals

Studentized residuals indicated that there were 22 extreme values that may have contributed to an overall shift in the model. In order to increase the normality of the distribution, the identified extreme values were removed. The re-analysis of the data showed that the normality of the residuals improved (Figure 4.2), and showed that the data was more closely aligned to a normal distribution (Figure 4.3).

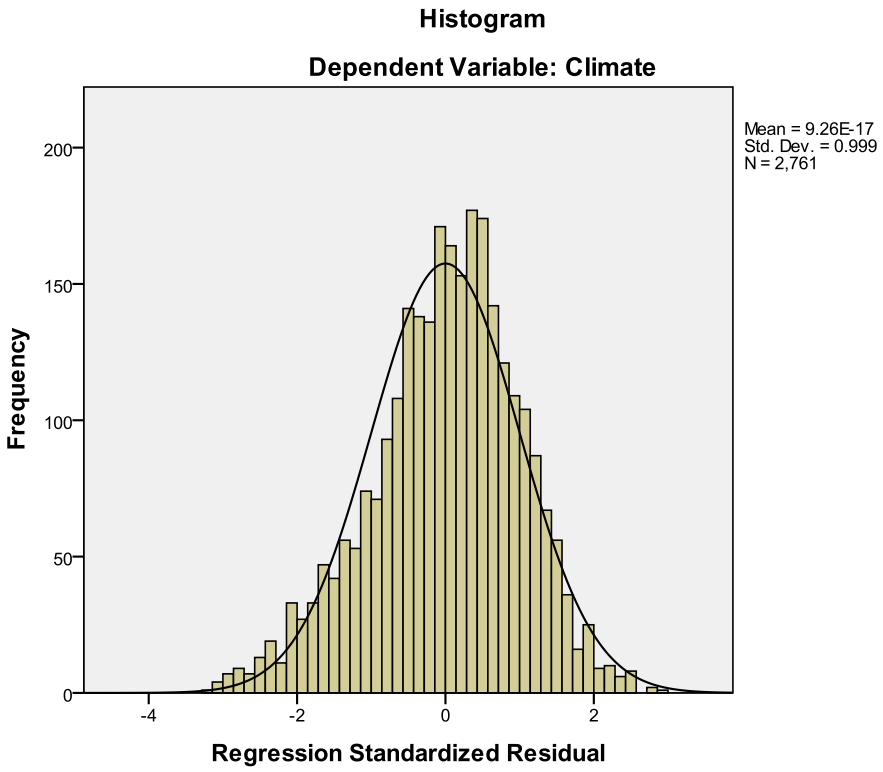

Figure 4.2 Histogram of Regression Standardized Residuals with Extreme Values Removed

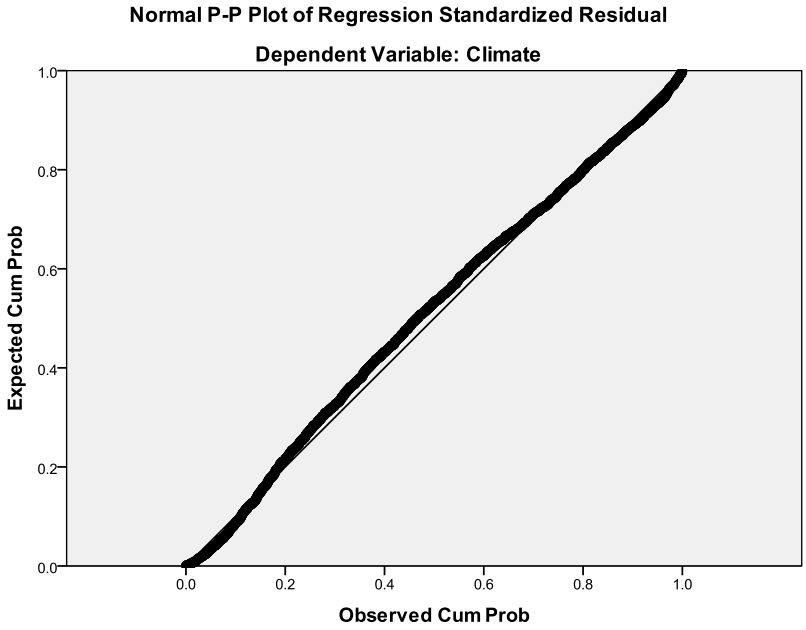

Figure 4.3. Normal P-Plot Regression Standardized Residuals of Instruction, Collaboration, Parental Involvement and Climate.

	n	Mean	Stand. Dev.	Skewness	Kurtosis
Networked Score	2761	.0046	.99455	-21.46	10.01
Instruction	2761	.0050	.99233	-27.66	16.90
Collaboration	2761	.0036	.99723	-17.83	2.25
Parental Involvement	2761	.0015	.99970	-.49	-10.83
Climate	2761	.0734	1.93561	-7.49	1.14

Table 4.2. Demographic Characteristics with Outliers Removed.

The revised demographic characteristics of the variables (Table 4.2) also demonstrated a slight improvement in the mean, skewness and kurtosis of the variables. Therefore, the size of the sample for the analysis was revised to 2,761.

Linearity

To assess linearity, the independent variables (instruction, collaboration and parental involvement) were entered into the model and compared to school climate. Figure 4.4 shows that although the majority of scores are clustered around zero, there appeared to be a slight linear trend in the output.

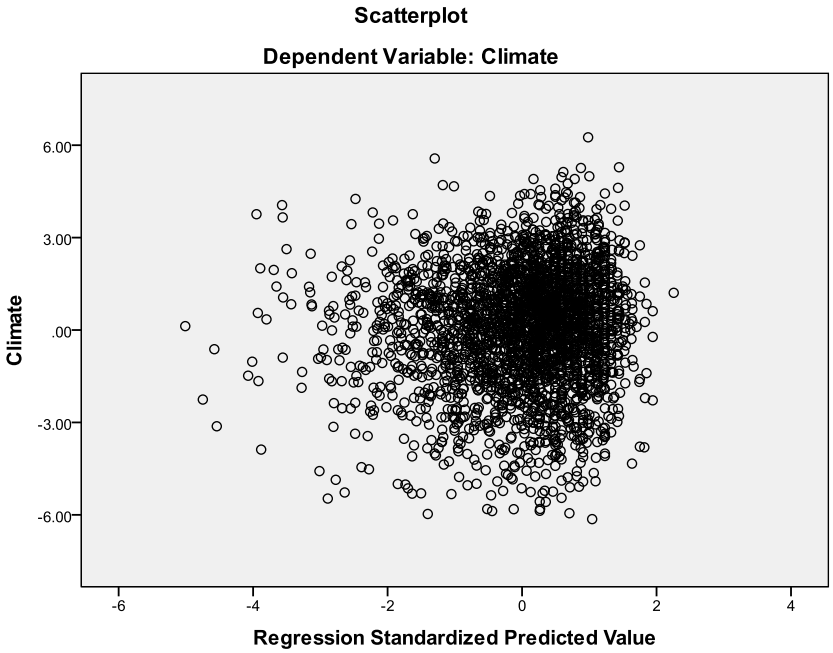

Figure 4.4. Linearity Scatterplot

Multicollinearity

Testing for multicollinearity was also included in the analysis to determine if two or more of the independent variables were highly correlated with each other. Multicollinearity occurs in data sets when the tolerance of each of the variables is low and the Variance Inflation Factor (VIF) is high. Table 4.3 indicates that the variables in the overall model all have a relatively moderate to high tolerance level, as well as a low VIF. Therefore, there is no evidence that multicollinearity occurred in this model.

Variable	Tolerance	Variance Inflation Factor
Networked Score	.993	1.007
Instruction	.488	2.048
Collaboration	.486	2.059
Parental Involvement	.892	1.121

Table 4.3. Tolerance and Variance Inflation Factor Analysis

Measurement Strength

Reliability. Cronbach's Alpha was used to assess reliability in this study. Cronbach's alpha analyzed how each item inter-correlated within the construct being

measured (Carmines & Zeller, 1979; Cronbach, 1951). Table 4.4 shows the Cronbach's Alpha score for each of the variables in the model.

Variable	Items	Cronbach'a Alpha
Instruction	4	.624
Collaboration	4	.578
Parental Involvement	4	.552
Climate	9	.971

Table 4.4. Reliability Estimates by Variables

The results in Table 4.8 illustrate that a liberal approach to interpreting Cronbach's Alpha must be observed in order to accept the independent variables as reliable. While instruction ($\alpha = .624$), collaboration ($\alpha = .578$) and parental involvement ($\alpha = .552$) are low, they have similar reliability estimates with instruction being the larger of the three. In taking a liberal approach to this exploratory analysis, the Cronbach's Alpha scores for instruction, collaboration and parental involvement are acceptable for this model. Climate ($\alpha = .971$) was clearly within appropriate parameters for reliability.

Validity. Validity was assessed using the Principal Component Analysis (PCA). Table 4.5 illustrates the validity of the item to variable fit for each of the constructs in the model. Each of the grouped measurement items successfully loaded onto a single factor for each variable: instruction, collaboration, parental involvement and school climate. Although the measurement item "evaluation" in both the variables of instruction and

collaboration are low, they are still included in these two constructs. Overall, there was a good fit to the data and validity was retained.

Latent Variables	Measurement Items	Factor Loadings
Instruction	Standards	.783
	Curriculum	.803
	Professional Development	.672
	Evaluation	.425
Collaboration	Standards	.749
	Curriculum	.803
	Professional Development	.683
	Evaluation	.446
Parental Involvement	Liaison	.705
	Workshops	.696
	Support	.605
	Lounge	.603
Climate	Administrative Behavior	.894
	Backs Me Up	.912
	Enforces Rules	.912
	Shares Beliefs	.907
	Communication	.906
	Cooperation	.909
	Recognition	.933
	Special Needs	.881
	Satisfaction	.915

Table 4.5. Results of Principal Component Analysis.

Data Analysis

This section details the correlation between the independent variables, covariates, and independent variable as the data is analyzed through multiple linear regression using hierarchical forced entry. First, the covariates were analyzed to determine which of them would be included in the model. Then, the correlation between networked leadership score and climate are analyzed. Finally, the covariates and each of the three constructs that comprised networked leadership in its current configuration (instruction, collaboration, and parental involvement) are individually entered into the model to gauge their influence on the teachers' perceptions of school climate.

Covariates

One-way ANOVAs were used to determine if each of the covariates significantly accounted for any of the variance in the model. Table 4.6 detailed the results of these analyses. The percentage of students who come from economically disadvantaged homes had a significant influence on the variance ($F = 55.209$, $df = 1, 2760$, $p < .01$) and was therefore included in the model. Likewise, the percentage of students who identify themselves as an ethnicity other than Caucasian positively influenced the variance ($F = 61.389$, $df = 1, 2760$, $p < .01$) and was therefore included in the model. The total enrollment of students did not significantly influence the variance in the model and was excluded from this analysis. Urbanicity was entered as a dummy variable comparing urban school with rural with suburban schools. Although urban schools demonstrated a significant influence, rural schools did not attain the same level. Therefore, urbanicity was not included in the model for this analysis.

Covariates	SS	MS	F
Percent Economically Disadvantages	202.718	202.718	55.209**
Percent Minority	224.914	224.914	61.389**
Enrollment	6.349	6.349	1.679
Urbanicity			
- Urban	22.741	22.741	6.087*
- Rural	.974	.974	.261

*p < 0.05. **p < 0.01.

Table 4.6. ANOVA to Determine Covariates Included in the Model

Networked Leadership and School Climate

The primary focus of this analysis was the correlation between networked leadership (as defined by the combined mean scores of instruction, collaboration, and instruction) and the teachers' perceptions of school climate. An ANOVA was initially used to determine if this was an appropriate measure of correlation between networked leadership and school climate. Table 4.7 indicates that the overall model was significant ($F = 26.25$, $df = 3,2757$, $p < .01$).

Model			Sum of Squares	Df	Mean Squares	F
1	Per. Econ. Dis. Per. Minority	Regression Residual Total	272.899 10067.663 10340.562	2 2758 2760	136.450 3.650	37.38**
2	Per. Econ. Dis. Per. Minority Networked Score	Regression Residual Total	287.123 10053.440 10340.562	3 2757 2760	95.708 3.674	26.25**

*p < 0.05. **p < 0.01.

Table 4.7. Analysis of Variance Networked Leadership and School Climate

Next, a correlational analysis was run to determine if a relationship existed between the networked leadership score and the school climate score. Table 4.8 illustrates that correlation with the covariates factored into the model. Networked leadership scores are positively correlated with school climate ($r = .050$, $p < .01$). Although the relationship appeared to be weak, it still extended in a positive direction.

Pearson Corr.	Climate	Percent Econ. Dis.	Percent Minority	Networked Score
Climate	1.000			
Per Econ. Dis.	-.140**	1.000		
Per. Minority	-.147**	.570**	1.000	
Networked Score	.050**	-.076**	-.066**	1.000

*p < 0.05. **p < 0.01.

Table 4.8. Correlation between Networked Leadership and School Climate.

The covariates in the model showed an inverse relationship with school climate, which indicated that as the percentage economically disadvantaged ($r = -.140$, $p < .01$) and percentage of minority ($r = -.147$, $p < .01$) increased, school climate decreased. Table 4.9 shows that when the influence of the covariates are controlled for in the model, networked leadership scores maintained a positive correlation with school climate ($b = .072$, $p = .048$). After controlling for the covariates, .14% of the variance in school climate can was uniquely explained by networked leadership score.

Results from Table 4.9 also indicated that 2.6% of the variability in school climate was explained by the combination of the covariates in model 1. This was statistically significant ($p < .01$). The addition of networked leadership scores in the analysis (Model 2) improved the explanation of the variability of school climate by .001. Although the addition of networked leadership was significant ($p = .048$), only 2.8% of

the variability of school climate was explained by the combination of all of the variables in this model.

	Predictor Variables	β (SE)	β (SE)
Model 1	% Econ. Dis.	-0.161** (.044)	-0.157** (.044)
	% Minority	-0.194** (.044)	-0.192** (.044)
Model 2	Networked Score		0.072* (.037)
R^2		0.026	0.028
Adj. R^2		0.026	0.028
F =		37.4**	3.9*
df=		2, 2758	1, 2757

*p < 0.05. **p < 0.01.

Table 4.9. Regression Analysis between Networked Leadership and School Climate

Given this study's finding that networked leadership scores positively correlated with school climate, the degree of influence of the individual constructs (instruction, collaboration, and parental involvement) on the overall school climate was analyzed next. An ANOVA (Table 4.10) indicated significant variance in the model (F = 17.42, df =5,2755 , p <.01) between the inclusion of all three variables (instruction, collaboration, and parental involvement) and school climate.

Applying hierarchical forced entry to multiple linear regression required the identification of the order in which the variables were to be entered into the model. The covariates were entered into the model first. The order of the independent variables was determined by the order in which they became predominant in scholarly literature

regarding principal leadership. Instruction was the first dominant leadership model, followed by influences of collaboration, and finally the focus on the importance of parental involvement within the educational environment.

Model			Sum of Squares	Df	Mean Squares	F
1	Per. Econ. Dis. Percent Minority	Regression	272.899	2	136.450	37.38**
		Residual	10067.663	2758	3.650	
		Total	10340.562	2760		
2	Per. Econ. Dis. Percent Minority Instruction	Regression	301.444	3	100.481	27.59**
		Residual	10039.118	2757	3.674	
		Total	10340.562	2760		
3	Per. Econ. Dis. Percent Minority Instruction Collaboration	Regression	311.601	4	77.900	21.41**
		Residual	10028.962	2756	3.639	
		Total	10340.562	2760		
4	Per. Econ. Dis. Percent Minority Instruction Collaboration Parent Involvement	Regression	316.842	5	63.368	17.42**
		Residual	10023.721	2755	3.638	
		Total	10340.562	2760		

*p < 0.05. **p < 0.01.

Table 4.10. Analysis of Variance Instruction, Collaboration, Parental Involvement and School Climate

Covariates

The percentage of students who were identified as economically disadvantaged, and the percentage of students who identified their ethnicity as anything other than Caucasian were first entered into the model as covariates. Table 4.11 indicated that both percentage of economically disadvantaged ($r = -.140$, $p < .01$) and percentage of minority students ($r = -.147$, $p < .01$) have an inverse relationship with school climate. As the percentage of economically disadvantaged students and the percentage of minority students increased, the overall teachers' perceptions of school climate decreased.

Pearson Corr.	Climate	Percent Econ. Dis.	Percent Minority
Climate	1.000		
Percent Econ. Dis.	-.140**	1.000	
Percent Minority	-.147**	.570**	1.000

*p < 0.05. **p < 0.01.

Table 4.11. Correlation between Covariates and School Climate

Table 4.12 shows that when the influence of the percentage of minority students was controlled for in the model, the percentage of economically disadvantaged students maintained a negative correlation with school climate ($b = -.161$, $p < .01$). After controlling for the percentage of minority students in the model, .46% of the variance in school climate was uniquely explained by the percentage of economically disadvantaged

students in the model. Likewise, when the influence of the percentage of economically disadvantaged students was controlled for in the model, the percentage of minority students maintained a negative correlation with school climate (b = -.194, p < .01). After controlling for the percentage of economically disadvantaged students in the model, .67% of the variance in school climate was uniquely explained by the percentage of minority students in the model.

	Predictor Variables	β (SE)
Model 1	% Econ. Dis.	-.161** (.044)
	% Minority	-.194** (.044)
R^2		.026
Adj. R^2		.026
F =		37.4**
df=		2, 2758

*p < 0.05. **p < 0.01.

Table 4.12. Regression analysis between covariates and school climate

Results from Table 4.12 also indicate that 2.6% of the variability in school climate was explained by the combination of the covariates in the model.

The percentage of economically disadvantaged students and the percentage of minority students are strictly entered as covariates in this model and are not the primary variables under investigation in this study. They control for a significant portion of the variance and therefore are included in the model as a way to receive a more accurate

analysis of the variables that this study is analyzing (instruction, collaboration, and parental involvement).

Instruction and School Climate

Once the covariates were entered into the overall model, instruction scores were added to assess its relationship to school climate. Table 4.13 indicates that the principal's focus on instruction ($r = .061$, $p < .01$) had a positive correlation with school climate. Although the relationship appeared to be weak, it is still trended in a positive direction. As the principal's focus on instruction, the teachers' positive perceptions of school climate increased.

Pearson Corr.	Climate	Percent Econ. Dis.	Percent Minority	Instruction
Climate	1.000			
Percent Econ. Dis.	-.140**	1.000		
Percent Minority	-.147**	.570**	1.000	
Instruction	.061**	-.060**	-.038**	1.000

*p < 0.05. **p < 0.01.

Table 4.13. Correlation between Instruction and School Climate

Table 4.14 shows that when the influence of the covariates are controlled for in the model, the instruction score maintained a positive correlation with school climate (b = .103, p < .01). After controlling for the covariates, .28% of the variance in school climate was uniquely explained by instruction score.

	Predictor Variables	β (SE)	β (SE)
Model 1	% Econ. Dis.	-0.161** (0.044)	-0.155** (0.044)
	% Minority	-0.194** (0.044)	-0.194** (0.044)
Model 2	Instruction		0.103** (0.037)
R^2 =		0.026	0.029
Adj. R^2 =		0.026	0.028
F =		37.4**	7.8**
df=		2, 2758	1, 2757

*p < 0.05. **p < 0.01.

Table 4.14. Regression Analysis between Instruction and School Climate

Results from Table 4.14 also indicate that 2.6% of the variability in school climate was explained by the combination of the covariates in model 1. This was statistically significant ($p < .01$). The addition of instruction in the analysis (Model 2) improved the explanation of the variability of school climate by .003. Although the addition of instruction is significant ($p < .01$), only 2.9% of the variability of school climate was explained by the combination of all of the variables in this model.

The principal's focus on cultivating instruction within the educational environment had a positive impact on the teachers' perception of school climate.

Teachers felt a stronger sense of collective school cohesion, as well as satisfaction and recognition when principals were engaged with the instructional aspect of learning and promoted student academic success.

Collaboration and School Climate

The principal's focus on collaboration was the next variable entered into the overall model. This analysis assessed how collaboration influenced school climate when instruction was already present in the model. Table 4.15 indicates that the principal's focus on collaboration ($r = .032$, $p = .047$) had a positive correlation with school climate. Although the relationship appeared to be weak, it still trended in a positive direction. As the principal's focus on collaboration increased, the teachers' positive perceptions of school climate also increased.

Pearson Corr.	Climate	Percent Econ. Dis.	Percent Minority	Instruction	Collaboration
Climate	1.000				
Percent Econ. Dis.	-.140**	1.000			
Percent Minority	-.147**	.570**	1.000		
Instruction	.061**	-.060**	-.038**	1.000	
Collaboration	.032*	-.086**	-.093**	.714**	1.000

*p < 0.05. **p < 0.01.

Table 4.15. Correlation between Instruction, Collaboration and School Climate

Table 4.16 shows that when the influence of the variables are controlled for in the model, the collaboration score did not maintain a positive significant correlation with school climate (b = -.087, p = .09). Only .09% of the variance in school climate was uniquely explained by the collaboration score. Also, the introduction of collaboration into the model increased the influence of instruction on school climate (b = .165, p < .01).

Results from Table 4.16 further indicate that 2.9% of the variability in school climate is explained by the combination of the covariates and instruction (Model 1 and 2). The addition of collaboration in the analysis (Model 3) improved the explanation of the variability of school climate by .001. Therefore, the combination of all of the variables in the model explained only 3.0% of the variability in school climate.

	Predictor Variables	β (SE)	β (SE)	β (SE)
Model 1	% Econ. Dis.	-.161** (.044)	-.155** (.044)	-.156** (.044)
	% Minority	.194** (.044)	-.194** (.044)	-.199** (.044)
Model 2	Instruction		.103** (.037)	.165** (.052)
Model 3	Collaboration			-.087 (.052)
R^2 =		.026	.029	.030**
Adj. R^2 =		.026	.028	.029**
F =		37.4**	7.8**	2.8
df=		2, 2758	1, 2757	1, 2756

*p < 0.05. **p < 0.01.

Table 4.16. Regression Analysis between Instruction, Collaboration and School Climate

The principal's focus on cultivating a collaborative learning environment through sharing influence on the processes associated with the development of student academic success did not have a positive impact on the teachers' perceptions of school climate. The analysis showed that although not significant, there was a negative relationship between correlation and school climate. This relationship did not positively contribute to the effectiveness of the networked leadership model's impact on the teachers' perception of school climate.

Parental Involvement and School Climate

With the addition of parental involvement, all variables were included in the overall model. This analysis assessed how parental involvement influenced the teacher's perceptions of school climate when instruction and collaboration are already present in the overall model. Table 4.17 indicates that the principal's focus on parental involvement ($r = .025$, $p = .092$) had a positive, yet non-significant correlation with school climate.

Table 4.18 shows that when the influence of the variables were controlled for in the model, the parental involvement score maintained its non-significant correlation with school climate, and turned negative ($b = -.046$, $p = .23$). Only .05% of the variance in school climate was uniquely explained by the collaboration score. The presence of parental involvement slightly decreased instruction ($b = .163$, $p < .01$) and collaboration ($b = -.086$, $p = .09$) when other variables were being held constant in the model.

Pearson Corr.	Climate	Percent Eco Dis	Percent Minority	Instruction	Collaboration	Parental Invol.
Climate	1.000					
Per Eco Dis	-.140**	1.000				
Per Minority	-.147**	.570**	1.000			
Instruction	.061**	-.060**	-.038**	1.000		
Collaboration	.032**	-.086**	-.093**	.714**	1.000	
Parental Inv.	.025	-.198	-.326	-.025	.015	1.000

*p < 0.05. **p < 0.01.

Table 4.17. Correlation between Instruction, Collaboration, Parental Involvement and School Climate

	Predictor Variables	β (SE)	β (SE)	β (SE)	β (SE)
Model 1	% Econ. Dis.	-.161**(.044)	-.155**(.044)	-.156**(.044)	-.157**(.044)
	% Minority	-.194**(.044)	-.194**(.044)	-.199**(.044)	-.214**(.046)
Model 2	Instruction		.103**(.037)	.165**(.052)	.163**(.052)
Model 3	Collaboration			-.087 (.052)	-.086 (.052)
Model 4	Parental Invol.				-.046 (.038)
R^2 =		.026	.029	.030	.031
Adj. R^2 =		.026	.028	.029	.029
F =		37.4**	7.8**	2.8	1.4
df=		2, 2758	1, 2757	1, 2756	1, 2755

*p < 0.05. **p < 0.01.

Table 4.18. Regression Analysis between Instruction, Collaboration, Parental Involvement and School Climate

Results from Table 4.18 also indicate that the addition of the parental involvement construct into the overall model improved the variability of school climate by .001. When all of the variables were included in the model, the combination of these variables explained 3.1% of the variability in school climate. None of the variables included in this analysis controlled for the majority of variance in the model.

The principal's focus on creating processes and pathways for parents to become more involved in the academic success of their child did not have a positive impact on the teachers' perceptions of school climate. The analysis showed that although not significant, there was a negative relationship between parental involvement and school climate. This relationship did not positively contribute to the effectiveness of the networked leadership model's impact on the teachers' perception of school climate.

Analysis Summary

Items identified on the SASS permitted for the development of the three independent constructs used in this analysis: instruction, collaboration, and parental involvement. This allowed for the creation of a comprehensive principal leadership approach labeled networked leadership. Also, items identified on the SASS allowed for the construction of the teachers' perceptions of school climate. The results of these analyses addressed the following four research questions:

1. Is there a relationship between principals' degree of Network Leadership within the school environment and teachers' perception of school climate?

The principal's networked leadership was positively related to the teachers' perceptions of school climate. Although there does not appear to be a strong relationship, the correlation does indicate a positive significant influence. Principals that are engaged in this type of leadership positively influenced the teachers' perceptions of a school climate and therefore encouraged an educational environment that had the potential to influence student academic success.

2. Is there a relationship between principals' degree of influence on instruction and teachers' perception of school climate?

When instruction was held constant in the model, it was positively correlated with school climate. For principals who focused on developing an environment where instructional influence and decision-making were prominent in their leadership style, the teachers' perception of that environment became more positive.

3. Is there a relationship between principals' degree of influence on collaboration and teachers' perception of school climate?

The principal's focus on collaboration did not maintain significance when the other variables were controlled for in the model. The principal's perception of teacher collaboration did not equate with the teachers' perceptions of positive school climate.

4. Is there a relationship between principals' degree of influence on parental involvement

and teachers' perception of school climate?

The principal's focus on creating an environment that promoted active parental involvement did not hold significance when correlated with the teachers' perceptions of school climate. The presence of parental involvement did not substantially improve the variability of school climate and, like collaboration, did not equate with the teachers' perceptions of school climate.

The principal's engagement in a networked leadership style had a positive impact on the teachers' perceptions of school climate. As the the variables were entered into the overall model, instruction maintained its significance regardless of the presence or absence of the other variables. Collaboration and parental involvement neither held significance nor had a strong impact on the variance of the model. Despite small correlations and small amounts of variance explained by the networked leadership model, this model may yet have promising potential for the field of educational research. This study's construct development may have limited the amount of networked leadership influence and variance on the school climate. Thus, it is necessary to discuss the limitations of inferences that can be made regarding the analysis of this study.

Chapter 5: Conclusions and Implications

Discussion

This chapter provides a summary of research findings, discussion pertaining to the findings' impact on the field of educational leadership, and the limitations of this particular research project. This chapter concludes with recommendations for further research.

The purpose of this study was to identify an approach to leadership by which principals network the constructs of instruction, collaboration, and parental involvement. The primary benefit of examining such a networked leadership model was to juxtaposition that model against prior research findings that indicated limited positive influence on school climate and student academic success when these variables were isolated. Thus, the degree to which principals influence instructional practices in the building, engage in collaboration by empowering the teachers to influence the learning environment, and establish processes and supports that facilitate parental involvement within the school environment, are assessed both individually and collectively in this networked approach to school leadership.

How principals lead schools influences teachers' overall cohesiveness as a community and satisfaction within the educational environment. Prior research has shown that the leadership style of the principal impacts school climate (Howard et al.,

1987; Hoy & Hoy, 2003; Marzano, Waters, & McNulty, 2005). Principals that attend to the needs of their teachers, staff, students and parents, create an environment where support and satisfaction are part of the fabric of the school. Moreover, within such an organizational climate, teachers are empowered to make decisions and provide instruction that ultimately leads to gains in student academic success (Hallinger, 1987; Halpin & Croft, 1982; Witcher, 1993). While this study's findings affirm that research, there are some noteworthy considerations that warrant discussion prior to final conclusions about the model's overall ability to predict positive gains vis-à-vis school climate and student academic success.

As the networked leadership model shows, the principal's engagement in this networked approach to leadership had a significantly positive influence on student academic success. However, the correlation was weak ($r = .072$, $p < .05$) and it only accounted for 2.8% of the overall variance in the model. Networked leadership had influence on how the teachers viewed their educational environment and approached their work, and this influence may have translated into improved student academic success.

Given that networked leadership displayed a positive correlation with school climate, it was advantageous to investigate the principal's influence through each of the constructs of instruction, collaboration, and parental involvement. Doing so allowed the researcher to prompt premature conclusions that a networked leadership model better predicts positive gains in school climate than does models of leadership that isolate these variables. This was especially necessary as prior research has documented strong relationships between instructional leadership and collaborative leadership and gains on the teachers' perceptions of school climate.

For instance, the principal's influence on instruction has a positive impact on the structures and processes within the school environment and the teachers' perceptions of climate (Blase & Blase, 2002: Hallinger, 2003). Through their focus on instructional procedures and practices, principals influence student academic success by facilitating a climate and environment where teachers maximize their ability to provide quality instruction (Bamberg & Andrews, 1990; Goldring, & Pasternack, 1994; Hallinger, & Heck, 1996a, 1996b, 2002; Hallinger, & Murphy, 1986). This positive impact on school climate allows the principal to have an indirect impact on student academic success (Cotton, 2003; Gurr, 1997; Hallinger & Heck, 1998).

This study affirms the prevailing findings in research about instructional leadership and school climate. When the principal's focus on instruction is entered into the model alone, it is positively correlated ($r = .103$, $p < .01$) with the teachers' perceptions of school climate. As with the overall composite score of networked leadership, instruction had weak influence on school climate. Also, instruction, when coupled with the covariates of the percent of economically disadvantaged students and the percent of minority students only accounted for 2.8% of the variance in the model. Instruction itself only accounted for approximately .3% of the variance.

Additionally, prior research has documented that when principals engage in collaborative efforts to enhance teacher involvement within the learning environment, teachers have a more positive sense of satisfaction and collegiality (Leithwood, 1992; Pepper & Thomas, 2000). When the principal shares decision-making responsibilities with teachers, levels of productivity, satisfaction, cohesiveness, and collegiality also increase (Howard et al., 1987; Hallinger, 1987; Halpin & Croft, 1982; Leithwood, 1992;

Pepper & Thomas, 2000; Witcher, 1993). This supports an environment that perpetuates increased student academic success. However, the findings of this study do not support such conclusions. The principal's focus on providing a collaborative environment did not reach threshold of significance when entered into the overall model (b = -.087, p = .09). In fact, it suggested a negative effect when instruction was already present in the model. Thus, the inclusion of the collaboration variable does not appear to strengthen the overall networked leadership approach to influencing school climate.

Prior research has also documented the effects of parental involvement on the educational environment. Teachers feel that when they have clear structured pathways to communicate and collaborate with parents, the school climate and their ability to influence student academic success increases (Anfara, Jr,. & Mertens, 2008; Bronfenbrenner, 1979; Epstein, 1986; Leichter, 1974; Litwak & Meyer, 1974; Henderson & Mapp, 2002). When principals cultivate processes and procedures that support the involvement of parents within the educational environment, the teachers' perceptions of school climate increase (Epstein & Dauber, 1991). The findings of this study do not support such conclusions. The principal's focus on parental involvement did not reach the threshold of significance when entered into the overall model (b = -.046, p = .230). Like collaboration, parental involvement had a negative effect when instruction and collaboration were already present in the model. Thus, parental involvement cannot be said to strengthen the networked leadership model in influencing school climate.

Therefore, while it initially appeared that the networked leadership approach held promise to leverage positive influences on teachers' perception of school climate, further analysis revealed that the construct of instruction was predominantly impacting

significance. When the individual constructs were parceled out, only the construct of instruction retained significance. This significance was also maintained regardless of which of the other constructs were entered into the model. The degree of the principal's focus on instruction was so great that it compensated for the non-significance of collaboration and parental involvement and allowed the comprehensive construct of networked leadership to present as significant. However, these results must be tempered with the fact that this significance is weak and the entire model only accounts for 3.1% of the variability in school climate.

Limitations

This study identifies 5 major limitations in its design and outcome:

1. The items used for this study were extracted from self-report questionnaires. Principals were self-assessing their influence on the educational environment that they were hired to maintain. As a recognized risk of self-report data, their responses to these items on the SASS questionnaire could have been motivated more by socially desirable responses than efforts to accurately depict their influence over procedures and processes within the educational environment.

2. The analysis for this study relied solely on responses to the items on the SASS questionnaire. Neither field observations nor interviews were built into the data collection model to supplement the principal's perceptions of their influence on the educational environment. Thus, there was no mechanism capable of determining how

the principals' perception of their influence was correlated with how the teacher perceived the principals influence within the school setting.

3. The responses from both the principals and the teachers were based on a singular snapshot of their perceptions of the climate and influence at the time the questionnaire was completed. Influence and perceptions may have easily been altered both positively and negatively after the SASS was completed and returned. No follow-up contact was entered into the data collection design in order to see if the influence and perceptions recorded on the SASS were maintained over a period of time in each respective school site.

4. The SASS was not designed to specifically measure how the principal engaged in networked leadership practices, instruction, collaboration and parental involvement in order to influence the teachers' perceptions of school climate. This study had to create these constructs from the existing questions. This restricted what data was available for analysis, and limited the comprehensive development of each construct. Consequently, the variables' impacts on school climate may have been diluted.

5. The findings of this study have limited inferences outside of this research. Due to its partial significance and lack of meaningful variability vis-à-vis school climate, the overall findings lead to further discussion and research, but fail to adequately establish a comprehensive impact on a new approach to educational leadership.

Recommendations

The following recommendations are presented to improve upon future attempts to replicate or redesign the current study:

1. Create a new survey instrument in which items are constructed in such a way to limit socially desirable responses and more accurately measure how principals engages teachers, parents and the learning environment through the lenses of instruction, collaboration, and parental involvement. A prudent step would be to first investigate existing surveys in order to identify such items that have already been developed and validated. If such items were available, then researchers could construct an instrument to solicit appropriate responses to those items.

2. Identify a smaller sample size whereby follow-up interviews and observations can be built into the data collection design. This will allow for better confirmation of disconfirmation of principal responses. It may also invite a more comprehensive picture of the principals' and teachers' interactions within the educational environment that is not restricted to the singular snapshot provided by survey completion.

3. Explore the possibility of including other constructs into the networked leadership model. Prevailing areas in the current research literature lead this study to create a networked approach to leadership by having the principal filter through the lenses of instruction, collaboration, and parental involvement. Using this dataset only

accounted for roughly 3% of the overall variability in the model. Identifying and including additional constructs into this type of analysis may account for more of the unexplained variance with regard to its influence on school climate.

Implications in General

Identifying approaches to effective leadership have been the subject of a plethora of research studies. A 6 year study commissioned by the Wallace Foundation (Seashore-Louis, Leithwood, Wahlstrom & Anderson, 2010) summed up the prevailing literature concerning the effects of principal leadership style on educational environment. They studied 180 schools in 43 school districts in 9 states found that successful schools have principals who engage in collegial collaboration, data-based decision-making, and some degree of shared leadership. What tends to be absent from research are the specific actions or behaviors that the principal uses to engage teachers and students in the learning environment (Haynes, 2011).

Discussion needs to take place around first differentiating between "what" the principal brings to the educational environment and "how" the principal affects the educational environment. The "what" tends to saturate the current literature: principals engage in leadership focused on instruction, collaboration, shared decision-making, and these foci produce positive results in teacher climate and student academic success (Bamberg, & Andrews, 1991; Conley, & Goldman, 1994; Hallinger, & Heck, 1996a, 1996b, 2002; Hallinger, & Murphy, 1986; Harris, 2005; Goldring, & Pasternack, 1994; Spillane, 2005).

However, it seems to be the "how" that principals need to better understand in order to cultivate an educational environment that supports teacher and student success. Principals are interested in how the information is shared in a collaborative manner, how decisions regarding curriculum and instruction are developed, and how principals, teachers, and parents interact with each other in a way that maximizes student achievement (Haynes, 2011; Seashore-Louis et al., 2010). In this study, a model of networked leadership attempted to address how principals engage in the process of cultivating an environment where teachers feel supported and students achieve academic success. While the model of networked leadership presented in this study does not yet sufficiently address the "how" of principal leadership, it perhaps serves as an example of the types of research projects needed in the field of educational leadership.

Seashore Louis et al., (2011) stated that, "leadership is second only to classroom instruction among all school-related factors that contribute to what students learn at school" (p.17). Teachers are at the front line consistently adjusting their delivery of instruction and processes to provide remediation and enrichment to continuously meet the needs of their students. The role of the principal is to support such an environment by assuring that teachers have the knowledge, skills, and resources available to make those necessary adjustments.

The principal's approach to networked leadership employs what Haynes (2011) called "fatter decision-making structures" (p. 11). The principal remains the leader of the school, monitoring the ebb and flow of the environment, keeping support and resources flowing where they are needed, and maintaining the vision and mission of the school. In such a model, mutual trust and respect would empower teacher to develop teacher-led

inquiry teams that engage the community, assess programs, resources, curriculum and methods of instructional delivery in order to meet the individual needs of their students. As teachers discover processes that are successful, they immediately convey their antecedent actions and how they implemented their plan of instruction in order to build on the collective capacity of teacher resources. This information is exchanged in multiple ways, allowing teachers to learn from each other and build upon the successes of their colleagues in their own classrooms. This fatter decision-making structure allows teachers to increase awareness of effective processes of differentiating instruction and implement a more comprehensive plan of student learning, which ultimately increases the effectiveness of the school's ability to cultivate student success.

When principals engage in a networked approach to leadership, they cultivate a school climate in which the teachers are impacted by the influence of the collective capacity of the school community, which in turn, evokes positive outcomes on student academic success (Seashore Louis et al., 2010). In a networked leadership model, the principal would elicit the greatest impact on student academic success through building school capacity, fostering teacher knowledge development, and supporting teacher-led collaborative learning teams. In this manner, the principal facilitates the networking of ideas, practices, processes, and supports so that students reap the benefits of efficient and effective exchanges of teaching information, techniques and best practices.

Although this analysis was limited in the significance and meaningfulness of its results, it shined a light on the need to have meaningful conversations around not only "what" principals bring to the educational environment but also "how" they engage in processes that elicit teacher satisfaction and student success. Therefore, further research

exploring a networked leadership model would need to concentrate on how principals engage in a networked approach to leadership in order to monitor, develop, and maintain this fatter educational structure.

Implications for Practice and Research

Multiple implications for the field of practice unfold from this study. First, instructional leadership is a critical piece in cultivating a positive school climate and improving student academic success. Principals continue to play an important role in the instructional process. Principals who focus on a consistent comprehensive mission and vision that coordinates curriculum, monitors progress, and assist teachers in removing barriers that impede instruction are positively influencing the educational environment as well as student academic success (Bamberg & Andrews, 1990; Goldring, & Pasternack, 1994; Hallinger, & Heck, 1996a, 1996b, 2002; Hallinger, & Murphy, 1986; Meek, 1999). By being knowledgeable about curriculum and instructional strategies, principals are able to assist teachers in the facilitation of instructional practices in the classroom (Leithwood & Riehl, 2003; Marzano, Waters & McNulty, 2003). Thus, principals maintain the instructional integrity of the learning environment by providing the resources, support and presence necessary for teachers to appropriately impact student learning (Andrews & Soder, 1987).

Instructional support with student academic success is mitigated through the teachers within the educational environment (Blase & Blase, 2002; Hallinger, 2003; Hallinger & Heck 1998). Principals make the most meaningful impact on student achievement through the the cultivation and facilitation of the school climate within the

educational environment (Gurr, 1997). Principals motivate, inspire and provide resources to teachers as a way of driving the instructional process (Cotton, 2003). They assist in developing the teachers' mastery of instructional practices through the knowledge, skills, and dispositions that bring to the educational environment (Leithwood et al., 2004).

Higher educational institutions must maintain a focus of instructional leadership in their principal preparation programs. Principals who graduate from their programs and enter into the field of education need to be stewards of the instructional process and have the skills necessary to cultivate a positive school climate in order to provide support and resources to their teachers. Diminishing the focus on instructional leadership in the preparation process runs the risk of inadequately preparing principals for success in the field, as well as potentially negating aspects of influence within the school climate.

Models of networked leadership have implications for the field of research. The lack of significant results in this study should not diminish interest in future configurations of networked leadership. The foundation of this concept is a viable approach to school leadership. Networked leadership seeks to identify fatter organizational structures that develop and fluctuate according to the needs of the teachers and the vision and direction of the school. In such models, power and decision-making authority reside within the network, empowering teachers, staff, and parents to make meaningful decisions that impact day-to-day learning environment for the purpose of increasing student academic success (Cebrowski, 2003; Garstika, 2003; Office of Force Transformation, 2005; Surry & Ely, 2002). Networked leadership is about putting the best information in the hands of the appropriate people in order for them to make efficient and effective decisions that ultimately leads to student success (Garstka, 2003).

As the hub of the network, principals facilitate the smooth interaction of knowledge, resources, and collaboration while maintaining the vision of the mission of the school (Alberts, & Hayes, 2003; Atkinson, & Moffat, 2005; Luddy, 2005; Stone, 2004). It is this physical and intellectual structure that improves the sharing of information, which in turn prompts collaboration to develop quality information, and thus enables the participants to increase awareness and implement a more comprehensive plan. Ultimately, the combination of these processes increases the effectiveness of teaching and learning (Alberts, 2002).

The notion of networked leadership needs to be explored using appropriate instrumentation and research to identify unique attributes and combinations of actions that may ultimately lead to a stout leadership model. Further theorization of networked leadership may yield better research and result in outcomes that facilitate leadership development and implementation in the field of education and principal preparation.

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Appendix A: Instruction

Instruction

Four Likert-scale Items from Question 12 on the 2007-2008 Principal Schools and Staffing Survey used to identify the construct of Instruction:

How much actual influence do you think the principal has on decisions concerning:

1) setting performance standards?

2) establishing curriculum?

3) determining professional development content?

4) evaluating teachers?

Appendix B: Collaboration

Collaboration

Four Likert-scale Items from Question 12 on the 2007-2008 Principal Schools and Staffing Survey used to identify the construct of Collaboration:

How much actual influence do you think teachers have on decisions concerning:

1) setting performance standards?

2) establishing curriculum?

3) determining professional development content?

4) evaluating teachers?

Appendix C: Parental Involvement

Parental Involvement

Four Nominal scale Items (Yes/ No) from Question 22 on the 2007-2008 Principal Schools and Staffing Survey used to identify the construct of Instruction:

This school year (2007-2008) does the school have the following:

1) a staff member assigned to work on parent involvement (Liaison)?

2) workshops or courses for parents or guardians?

3) services to support parent participation, such as transportation and child care?

4) parent drop-in center or lounge?

Appendix D: School Climate

School Climate

9 Likert-scale Items from Question 55 on the 2007-2008 Teacher Schools and Staffing Survey used to identify the construct of School Climate:

1 (a) The school administration's behavior toward the staff is supportive and encouraging.

2 (g) My principal enforces school rules for student conduct and backs me up when I need it.

3 (h) Rules for student behavior are consistently enforced by teachers in this school, even for students who are not in their classes.

4 (i) Most of my colleagues share my beliefs and values about what the central mission of the school should be.

5 (j) The principal knows what kind of school he or she wants and has communicated it to the staff.

6 (k) There is a great deal of cooperative effort among the staff members.

7 (l) In this school, staff members are recognized for a job well done.

8 (o) I am given the support I need to teach students with special needs.

9 (q) I am generally satisfied with being a teacher at this school.