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The Effect of Improved School Climate Over Time on Fifth-Grade Students' Achievement Assessment Scores and Teacher Administered Grade Scores

Dawn M. Marten

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The Effect of Improved School Climate Over Time on Fifth-Grade Students'

Achievement Assessment Scores and Teacher Administered Grade Scores

By

Dawn M. Marten

A Dissertation

Presented to the Faculty of

The Graduate College of the University of Nebraska

In Partial Fulfillment of Requirements

For the Degree of Doctor of Education

Major: Educational Administration

Under the Supervision of Dr. John W. Hill

Omaha, Nebraska

May, 2012

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UMI Number: 3503617

UMI®
Dissertation Publishing

UMI 3503617

ProQuest®

Abstract

THE EFFECT OF IMPROVED SCHOOL CLIMATE OVER TIME ON FIFTH-GRADE

STUDENTS' ACHIEVEMENT ASSESSMENT SCORES AND TEACHER

ADMINISTERED GRADE SCORES

Dawn M. Marten, Ed.D.

University of Nebraska, 2012

Advisor: Dr. John W. Hill

The purpose of the study was to determine the effect of improved school climate, as teachers' beliefs changed from negative to positive over time, on students' reading, math, and writing assessment scores and teacher administered grade scores in reading, math, and writing. Overall, findings indicate that lose, maintain, or improve third-grade pretest compared to fifth-grade posttest Essential Learner Outcome assessment below proficient, barely proficient, proficient, or beyond proficient nomenclature category chi-square results were in the direction of statistically different nomenclature category improvement for reading (X^2(6, $N = 75$) = 22.00, $p = .001$), math (X^2(6, $N = 75$) = 69.20, $p = .000$), and writing (X^2(6, $N = 75$) = 18.60, $p = .005$) indicating that fifth-grade posttest Essential Learner Outcome assessment scores were positively impacted by an improving school climate with the majority of the students improving or maintaining their proficiency level. Furthermore, lose, maintain, or improve ending of third-grade pretest compared to ending fifth-grade posttest grade chi-square results were in the direction of statistically different improvement for reading grade score results (X^2(6, $N = 75$) = 30.30, $p = .000$), math grade score results (X^2(6, $N = 75$) = 14.00, $p = .030$), and writing grade score results (X^2(6, $N = 75$) = 35.20, $p = .000$) indicating that fifth-grade posttest reading grade scores

were positively impacted by an improving school climate with the majority of the students improving or maintaining their grade score. School climate is an essential factor in students' academic, social, emotional, and ethical development and wellbeing. Students who experience a sense of safety, have healthy adult and peer relationships, feel respected, and are encouraged to take ownership in creating a positive school climate are well on their way to becoming productive citizens with the academic resources necessary to make a positive difference in their own lives--and the lives of others in their school community as well.

Acknowledgements

There are a few special individuals that I owe my gratitude to for being by my side through this incredible journey. First and foremost, I thank my husband, Jeremy, and my son, Logan, who endured my absences for class and long-stretches of time away researching and writing my dissertation. I thank Jeremy for his support and encouragement to keep pushing through this process even when it was difficult to juggle the role as a wife, mother, principal, and student. He is truly my strength and best friend.

Thank you to my mother, Karen Sellin, who has always supported my education and my brother, Julius Sellin, for the pride he holds for his little sister. Their support and encouragement has been the foundation behind my educational drive.

I would like to thank Dr. John Hill, my advisor and committee chair. Throughout this process, he has encouraged me to become a strong researcher and writer, as well as provided valuable feedback and insights. He has carried me through this process while answering the many questions I had along the way. I also want to thank my other dissertation committee members, Dr. Kay Keiser, Dr. Peter Smith, and Dr. Neal Grandgenett, as well as University of Nebraska-Omaha faculty members who have provided support and teaching along the way: Dr. Karen Hayes and Dr. Laura Schulte. A special thank you is given to Mrs. Barbara Mraz, assistant in the office of Educational Administration, for her expert help with editing and also for greeting me with a smile and during each of my many visits to Dr. Hill's office.

I would also like to thank my colleagues for all of their encouragement and support along the way. I especially thank Dr. Heidi Penke, Dr. Heather Phipps, and Dr. Jennifer Wilson for enduring the Doctorate program and classes along my side.

A special thank you to my staff at Harvey Oaks Elementary School for the support and flexibility they have shown me during my studies and dissertation writing. I also would like to acknowledge a special colleague, former boss, and my professional inspiration, Melissa Poloncic, for working with me in the early stages of my dissertation writing and for continually being my professional mentor.

Finally, I would like to express my thanks to Dr. Tami Williams, Director of Assessment, Research, and Evaluation who supported me through the statistics portion of this study. To all of these family, friends, and mentors, I am thankful you have been traveling this journey with me.

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CHAPTER ONE

Introduction

Positive school climate is frequently mentioned in effective schools research as one of the variables important for student achievement (Macneil & Maclin, 2005; Winerip, 2011). The link between positive school climate and strong teacher-student relationships are often indicators of students' feelings of being treated fairly, feelings of safety, and feelings of support (Bulach, Boothe, & Pickett, 2006). The growing concern for educational policy makers, parents, teachers, and students is what happens in schools when school climate is weak and students do not experience feelings of acceptance, positive regard, and security (Beaudoin & Taylor, 2004; Winerip, 2011).

The behavior of students in school and ultimately their achievement in academic subjects is a function of the culture, positive or negative, of the school. Students take their cues about how to behave towards others from the way those important to them actually behave and interact, attending carefully to the observed expectations and definition of appropriate behavior (Samdal, Nutbeam, Wold, & Kannas, 1998). However, in the absence of positive support and regard from teachers and administrators, students may themselves exhibit negative and demeaning emotional, social, and academic behaviors (Beaudoin & Taylor, 2004; Kasen, Johnson, & Cohen, 1990; Winerip, 2011). School climate has a profound impact on the lives and productivity of all educational stakeholders (Kasen et al., 1990).

Two aspects of school climate, commitment to school and positive feedback from teachers, have been shown to affect students' self-esteem and sense of belonging (Hoge, Smith, & Hanson, 1990). When teachers persistently communicate by word and deed,

negative thoughts and attitudes, teachers create an atmosphere where students are less likely to prosper academically or emotionally (Kasen et al., 1990). Because negative teacher communication in the classroom is contagious, students may withdraw from school activities, academics, and in some cases even their social development with peers (Beaudoin & Taylor, 2004; Kasen et al., 1990). Students are less likely to cultivate the desire to become better academically or put forth the effort they need to succeed in the classroom, when the classroom climate is negative overall. This in turn may contribute to students' diminished self-worth, lack of confidence, and reduced ambition.

Feeling connected to people at school is a critical element of a positive school climate. An underlying negative school climate reduces a teacher's opportunity to model empathic behavior towards students, which in turn is necessary for students to observe and develop their own social skills, friendships, and conflict-resolution skills. Without the ability to be empathic, students may not develop the ability to make positive social connections with peers while reducing the kinds of negative peer interactions that also harm school climate (Gottfredson, Gottfredson, Payne, & Gottfredson, 2005).

In schools without direct instruction of conflict resolution skills accompanied by adult modeling of proactive problem solving, negative peer interactions such as bullying and peer conflicts become the norm (Tableman, 2004). Therefore, a positive school climate offers significant potential for enhancing both the understanding and the prevention of school misconduct and violence (Tableman, 2004).

Furthermore, there is a correlation between school climate and student academic performance that can promote or complicate meaningful student learning (Witziers, Bosker, & Krüger, 2003). In schools with a negative school climate, academic

performance is diminished because students may not feel safe to freely express their opinions or take risks in the classroom (Beaudoin & Taylor, 2004; Stockard & Mayberry, 1992). Teaching methods that do not encourage a variety of learning styles and student needs, inadvertently contributes to a negative school climate that affects all members of the school community and results in learning at less than optimum levels (Freiberg, 1998). When teachers feel withdrawn and disengaged in their profession, effective levels of instruction are absent, which has an adverse impact on student engagement, learning, and performance. In schools with a negative climate, students do not feel safe, cared for, supported, or encouraged therefore academic achievement decreases along with motivation to learn (Merrow, 2001; Weber, 2008). When a positive school climate is endorsed, there is a natural promotion of essential learning skills, (e.g. creativity and innovation skills, critical thinking and problem solving skills, communication and collaborative skills) as well as life and career skills (e.g. flexibility and adaptability, initiative, social and cross culture skills, productivity and accountability, leadership and responsibility) which are essential for students' future success (Partnership for 21st Century Skills, 2002).

A safe, caring, participatory, and responsive school climate fosters great attachment to school, in addition provides the foundation for emotional, social, and academic learning success (Baker, 2000).

Purpose of the Study

The purpose of the study is to determine the effect of improved school climate, as teachers' beliefs changed from negative to positive over time, on students' reading, math,

and writing assessment scores and teacher administered grade scores in reading, math, and writing.

Research Questions

The following research questions were addressed and answered as part of the study:

Overarching Pretest-Posttest Criterion-Referenced Reading Achievement Research Question #1. In classrooms where teachers' beliefs changed from negative to positive over time, did students lose, maintain, or improve their third-grade pretest compared to their fifth-grade posttest reading Essential Learner Outcome assessment nomenclature category of below proficient, barely proficient, proficient, or beyond proficient?

Overarching Pretest-Posttest Criterion-Referenced Math Achievement Research Question #2. In classrooms where teachers' beliefs changed from negative to positive over time, did students lose, maintain, or improve their third-grade pretest compared to their fifth-grade posttest math Essential Learner Outcome assessment nomenclature category of below proficient, barely proficient, proficient, or beyond proficient?

Overarching Pretest-Posttest Criterion-Referenced Writing Achievement Research Question #3. In classrooms where teachers' beliefs changed from negative to positive over time, did students lose, maintain, or improve their third-grade pretest compared to their fifth-grade posttest writing Essential Learner Outcome assessment nomenclature category of below proficient, barely proficient, proficient, or beyond proficient?

Overarching Pretest-Posttest Reading Grade Score Research Question #4. In classrooms where teachers' beliefs changed from negative to positive over time, did students lose, maintain, or improve their ending third-grade pretest compared to their ending fifth-grade posttest reading grade score of a 1 (100-93%), 2 (92-85%), 3 (84-77%), 4 (76-69%), or 5 (68-0%) nomenclature category?

Overarching Pretest-Posttest Math Grade Score Research Question #5. In classrooms where teachers' beliefs changed from negative to positive over time, did students lose, maintain, or improve their ending third-grade pretest compared to their ending fifth-grade posttest math grade score of a 1 (100-93%), 2 (92-85%), 3 (84-77%), 4 (76-69%), or 5 (68-0%) nomenclature category?

Overarching Pretest-Posttest Writing Grade Score Research Question #6. In classrooms where teachers' beliefs changed from negative to positive over time, did students lose, maintain, or improve their ending third-grade pretest compared to their ending fifth-grade posttest writing grade score of a 1 (100-93%), 2 (92-85%), 3 (84-77%), 4 (76-69%), or 5 (68-0%) nomenclature category?

Data Collection Procedures

Permission from the appropriate school research personnel was obtained before data was collected. All study data were retrospective, archival, and routinely collected as part of school records. Subject data includes achievement data and grade scores. Non-coded numbers were used to display individual anonymous achievement data and grade scores. Data, descriptive statistics, and inferential analysis has been utilized and reported.

Performance site. This research was conducted in the public school setting through normal educational practices. The study procedures did not interfere in any way

with the normal educational practices of the public school and did not involve coercion or discomfort of any kind. All data was analyzed and kept secure in the researcher's office. Data was stored on spreadsheets and a flash drive for statistical analysis and kept in a locked file cabinet. No individual identifiers were attached to the data once the data are linked.

Institutional Review Board (IRB) for the protection of Human Subjects Approval Category

The exemption categories for this study were provided under 45CFR.101(b) categories 1 and 4. The research was conducted using routinely collected archival data. A letter of support from the district was provided for IRB review. Parents, teachers, and administrators' use the achievement data reports to assess individual progress in the given grade levels. Achievement test data was collected by the research school district to evaluate and compare student performance within the district. Grade scores were given each quarter as a measure to students' knowledge in a given subject area. Therefore, all safeguards for human subjects were preserved and the review of achievement data and grade scores did not present a potential risk for human subjects.

Assumptions

This study has several strong features. The research elementary school in this study continues to make annual Adequate Yearly Progress and has highly qualified teachers. The research elementary school also has a building staff development plan, re-teaching plan, and a pyramid of interventions plan for students. All students in this study have been continuously enrolled from the beginning of the third-grade through the end of the fifth-grade in their respective research elementary school, all students participated in

the district Essential Learner Outcomes assessment in reading, math, and writing, and all students received a grade score in the concurrent content areas.

The research school district's Essential Learner Outcomes assessments undergo a rigorous pre-pilot and pilot test to ensure item quality. Following the pilot test, separate groups of professional educators judge the assessment for curriculum alignment, test bias, and sufficiency of items which accurately diagnose students with achievement levels at below proficient, barely proficient, proficient, and beyond proficient.

Teacher administered grade scores are given to students in second-grade through fifth-grade in the respective research elementary school in this study. Grade scores indicate a particular level of knowledge in a given content area. 1, 2, 3, 4, and 5 are the grade scores that students earn based on their demonstration of mastery on the given content standards.

Delimitations of the Study

The study was delimited to students in a suburban school district who were in attendance from third-grade through fifth-grade during the 2005-2008 school years, attending their respective research elementary school. The research elementary school in this study is not eligible for Title I status. The findings of the study will be delimited to the students who attended this research elementary school.

Limitations of the Study

This exploratory efficacy study is confined to one research elementary school. Using the assessment results and grade scores from one suburban school district may skew the statistical results and reduce the utility and generalizability of the findings.

Definition of Terms

Academically vulnerable students. Academically vulnerable students is defined as students who have a higher than normal probability of not succeeding academically.

Adequate yearly progress (AYP). Adequate Yearly Progress is defined as a statewide accountability system mandated by the No Child Left Behind Act of 2001 which requires each state to ensure that all schools and districts make Adequate Yearly Progress.

Barely proficient achievement level. Barely proficient achievement level is defined as an indicator of a student's performance level on a particular criterion referenced assessment based on an established cut score. A student with a barely proficient rating, scores within a range of scores just above the lowest cut score on a multi-level proficiency scale. Students scoring in this range are perceived to have below average academic achievement in the related curriculum area.

Below proficient achievement level. Barely proficient achievement level is defined as an indicator of a student's performance level on a particular criterion referenced assessment based on an established cut score. A student with a below proficient rating, scores within a range of scores below the lowest cut score on a multi-level proficiency scale. Students scoring in this range are below to significantly below average academic achievement in the related curriculum area.

Beyond proficient achievement level. Barely proficient achievement level is defined as an indicator of a student's performance level on a particular criterion referenced assessment based on an established cut score. A student with a beyond proficient rating, scores within a range of scores above the highest cut score on a multi-

level proficiency scale. Students scoring in this range are perceived to have above average academic achievement in the related curriculum area.

Building cohesiveness. Building cohesiveness is defined as a category on the Effective School Survey that examines teachers' beliefs on the level of cohesiveness among staff members.

Criterion referenced test (CRT). Criterion referenced test is defined as a test in which the questions are written according to specific predetermined criteria such as an established academic curriculum in which students have received instruction prior to the administration of the test.

Effective school survey. Effective School Survey is defined as an instrument completed by teachers at each school in the research school district. The climate survey measures: a) monitoring student achievement, b) parent/community involvement, c) preparing for future, d) building cohesiveness, e) positive attitude, f) fair and proactive discipline, g) high expectations, h) student success, and i) rules and supervision.

Effective school survey results. Effective school survey results is defined as summary data in each of the multi-item scales. Items were collapsed by a process of norming individual survey responses against district averages for that level (i.e. elementary). The resulting standard scores vary around an average of 50 (scores above 50 are above the in-district norm while those below 50 are below the norm).

Essential learner outcomes assessments (ELO). Essential Learner Outcomes assessments are defined as criterion referenced tests given to all students in grades one through eleven in the research school district. The purpose of these assessments is to determine the level of proficiency that students have achieved with the local curriculum

that is aligned to state standards. Results of these tests are used to inform educators and parents of the progress of children, which includes required intervention for students below proficient performance. The results for students in certain grades are also used for No Child Left Behind requirements as well as for state reposting. The district's Essential Learner Outcomes assessments are also high stakes graduation requirements.

Fair and proactive discipline. Fair and proactive discipline is defined as a category on the Effective School Survey that examines teachers' beliefs about the discipline procedures and follow-through at their school.

High expectations. High expectations is defined as a category on the Effective School Survey that examines teachers' beliefs and practices of setting high academic expectations for their students.

Highly qualified. Highly qualified is defined as a teacher who has obtained full state teacher certification or has passed the state teacher licensing examination and holds a license to teach in the state; holds a minimum of a bachelor's degree; and has demonstrated subject area competence in each of the academic subjects in which the teacher teaches.

Monitoring student achievement. Monitoring student achievement is defined as a category on the Effective School Survey that examines teachers' beliefs and practices about assessing students' academics.

Negative school climate. Negative school climate is defined as teacher-reported survey standard scores that are below the in-district norm of 50 in each of the following categories: a) monitoring student achievement, b) parent/community involvement, c)

preparing for future, d) building cohesiveness, e) positive attitude, f) fair and proactive

discipline, g) high expectations, h) student success, and i) rules and supervision.

No Child Left Behind. No Child Left Behind is defined as Public Law 107-110,

amendments to the Elementary and Secondary Education Act of 1964 were signed into

law by President George W. Bush on January 8, 2002. This federal statue outlines

definitive expectations of all schools in the United States in relation to student

achievement and accountability.

Parent/community involvement. Parent/community involvement is defined as a

category on the Effective School Survey that examines teachers' beliefs on the

parent/community level of attachment to the school.

Positive attitude toward school. Positive attitude toward school is defined as a

category on the Effective School Survey that examines teachers' perspective of their

work environment.

Positive school climate. Positive school climate is defined as teacher-reported

survey standard scores that are above the in-district norm of 50 in each of the following

categories: a) monitoring student achievement, b) parent/community involvement, c)

preparing for future, d) building cohesiveness, e) positive attitude, f) fair and proactive

discipline, g) high expectations, h) student success, and i) rules and supervision.

Preparing for the future. Preparing for the future is defined as a category on the

Effective School Survey that examines teachers' beliefs and practices with student

preparation for the future.

Proficient achievement level. Proficient achievement level is defined as an

indicator of a student's performance level on a particular criterion referenced assessment

based on an established cut score. A student with a proficient rating, scores within a range of scores above the mid-range cut score on a multi-level proficiency scale. Students scoring in this range are perceived to have average academic achievement in the related curriculum area.

Pyramid of interventions. Pyramid of interventions is defined by the research school district as a framework that provides integrated academic and behavioral support to children within a three-tiered model: school-wide interventions, targeted group interventions, and intense individual interventions.

Rules and supervision. Rules and supervision is defined as a category on the Effective School Survey that examines teachers' beliefs on student compliance with school rules and level of supervision.

School culture. School culture is defined as a set of attributes, beliefs, behaviors, norms, traditions, and common languages shared by people in a school.

School climate. School climate is defined as teachers' perceptions of their overall work environment, the quality of relationships within the school, and how the relationships affect staff members and students' experiences.

Staff engagement. Staff engagement is defined as a staff member whom is fully involved in, and enthusiastic about, his or her work, and thus will act in a way that furthers their organization's interests and goals.

Standard setting. Standard setting is defined as the psychometric process of determining the cut score that divides a range of scores on an assessment into various levels of proficiency. This process includes at least three and usually four simultaneously applied methods to ensure the validity of the cut score.

Student resilience. Student resilience is defined as a student that has a certain set of attributes that provides him or her with the strength and fortitude to confront the overwhelming obstacles they are bound to face in schools.

Student success. Student success is defined as a category on the Effective School Survey that examines teachers' beliefs on instruction and student learning.

Teacher administered grade scores. Teacher administered grade scores is defined as scores (1, 2, 3, 4, or 5) that teachers give to students based on the students' demonstration of mastery on the given content standards.

Title I Status. Title I Status is defined as schools that receive federal aid money based on the number of low-income families that attend the school.

Significance of the Study

This study has the potential to contribute to research, practice, and policy. The study is of significant interest to teachers, principals, and district personnel as they consider the impact of school climate on student achievement. It is also of significant interest specifically to principals of the research school district in this study since school climate is a component of the principals' yearly evaluation. The connection between school climate and student achievement has implications for students, parents, and school personnel.

Contribution to Research

A review of professional literature suggests that more research is needed on the connection between teachers' beliefs that impact school climate and student achievement. This study will contribute to the importance of teacher professional engagement and teacher-student relationships.

Contribution to Practice

As a result of this research, this school district may decide whether or not to continue to focus on school climate and professional engagement as a district-wide initiative. This school district may decide whether professional development initiatives focusing on professional engagement and relationship-building should be continued.

Contribution to Policy

The results of this study may offer insight into how school districts assist schools in developing a positive school climate. Given the study outcomes, the research school district may choose to consider professional development in the area of school climate, staff engagement, and building student assets.

Organization of the Study

The literature review relevant to this research study is presented in Chapter 2. This chapter reviews the professional literature related to the development and components of a positive school climate and teacher beliefs, which impacts student achievement. Chapter 3 describes the research design, methodology, independent variables, dependent variables, and procedures that will be used to gather and analyze the data of the study. This includes a detailed synthesis of the participants, a comprehensive list of the dependent variables, the dependent measures, and the data analysis used to statistically determine if the null hypothesis shall be rejected for each research question. Chapter 4 reports the research results and findings--including data analysis, tables, and descriptive statistics. Chapter 5 provides conclusions and a discussion of the research findings.

CHAPTER TWO

Review of the Literature

School climate and student achievement should not be viewed as separate considerations. School climate and student achievement are related; the quality of the school climate appears to be the single most predictive factor in any school's capacity to promote student achievement (Freiberg, 1999; Hoy & Hannum, 1997). At the core of what defines a high functioning school is a high degree of organizational intentionality, collaborative effort, reflective practice, and a pervasive orientation toward achievement that could be classified as a psychology of success (Dunn & Harris, 1998). A highly positive school climate is one that is created intentionally, a culture that exudes a sound vision that is translated into effective practice, collaborative staff relations, the promotion of a psychology of success for students and staff, and student academic and social change for the better (Dunn & Harris, 1998; Phillips, 1997; Winerip, 2011).

School Climate and the Principal

The principal's leadership impacts student success predominantly through the support of and collaboration with talented teachers (Murphy & Hallinger, 1992). Ultimately, the principal impacts student success through the creation of a positive and supportive school climate. Research has found a relationship between student learning outcomes and the degree to which a school's mission emphasizes all students' opportunities to learn and high expectations for all students' achievement (Hallinger, Bickman, & Davis, 1996). Mission also refers to the stated and implied purpose of the school and the core values that it purports. The school's mission serves as the engine at the heart of any successful school. Furthermore, the stated school mission allows staff

members to identify with the organization, justify their sacrifice and commitment, and infuse their work with lasting meaning (Gordon, 2006). Despite difficulties, the more effectively the stated mission of a school is integrated into its day-to-day expectations, the more it will drive engagement and other positive outcomes (Gordon, 2006).

In their eight year study *From a Mission to a Vision*, Sebring and Bryk (2000) asserted that the key factors influencing student achievement were the principal's ability to describe a vision as a way to inspire staff members while still giving them room to participate in the formation of school-wide goals. Also according to Sebring and Bryk (2000), a school's mission describes boldly what we want students to accomplish and the school vision provides a vivid picture of the anticipated results of our educational efforts. Developing that vision typically starts with the principal, but it doesn't end there. As with a school's mission, once the principal expresses a vision for the future, it must be fine-tuned by input from teachers and parents so that it truly resonates with those who strive, day-to-day, to achieve it. A school's vision tends to pull the individuals within it together (Gordon, 2006). Involving others in forming the school's vision contributes to an overall feeling of participation and inclusiveness within the school (Sebring & Bryk, 2000). If a vision refers to the organization's ideal destination, then goals are the practical road maps that make that destination seem reachable. It is up to the principal to make connections between the vision and goals by regularly calling attention to them (Gordon, 2006).

Although many factors impact student achievement we cannot discard the facts from research that point to a correlation between school climate and student achievement evolving back to the critical role of the principal. The principal paves the way for teacher

engagement, which is the one single area that principals can most effectively contribute to success in the classroom (Gordon, 2006).

A school's climate refers to teachers' perceptions of their overall work environment, the quality of relationships within the school, and how those relationships affect staff members' experiences (Hoy, 1990). While a school's culture refers to traditions and expectations--the shared ways of doing things inside a school that have evolved over time--school culture influences the way people act, the dress attire, the conversations that occur, and how teachers feel about their work and students (Deal & Peterson, 1999). Promoting a healthy climate will over time positively impact the school culture. Gordon (2006) asserts that:

> Principals have the power to impact a school's climate by communicating clear mission and vision, fostering collaboration among teachers, encouraging teachers' involvement in decision making, setting high expectations for teachers and students, developing a sense of teamwork and trust, stimulating thinking, and reflection on teaching. (p. 223)

Historically, the largest gains in reading and math have occurred in schools where teachers felt that the principal communicates a vision for instructional goal setting, collaboration, and performance standards (Andews & Soder, 1987). Effective principals create a school climate where academic achievement and emotional wellbeing is the primary goal for every student. In addition, effective principals provide the administrative support that empowers teachers to concentrate on the primary goal of student success (Steller, 1988). Generating a positive school climate in turn leads to high levels of employee engagement (Harter, Schmidt, & Hayes, 2002). There is a significant

positive relationship between teacher engagement and student performance (Gordon, 2006).

Instructional goal setting. Principals who communicate instructional goal setting, sets expectations for continual improvements of instructional practices and actively engages in the staff development surrounding best practice (Andrews & Soder, 1987; Gruenert, 2005). Improvement of instructional practice can be achieved through facets of peer observation, aligned professional development, and professional reflective dialogue between teacher and principal. Therefore, a climate of high expectations for teachers overflows to high student expectations and instills in students the belief that they can learn at a high level, and with teacher support and encouragement students can meet these high expectations (Johnson & Livingston, 2001).

Collaboration. Creating a collaborative environment for teachers has been described as the single most important factor for successful school improvement initiatives (Johnson & Livingston, 2001; Maehr & Midgley, 1996). Student achievement is greatest where teachers and administrators work together in collaboration to identify student academic needs and implement instructional practices and interventions (Goldring, 2002). These collaborative cultures develop teachers through mutual support, joint works of efforts, and agreement on educational values (Gruenert, 2005). When members of the organization work together to accomplish a task--student achievement-- they demonstrate the embedded belief and importance of collaboration (Goldring, 2002). This culture must be fostered through principal direction, vision, and instructional leadership.

Performance standards. The instructional leader, the principal, communicates expectations of instructional practices and standards. Differentiation, small group instruction, and support through intervention are just a few of the performance standards that have become part of the common instructional expectations in our schools (Rotherham & Willingham, 2009). These expectations are communicated and supported by a principal who teachers view as an instructional leader. These performance expectations have been proven to be a few of the instructional best practices that increase student academic performance (Campbell & Campbell, 2004; Merrill, 2002; Tomlinson, 2000).

No matter how much administrative authority teachers are subject to, teachers alone exercise real control over what happens in their classrooms (Ingersoll, 2003). When teachers feel supported, empowered, and engaged these same conditions will be extant for students to emulate and positive outcomes will result from this shared positive school climate (Gruenert, 2005; Ingersoll, 2003).

School Climate and the Teacher

Of all the factors that have contributed to the social environment in which students are educated, the teacher has been the most decisive (Smith, Neisworth, & Greer, 1978). Teachers' attitude toward students and education determines, to a very real degree, how students perceive school, themselves, and one another. Teachers can make learning pleasant or punishing, can create motivation or fear, and produce anticipation or dread. A teacher's personal style and approach, more than anything else, creates the climate and mood characterizing the classroom (Denton, 2008).

It is held that in classrooms, the interaction between the teacher and students is so complex that personal biases and emotions may be overshadowed by the subtle variables that affect all levels of human interaction. In other words, teachers may be too quick to assume that a student's inappropriate behavior is the result of problems at home or due to immaturity. Teachers need to realize that students' behaviors may be, at least partially iatrogenic to the actions of the teacher (Denton, 2008; Bondy & Ross, 2008). However, when students experience the classroom as a caring, supportive place where everyone is valued and respected, students will participate and learn more and be more likely to succeed (Lumsden, 1994). The teacher plays an instrumental role in providing a safe and orderly climate--a climate in which stress may be reduced or heightened when appropriate and relationships are nurtured (Dodd, 1997; Macneil & Maclin, 2005). Moreover, the teacher is the organizer of optimum learning situations who determines the classroom climate through decision-making, communication style, instructional practices, and personal interaction and regard for every student. Moos (1979) suggested that the teacher was of greater importance than the characteristics of the students in creating the classroom climate. Teachers who are committed to students are more likely to spend the extra time and effort necessary to motivate and nurture their students (Hoy & Hannum, 1997). For example, committed teachers are likely to stay after school to tutor or counsel students and are willing to give of themselves on behalf of their students (Hoy & Hannum, 1997).

Greeting students, interacting with them about things outside of the classroom, and caring for and treating them as human beings helps create a learner-centered classroom with a positive climate. Connecting with each student allows teachers to better

respond to students' unique capabilities and needs (Wisehart, 2004). A positive climate is sensitive to cultural issues, as well as different learning styles, values, perspectives, roles, and customs. A classroom with positive climate has a teacher that has come to know their students and their backgrounds, and have incorporated a variety of ways for students to learn and ways to demonstrate or express that learning (McCombs & Whisler, 1997).

School Climate and Student Achievement

In research on school effectiveness, there is an emphasis on the importance of a school climate in which optimal learning occurs (Gruenert, 2005; Johnson, Johnson, & Zimmerman, 1996). Student achievement has been linked to a positive school climate and long-term achievement is related to schools with an academic emphasis within a healthy school climate (Goldring, 2002). Moreover, the school climate and student achievement connection has been well established in the research (Freiberg, 1999; Hoy & Hannum, 1997; Kober, 2001; Loukas & Robinson, 2004; Norton, 2008). The Search Institute also found that a caring school climate is associated with higher grades, student engagement, higher attendance rates, higher student expectations and aspirations, a sense of scholastic competence, fewer school suspensions, and on-time progression through grades (The Search Institute, 2010). A positive school climate also contributes to the emotional wellbeing of students. Higher self-esteem and self-concept with lower anxiety levels and less student isolation have all been noted to be natural outcomes of a nurturing school environment (The Search Institute, 2010).

Consequently, the concepts of respect, acceptance and belonging, personal empowerment, and intrinsic motivation are all rooted within the theory of psychology of

success (Hoy & Hannum, 1997; Loukas & Robinson, 2004; Norton, 2008). These essential factors emerge to explain the degree to which a student has a psychological orientation toward success or failure. Furthermore, many studies indicate that each of these factors correlates with academic success (Auer, 1992; Benham, 1993; Dweck, 2000; Klein & Keller, 1990; Rennie, 1991).

Respect. Twenty-first century classrooms have become more diverse, and teachers interact with students from diverse cultural and economic backgrounds as people, not problems (Magana Shubel, 2010). Students share in creating classroom communities where everyone is committed to helping one another learn and feel valued for his or her own special qualities (Magana Shubel, 2010). Recognition is often utilized more than rewards, prizes, or high grades. Recognition has frequently come in the form of a note from the teacher or the opportunity to present student work to real audiences in the classroom, school, and community (Beaudoin, 2010). Respect and recognition in the classroom enriches the lives of students, and gives those students who have lesser support outside school, their only chance at a bright future (Dodd, 1997). This feeling of respect can only be developed in a classroom where positive regard for individuals is present.

Acceptance and belonging. The feeling of affirmation and belonging encourages students to be more motivated in school and apply themselves to even difficult academics. Students who feel valued as a member of a learning community develop a sense of acceptance and belonging (Sapon-Shevin, 2008). Students, who feel like they belong, participate in classrooms that are friendly toward all learners, accepting of personal cultural backgrounds, and learning styles (Sagor, 2003). The more one feels accepted and acceptable, the more one will be able to express one's self, act

authentically, and be fully present to others (Osterman, 2000). This same sense of belonging and acceptance is essential to a young person's mental health and ability to trust and take risks (Shann, 1999; Shindler, 2009). Research has shown a relationship between a sense of belonging with acceptance and self-esteem (Osterman, 2000; Shann, 1999). Moreover, building a sense of classroom belonging and the sense of self- and peer-acceptance has been shown to promote higher achievement (Sanders & Rivers, 1996). The feeling of affirmation and belonging fosters students to be more motivated in school and apply themselves to academics, therefore; they thrive academically and emotionally (Sagor, 2003).

Personal empowerment. Personal empowerment is defined by one's sense of internal causality and orientation toward personal responsibility in which one is the author of his or her own fate (Shindler, 2009). The more personal empowerment a student possess, the more they feel that their destiny is in their own hands. Research has drawn a strong relationship between levels of student self-esteem and sense of personal empowerment (Hagborg, 1996; Klein & Keller, 1990; Sharidan, 1991). Study results have shown repeatedly that students with higher degrees of personal empowerment demonstrate higher levels of achievement (Auer, 1992; Hoge, Smith, & Hanson, 1990). In fact, having high levels of personal empowerment have been shown to be an even more significant predictor of achievement than intelligence or socioeconomic status (Hagborg, 1996).

Students build the capacity of personal empowerment through their interactions with teachers and the opportunities that teachers provide them to evaluate themselves positively. Teachers create a sense of autonomy in their students by encouraging them to

use their own decision making abilities to solve problems and decide for themselves what resources to use to successfully complete assignments (Urdan & Maehr, 1995; Wentzel, 1999). When students are provided meaningful, authentic learning opportunities that spark their natural interests and goals for learning, they are transformed from passive learners to empowered learners. To empower students means to step away from our comfort zones and let students become the teachers, facilitators, and leaders in our schools (Kreisberg, 1992; Maehr & Midgley, 1996).

Intrinsic motivation. Students who deem to be competent have a sense of personal strength, confidence, strong sense of self-worth, and motivation. Students who feel a sense of success in the classroom are able to experience the satisfaction of feeling competent (Sagor, 2003; McCombs & Whisler, 1997). Competent students are able to monitor personal progress, are involved in the assessment of the work, and demonstrate proficiency on standards. All of these contribute to a student's self-motivation (Sagor, 2003). In addition, students who see themselves as a useful part of the team, also feel they have a real contribution to a larger cause due to their internal motivation. Therefore, when students feel useful, they have a sense of hard work ethic that contributes to their learning and understanding of concepts (Sagor, 2003).

Classrooms that foster self-fulfillment, enjoyment, and desire to achieve mastery of the subject are intern developing intrinsic motivation in students. These are environments where teachers provide frequent positive feedback that supports students' beliefs that they can do well (Brozo, 2005; Kurvink, 1993). Ensuring opportunities for students' success by assigning tasks that are neither too easy nor too difficult also contributes. Research has also shown that students with an intrinsic motivation have

been provided the opportunities to find personal meaning and value in the subject material that is taught (Anderman & Leake, 2005). Therefore, intrinsic motivation promotes a strong foundation for academic success. This can only be developed when learning is taking place in an atmosphere that is open and positive, where students feel that they are valued members of a learning community.

Conclusion

Schools cannot be great places for students to learn, if they are not great places for adults to work. The attitude of those serving always rubs off on those being served. A supportive, collaborative workplace that fully engages talented teachers is the only setting that students have opportunities to reach their fullest potential (McCombs & Whisler, 1997; Stockard & Mayberry, 1992). Evidence supports that achievement-oriented emphasis creates a school climate in which both teachers and students are more likely to persist in their academic efforts and succeed (Lee & Loeb, 2000; Lee & Smith, 1999; Phillips, 1997). Therefore, teachers who feel appreciated, connected, and energized by their colleagues and school leaders are the most likely to bring out the best in their students. Respected adults engage in respectful interactions in which respectful students can blossom (Lee & Smith, 1999; Phillips, 1997).

CHAPTER THREE

Methodology

The purpose of the study is to determine the effect of improved school climate, as teachers' beliefs changed from negative to positive over time, on students' reading, math, and writing assessment scores and teacher administered grade scores in reading, math, and writing.

Participants

Number of participants. Seventy-five ($N = 75$) fifth-grade students were selected to participate in the study.

Gender of participants. Of the total number of participants ($N = 75$), the gender ratio is 35 males (47%) and 40 females (53%).

Age range of participants. The age range of the study participants is 10 years to 11 years of age.

Racial and ethnic origin of participants. Of the total number of participants ($N = 75$), the racial and ethnic origin is 84% White, 11% Asian, 3% African American, and 3% Hispanic.

Inclusion criteria of participants. Students who attended the research elementary school at the beginning of third-grade through the end of fifth-grade that took the district Essential Learner Outcome Assessment in reading, math, and writing and received teacher administered grade scores in the concurrent subjects were selected for study participation.

Method of participant identification. Students in the research elementary school, where the measured school climate changed from negative to positive over time,

were selected for study participation. Students' below proficient, barely proficient,

proficient, and beyond proficient reading, math, and writing assessment scores, and

teacher administered grade scores of 1, 2, 3, 4, and 5 in the concurrent subjects were

analyzed to determine nomenclature category change over time as the school climate

improved. Study participants' pretest data were collected in the spring of 2006, when the

school climate was measured as negative and posttest data were collected in the spring of

2008, when the school climate was measured as positive and new administrative

leadership was assigned.

Description of Procedures

Permission from the appropriate research school district personnel was obtained.

All study data was routinely collected archival school information. Reading, math, and

writing assessment data was collected from the 2005-2006 and 2007-2008 school years as

students were in third-grade and fifth-grade. Teacher administered grade scores was

collected from the same school years in the concurrent subjects.

Research design. The pretest-posttest single-group comparative efficacy study

design extended in time is displayed in the following notation:

Group 1 $X_1 \, Y_1 \, O_1 \, Y_2 \, O_2$

Group 1 = study participants. Naturally formed group of students ($N = 75$) who

attended the research elementary school in 2005-2008.

X_1 **= study constant.** All students completed third-grade through fifth-grade in

the research elementary school where teachers' ($N = 33$) aggregate *Effective School*

Survey score in 2005 was, $M = 38.50$ ($SD = 5.36$) and teachers' ($N = 33$) aggregate

Effective School Survey score in 2008 was, $M = 54.95$ ($SD = 3.84$). For this study, the

research school districts' aggregated benchmark score of 50 was utilized to indicate a positive school climate designation. A two-sample t test assuming equal variances was calculated for the nine aggregated domain area scores across time 2005 and 2008 for the teachers completing the survey. Results were statistically different in the direction of improvement where, $t(16) = 7.47$, $p < .0001$ (two-tailed), $d = 3.521$, and domain score difference 2005 compared to 2008 was: Monitoring Student Achievement (+12.68); Parent/Community Involvement (+11.51); Preparing for Future (+16.62); Building Cohesiveness (+18.36); Positive Attitude (+20.17); Fair and Proactive Discipline (+30.89); High Expectations (+10.70); Student Success (+8.51); and Rules and Supervision (+18.56).

Y_1 = study independent variable, negative school climate. Students were enrolled in the research elementary school when teacher's beliefs negatively impacted the school climate during 2005-2006.

Y_2 = study independent variable, positive school climate. Students were enrolled in the research elementary school when teacher's beliefs were positively impacted the school climate 2007-2008.

O_1 = study pretest dependent measures for third-grade assessment scores and grade scores. (1) Criterion referenced achievement test as measured by the research school districts' third-grade Essential Learner Outcome assessments in the areas of (a) reading, (b) math, and (c) writing for each nomenclature category of (a) below proficient, (b) barely proficient, (c) proficient, and (d) beyond proficient. (2) End of third-grade teacher administered grade scores in the areas of (a) reading, (b) math, and (c) writing for each grade score of (a) 1, (b) 2, (c) 3, (d) 4, and (e) 5.

O$_2$ = study posttest dependent measures for fifth-grade assessment scores and grade scores. (1) Criterion referenced achievement test as measured by the research school districts' fifth-grade Essential Learner Outcome assessments in the areas of (a) reading, (b) math, and (c) writing for each nomenclature category of (a) below proficient, (b) barely proficient, (c) proficient, and (d) beyond proficient. (2) End of fifth-grade teacher administered grade scores in the areas of (a) reading, (b) math, and (c) writing for each grade score of (a) 1, (b) 2, (c) 3, (d) 4, and (e) 5.

Independent Variable Descriptions

The independent variable for this study is the change in reported teachers' beliefs that negatively impacted the school climate in 2005-2006 changing to reported teachers' beliefs that positively impacted the school climate in 2007-2008 following a change in administrative leadership.

Dependent Variable Descriptions

The dependent variables for this study are (1) Criterion referenced achievement test as measured by the research school districts' Essential Learner Outcome assessments in the areas of (a) reading, (b) math, and (c) writing for each nomenclature category of (a) below proficient, (b) barely proficient, (c) proficient, and (d) beyond proficient. (2) Teacher administered grade scores in the areas of (a) reading, (b) math, and (c) writing for each grade score of (a) 1, (b) 2, (c) 3, (d) 4, and (e) 5.

Research Questions and Data Analysis

The following research questions will be addressed and answered as part of the study:

Overarching Pretest-Posttest Criterion-Referenced Reading Achievement

Research Question #1. In classrooms where teachers' beliefs changed from negative to positive over time, did students lose, maintain, or improve their third-grade pretest compared to their fifth-grade posttest reading Essential Learner Outcome assessment nomenclature category of below proficient, barely proficient, proficient, or beyond proficient?

Analysis. Research Sub-Question #1 utilized a chi-square test of significance for the data sets observed versus expected cell frequencies used to compare students lose, maintain, or improve third-grade pretest compared to their fifth-grade posttest reading Essential Learner Outcome assessment of a below proficient, barely proficient, proficient, and beyond proficient nomenclature category result. An alpha level of .01 was utilized to test the null hypothesis for these frequencies. Frequencies and percentages are displayed in tables.

Overarching Pretest-Posttest Criterion-Referenced Math Achievement

Research Question #2. In classrooms where teachers' beliefs changed from negative to positive over time, did students lose, maintain, or improve their third-grade pretest compared to their fifth-grade posttest math Essential Learner Outcome assessment nomenclature category of below proficient, barely proficient, proficient, or beyond proficient?

Analysis. Research Sub-Question #2 utilized a chi-square test of significance for the data sets observed versus expected cell frequencies used to compare students lose, maintain, or improve third-grade pretest compared to their fifth-grade posttest math Essential Learner Outcome assessment of below proficient, barely proficient, proficient,

or beyond proficient nomenclature category result. An alpha level of .01 was utilized to test the null hypothesis for these frequencies. Frequencies and percentages are displayed in tables.

Overarching Pretest-Posttest Criterion-Referenced Writing Achievement Research Question #3. In classrooms where teachers' beliefs changed from negative to positive over time, did students lose, maintain, or improve their third-grade pretest compared to their fifth-grade posttest writing Essential Learner Outcome assessment nomenclature category of below proficient, barely proficient, proficient, or beyond proficient?

Analysis. Research Sub-Question #3 utilized a chi-square test of significance for the data sets observed versus expected cell frequencies used to compare students lose, maintain, or improve third-grade pretest compared to their fifth-grade posttest writing Essential Learner Outcome assessment of a below proficient, barely proficient, proficient, or beyond proficient nomenclature category result. An alpha level of .01 was utilized to test the null hypothesis for these frequencies. Frequencies and percentages are displayed in tables.

Overarching Pretest-Posttest Reading Grade Score Research Question #4. In classrooms where teachers' beliefs changed from negative to positive over time, did students lose, maintain, or improve their ending third-grade pretest compared to their ending fifth-grade posttest reading grade score of a 1 (100-93%), 2 (92-85%), 3 (84-77%), 4 (76-69%), or 5 (68-0%) nomenclature category?

Analysis. Research Sub-Question #4 utilized a chi-square test of significance for the data sets observed versus expected cell frequencies used to compare students lose,

maintain, or improve ending third-grade pretest compared to their ending fifth-grade posttest reading grade score of a 1 (100-93%), 2 (92-85%), 3 (84-77%), 4 (76-69%), or 5 (68-0%) nomenclature category result. An alpha level of .01 was utilized to test the null hypothesis for these frequencies. Frequencies and percentages are displayed in tables.

Overarching Pretest-Posttest Math Grade Score Research Question #5. In classrooms where teachers' beliefs changed from negative to positive over time, did students lose, maintain, or improve their ending third-grade pretest compared to their ending fifth-grade posttest math grade score of a 1 (100-93%), 2 (92-85%), 3 (84-77%), 4 (76-69%), or 5 (68-0%) nomenclature category?

Analysis. Research Sub-Question #5 utilized a chi-square test of significance for the data sets observed versus expected cell frequencies used to compare students lose, maintain, or improve ending third-grade pretest compared to their ending fifth-grade posttest math grade score of a 1 (100-93%), 2 (92-85%), 3 (84-77%), 4 (76-69%), or 5 (68-0%) nomenclature category result. An alpha level of .01 was utilized to test the null hypothesis for these frequencies. Frequencies and percentages are displayed in tables.

Overarching Pretest-Posttest Writing Grade Score Research Question #6. In classrooms where teachers' beliefs changed from negative to positive over time, did students lose, maintain, or improve their ending third-grade pretest compared to their ending fifth-grade posttest writing grade score of a 1 (100-93%), 2 (92-85%), 3 (84-77%), 4 (76-69%), or 5 (68-0%) nomenclature category?

Analysis. Research Sub-Question #6 utilized a chi-square test of significance for the data sets observed versus expected cell frequencies used to compare students lose, maintain, or improve ending third-grade pretest compared to their ending fifth-grade

posttest writing grade score of 1 (100-93%), 2 (92-85%), 3 (84-77%), 4 (76-69%), or 5 (68-0%) nomenclature category result. An alpha level of .01 was utilized to test the null hypothesis for these frequencies. Frequencies and percentages are displayed in tables.

Data Collection Procedures

Permission from the appropriate research school personnel was obtained before data was collected. All study data were retrospective, archival, and routinely collected as part of school records. Participant data includes achievement data and grade scores. Non-coded numbers were used to display individual anonymous achievement data and grade scores. Data, descriptive statistics, and inferential analysis has been utilized and reported.

Performance site. This research was conducted in the public school setting through normal educational practices. The study procedures did not interfere in any way with the normal educational practices of the public school and did not involve coercion or discomfort of any kind. All data was analyzed and kept secure in the researcher's office. Data was stored on spreadsheets and a flash drive for statistical analysis and kept in a locked file cabinet. No individual identifiers were attached to the data once the data are linked.

Institutional Review Board (IRB) for the protection of Human Subjects Approval Category.

The exemption categories for this study will be provided under 45CFR.101(b) categories 4. The research was conducted using routinely collected archival data. A letter of support from the district has been provided for IRB review. The exemption categories data collected for this study are achievement data and grade scores. Parents,

teachers, and administrators use the achievement data reports to assess individual

progress in the given grade level. Data collected from the achievement tests were used

by the research school district to evaluate and compare school performance within the

district. Grade scores are given each quarter as a measure to students' demonstration of

mastery on the given content standards. Therefore, all safeguards for human subjects

were preserved and the review of achievement data and grade scores did not present a

potential risk for human subjects.

CHAPTER FOUR

Results

Purpose of the Study

The purpose of the study is to determine the effect of improved school climate, as teachers' beliefs changed from negative to positive over time, on students' reading, math, and writing assessment scores and teacher administered reading, math, and writing grade scores.

Independent Variable

The independent variable for this study is the change in reported teachers' beliefs that negatively impacted the school climate in 2005-2006 changing to reported teachers' beliefs that positively impacted the school climate in 2007-2008 following a change in administrative leadership.

Dependent Variable

The dependent variables for this study are (1) Criterion referenced achievement test as measured by the research school districts' Essential Learner Outcome assessments in the areas of (a) reading, (b) math, and (c) writing for each nomenclature category of (a) below proficient, (b) barely proficient, (c) proficient, and (d) beyond proficient. (2) Teacher administered grade scores in the areas of (a) reading, (b) math, and (c) writing for each grade score of (a) 1, (b) 2, (c) 3, (d) 4, and (e) 5.

All study achievement data and grade score data related to each of the dependent variables were retrospective, archival, and routinely collected school information. Permission from the appropriate research school personnel was obtained before data were collected and analyzed.

Table 1 displays demographic information of individual students who attended third-grade through fifth-grade in the research elementary school.

Research Question #1

The first hypothesis was tested using chi-square (X^2). The results of X^2 displayed in Table 2 for students lose, maintain, or improve third-grade pretest compared to fifth-grade posttest reading Essential Learner Outcome assessment below proficient, barely proficient, proficient, or beyond proficient nomenclature category result were statistically different (X^2(6, N = 75) = 22.00, p = .001), so the null hypothesis of no difference or congruence for the nomenclature category change result for reading was rejected.

Research Question #2

The second hypothesis was tested using chi-square (X^2). The results of X^2 displayed in Table 3 for students lose, maintain, or improve third-grade pretest compared to fifth-grade posttest math Essential Learner Outcome assessment below proficient, barely proficient, proficient, or beyond proficient nomenclature category result were statistically different (X^2(6, N = 75) = 69.20, p = .000), so the null hypothesis of no difference or congruence for the nomenclature category change result for math was rejected.

Research Question #3

The third hypothesis was tested using chi-square (X^2). The results of X^2 displayed in Table 4 for students lose, maintain, or improve third-grade pretest compared to fifth-grade posttest writing Essential Learner Outcome assessment below proficient, barely proficient, proficient, or beyond proficient nomenclature category result were statistically different (X^2(6, N = 75) = 18.60, p = .005), so the null hypothesis of no difference or congruence for the nomenclature category change result for writing was rejected.

Research Question #4

The fourth hypothesis was tested using chi-square (X^2). The results of X^2 displayed in Table 5 for students lose, maintain, or improve ending third-grade pretest compared to ending fifth-grade posttest reading grade scores result were statistically different (X^2(6, N = 75) = 30.30, p = .000), so the null hypothesis of no difference or congruence for the reading grade scores change result was rejected.

Research Question #5

The fifth hypothesis was tested using chi-square (X^2). The results of X^2 displayed in Table 6 for students lose, maintain, or improve ending third-grade pretest compared to ending fifth-grade posttest math grade scores result were not statistically different (X^2(6, N = 75) = 14.00, p = .030), so the null hypothesis of no difference or congruence for the math grade scores change result was not rejected because statistical significance for the data sets observed versus expected cell frequencies used for calculation with df = 6 and a tabled value = 16.812 required to obtain an alpha level of .01, the threshold for statistical significance for this research question was not met.

Research Question #6

The sixth hypothesis was tested using chi-square (X^2). The results of X^2 displayed in Table 7 for students lose, maintain, or improve ending third-grade pretest compared to ending fifth-grade posttest writing grade scores result were statistically different (X^2(6, N = 75) = 35.20, p = .000), so the null hypothesis of no difference or congruence for the writing grade scores change result was rejected.

Table 1

Demographic Information of Individual Students Who Attended Third-Grade Through Fifth-Grade in the Research Elementary School

Student Number	Gender	Ethnicity	Special Education
1.	Male	Caucasian	No
2.	Male	Caucasian	No
3.	Male	Caucasian	Yes
4.	Male	Caucasian	Yes
5.	Male	Caucasian	Yes
6.	Female	African American	Yes
7.	Female	Caucasian	No
8.	Male	Caucasian	No
9.	Male	Hispanic	No
10.	Female	Caucasian	Yes
11.	Male	Caucasian	No
12.	Male	Caucasian	Yes
13.	Female	Caucasian	No
14.	Male	Caucasian	Yes
15.	Male	Caucasian	No
16.	Female	Caucasian	No
17.	Female	Caucasian	No
18.	Female	Caucasian	No
19.	Female	Caucasian	No
20.	Female	Caucasian	No
21.	Male	Caucasian	No
22.	Male	Caucasian	No
23.	Male	Caucasian	Yes
24.	Female	Caucasian	No
25.	Female	Caucasian	No
26.	Female	Caucasian	Yes
27.	Male	Caucasian	No
28.	Female	African American	No
29.	Female	Caucasian	No
30.	Female	Caucasian	No
31.	Male	Caucasian	No
32.	Female	Asian	Yes
33.	Male	Asian	No
34.	Female	Caucasian	No
35.	Female	Caucasian	No
36.	Male	Caucasian	No
37.	Male	Asian	No

Table 1 Continued

Demographic Information of Individual Students Who Attended Third-Grade Through Fifth-Grade in the Research Elementary School

Student Number	Gender	Ethnicity	Special Education
38.	Female	Asian	No
39.	Female	Caucasian	No
40.	Male	Asian	No
41.	Male	Caucasian	No
42.	Female	Caucasian	No
43.	Male	Caucasian	No
44.	Male	Caucasian	No
45.	Male	Caucasian	Yes
46.	Male	Asian	No
47.	Male	Caucasian	No
48.	Male	Caucasian	No
49.	Male	Caucasian	Yes
50.	Female	Caucasian	No
51.	Female	Caucasian	No
52.	Female	Caucasian	No
53.	Female	Hispanic	No
54.	Female	Asian	No
55.	Male	Caucasian	No
56.	Female	Caucasian	No
57.	Male	Caucasian	No
58.	Female	Caucasian	Yes
59.	Male	Caucasian	No
60.	Female	Caucasian	No
61.	Male	Caucasian	Yes
62.	Male	Asian	No
63.	Female	Caucasian	No
64.	Female	Caucasian	No
65.	Female	Caucasian	No
66.	Female	Caucasian	No
67.	Female	Caucasian	No
68.	Female	Caucasian	No
69.	Female	Caucasian	No
70.	Female	Caucasian	No
71.	Female	Caucasian	No
72.	Female	Caucasian	Yes
73.	Male	Caucasian	No
74.	Female	Caucasian	Yes
75.	Male	Caucasian	No

Table 2

Chi-Square Test of Significance for Students Lose, Maintain, or Improve Third-Grade Pretest
Compared to Fifth-Grade Posttest Reading Essential Learner Outcome Assessment Below
Proficient, Barely Proficient, Proficient, or Beyond Proficient Nomenclature Category Result

	Reading Essential Learner Outcome Proficiency Category								
	Below		Barely		Proficient		Beyond		
Reading Result	N	$(\%)$	N	$(\%)$	N	$(\%)$	N	$(\%)$	X^2
Improve	4	(57)	6	(40)	10	(37)	0	(0)	
Maintain	3	(43)	9	(60)	11	(41)	15	(58)	
Lose	0	(0)	0	(0)	6	(22)	11	(42)	
Total	7	(100)	15	(100)	27	(100)	26	(100)	22.00[a]***

[a]Statistical significance for the data sets observed versus expected cell frequencies used for calculation with $df = 6$ and a tabled value = 16.812 required to obtain an alpha level of .01, the threshold for statistical significance for this research question.
***$p = .001$.

Table 3

Chi-Square Test of Significance for Students Lose, Maintain, or Improve Third-Grade Pretest Compared to Fifth-Grade Posttest Math Essential Learner Outcome Assessment Below Proficient, Barely Proficient, Proficient, or Beyond Proficient Nomenclature Category Result

| | Math Essential Learner Outcome Proficiency Category | | | | | | | |
| | Below | | Barely | | Proficient | | Beyond | | |
Math Result	N	$(\%)$	N	$(\%)$	N	$(\%)$	N	$(\%)$	X^2
Improve	3	(100)	1	(9)	1	(5)	0	(0)	
Maintain	0	(0)	8	(73)	9	(47)	4	(10)	
Lose	0	(0)	2	(18)	9	(47)	38	(90)	
Total	3	(100)	11	(100)	19	(100)	42	(100)	69.20^{a}***

[a]Statistical significance for the data sets observed versus expected cell frequencies used for calculation with *df* = 6 and a tabled value = 16.812 required to obtain an alpha level of .01, the threshold for statistical significance for this research question.
***p = .000.

Table 4

Chi-Square Test of Significance for Students Lose, Maintain, or Improve Third-Grade Pretest Compared to Fifth-Grade Posttest Writing Essential Learner Outcome Assessment Below Proficient, Barely Proficient, Proficient, or Beyond Proficient Nomenclature Category Result

	Writing Essential Learner Outcome Proficiency Category								
	Below		Barely		Proficient		Beyond		
Writing Result	N	$(\%)$	N	$(\%)$	N	$(\%)$	N	$(\%)$	X^2
Improve	5	(71)	6	(28)	5	(20)	0	(0)	
Maintain	2	(29)	10	(48)	10	(42)	14	(61)	
Lose	0	(0)	5	(24)	9	(38)	9	(39)	
Total	7	(100)	21	(100)	24	(100)	23	(100)	18.60[a]***

[a]Statistical significance for the data sets observed versus expected cell frequencies used for calculation with $df = 6$ and a tabled value = 16.812 required to obtain an alpha level of .01, the threshold for statistical significance for this research question.
***$p = .005$.

Table 5

Chi-Square Test of Significance for Students Lose, Maintain, or Improve Ending Third-Grade Pretest Compared to Ending Fifth-Grade Posttest Reading Grade Score Result

	Reading Grade Scores				
	Grade of A	Grade of B	Grade of C	Grade of D	
Reading Result	*N* *(%)*	*N* *(%)*	*N* *(%)*	*N* *(%)*	X^2
Improve	0 (0)	21 (57)	13 (76)	1 (100)	
Maintain	15 (75)	15 (40)	4 (24)	0 (0)	
Lose	5 (25)	1 (3)	0 (0)	0 (0)	
Total	20 (100)	37 (100)	17 (100)	1 (100)	30.30[a]***

[a]Statistical significance for the data sets observed versus expected cell frequencies used for calculation with *df* = 6 and a tabled value = 16.812 required to obtain an alpha level of .01, the threshold for statistical significance for this research question.
***p = .000.

Table 6

Chi-Square Test of Significance for Students Lose, Maintain, or Improve Ending Third-Grade Pretest Compared to Ending Fifth-Grade Posttest Math Grade Score Result

	Math Grade Scores							
	Grade of A		Grade of B		Grade of C		Grade of D		
Math Result	*N*	*(%)*	*N*	*(%)*	*N*	*(%)*	*N*	*(%)*	X^2
Improve	0	(0)	12	(24)	6	(55)	1	(100)	
Maintain	8	(57)	26	(53)	4	(36)	0	(0)	
Lose	6	(43)	11	(22)	1	(9)	0	(0)	
Total	14	(100)	49	(100)	11	(100)	1	(100)	14.00[a†]

[a]Statistical significance for the data sets observed versus expected cell frequencies used for calculation with *df* = 6 and a tabled value = 16.812 required to obtain an alpha level of .01, the threshold for statistical significance for this research question.
[†]*p* = .030.

Table 7

Chi-Square Test of Significance for Students Lose, Maintain, or Improve Ending Third-Grade Pretest Compared to Ending Fifth-Grade Posttest Writing Grade Score Result

	Writing Grade Scores							
	Grade of A		Grade of B		Grade of C		Grade of D	
Writing Result	N	(%)	N	(%)	N	(%)	N	(%)	X^2
Improve	0	(0)	17	(55)	6	(75)	3	(100)	
Maintain	28	(85)	13	(42)	2	(25)	0	(0)	
Loose	5	(15)	1	(3)	0	(0)	0	(0)	
Total	33	(100)	31	(100)	8	(100)	3	(100)	35.20[a]***

[a]Statistical significance for the data sets observed versus expected cell frequencies used for calculation with $df = 6$ and a tabled value = 16.812 required to obtain an alpha level of .01, the threshold for statistical significance for this research question.
***$p = .000$.

CHAPTER FIVE

Conclusions and Discussion

The following conclusions may be drawn from the study for each of the six research questions.

Research Question #1 Conclusion

Overall, findings indicate that lose, maintain, or improve third-grade pretest compared to fifth-grade posttest reading Essential Learner Outcome assessment below proficient, barely proficient, proficient, or beyond proficient nomenclature category results were in the direction of statistically different nomenclature category improvement with 20 students (27%) improving their reading proficiency level, 38 students (51%) maintaining their reading proficiency level, and 17 students (22%) losing their reading proficiency level. The results indicate that fifth-grade posttest reading Essential Learner Outcome assessment scores were positively impacted by an improving school climate with the majority of the students improving or maintaining their proficiency level.

Research Question #2 Conclusion

Overall, findings indicate that lose, maintain, or improve third-grade pretest compared to fifth-grade posttest math Essential Learner Outcome assessment below proficient, barely proficient, proficient, or beyond proficient nomenclature category results were in the direction of statistically different nomenclature category improvement with 5 students (7%) improving their math proficiency level, 21 students (28%) maintaining their math proficiency level, and 49 students (65%) losing their math proficiency level. The results indicate that fifth-grade posttest math Essential Learner

Outcome assessment scores were not positively impacted by an improving school climate with the majority of the students losing their proficiency level.

Research Question #3 Conclusion

Overall, findings indicate that lose, maintain, or improve third-grade pretest compared to fifth-grade posttest writing Essential Learner Outcome assessment below proficient, barely proficient, proficient, or beyond proficient nomenclature category results were in the direction of statistically different nomenclature category improvement with 16 students (21%) improving their writing proficiency level, 36 students (48%) maintaining their writing proficiency level, and 23 students (31%) losing their writing proficiency level. The results indicate that fifth-grade posttest writing Essential Learner Outcome assessment scores were positively impacted by an improving school climate with the majority of the students improving or maintaining their proficiency level.

Research Question #4 Conclusion

Overall, findings indicate that lose, maintain, or improve third-grade pretest compared to fifth-grade posttest reading grade score of 1, 2, 3, 4, or 5 nomenclature category results were in the direction of statistically different nomenclature category improvement with 35 students (47%) improving their reading grade score, 34 students (45%) maintaining their reading grade score, and 6 students (8%) losing their reading grade score. The results indicate that fifth-grade posttest reading grade scores were positively impacted by an improving school climate with the majority of the students improving or maintaining their grade score.

Research Question #5 Conclusion

Overall, findings indicate that lose, maintain, or improve third-grade pretest compared to fifth-grade posttest math grade score of 1, 2, 3, 4, or 5 nomenclature category results were in the direction of statistically different nomenclature category improvement with 19 students (25%) improving their math grade score, 38 students (51%) maintaining their math grade score, and 18 students (24%) losing their math grade score. The results indicate that fifth-grade posttest math grade scores, although not statistically significant, were positively impacted by an improving school climate with the majority of the students improving or maintaining their grade score.

Research Question #6 Conclusion

Overall, findings indicate that lose, maintain, or improve third-grade pretest compared to fifth-grade posttest writing grade score of 1, 2, 3, 4, or 5 nomenclature category results were in the direction of statistically different nomenclature category improvement with 26 students (35%) improving their writing grade score, 43 students (57%) maintaining their writing grade score, and 6 students (8%) losing their writing grade score. The results indicate that fifth-grade posttest writing grade scores were positively impacted by an improving school climate with the majority of the students improving or maintaining their grade score.

Discussion

The purpose of this study was to measure the impact an improved school climate had on student achievement. In an attempt to provide more specific research regarding teacher's professional beliefs, which influence a school climate, and the impact this has on student achievement, it was concluded there was a positive and statistically significant

impact on student achievement (i.e. assessment results and grade scores). This study demonstrates that school climate is a factor worth considering in understanding the levels of student achievement or lack thereof. School climate is influenced by the extent to which members of the school community feel socially, emotionally, and physically safe. Research suggests that a sustainable, positive school climate has an impact on students' academic achievement, mental health, graduation rates, school connectedness, teacher retention, and risk prevention (Cohen & Geier, 2010). Therefore, the results of this study have potential implications for all schools, classrooms, and educators.

Implications for practice. The creation of a positive climate is the responsibility of all stakeholders, including administration, teachers, students, and parents. The school community must have a shared vision and plan for promoting, enhancing, and sustaining a positive school climate for students, as well as teachers. All members of the school community must be committed to physical, emotional, and intellectual safety for the teaching staff and for all learners. This progressive environment begins with the driving force of the principal. The school leader is an integral factor in the development of an open and positive school climate. The leader that promotes personal growth by encouraging teamwork, shared decision-making, and ethical caring behavior will cultivate a positive climate in which the school members desire to work and strive toward the achievement of the organization's mission and goals. This professional fulfillment and satisfaction overflows into the classrooms where students are then giving these same opportunities to foster and grow emotionally and academically.

A clear understanding that school climate improvement is an ongoing organic process is integral to wider school improvement. This process must be understood and

obeyed by all stakeholders. The school improvement process should embrace school

climate data and should be analyzed to inform practice. This plan for improvement must

embark on professional development for continuous improvement that becomes

embedded in the culture of the school. Intentional and tactical plans to adjust school

climate should be reviewed yearly. In order for the school improvement process to be

successful and continually support school climate, all stakeholders need to assume

ownership and responsibility for improving student and teacher connectedness and

minimize barriers to learning and growing for students as well as professionals.

Integrating school improvement measures into the day-to-day ebb and flow of school

procedures is imperative for both teacher professional growth and student academic

success.

Implications for policy. District and school policy must actively support

practices that contribute to the promotion and implementation of positive school climate

initiatives. Policies must encourage, support, and reward implementation and

sustainability of a positive school climate. In addition, school policy must seek to

promulgate the implementation of positive school climate initiatives based on research

and evidence of practice. District and school policies should specifically promote and

sustain the development of social, emotional, ethical, and intellectual, skills, knowledge,

and dispositions that will serve as a comprehensive system to remove barriers to learning

and teaching and to continuiously reengage students and teachers who have become

disengaged.

To ensure district and school policies are supportive of a positive school climate,

district policymakers and educational leaders must exercise specific practices through

their strategic planning and school improvement processes. Ensuring the school mission and vision aligns to positive school climate goals is the first step in true policy change. The perception of "what's measured is what matters" is the stance that holds true in the school improvement process. Another important step is to take a critical look at the data collection methods and accountability measures in regard to school climate. Creating standards for school climate assessment procedures and guidelines for selecting a school climate measure should be developed at the district level. Reporting results to all stakeholders and developing action plans based on the data is the essential phase. Staff hiring decisions should also be link to the beliefs and importance of a positive school climate. Alignment of policy and practice is the heart of a positive school climate.

Implications for further research. It is clear that students through their academic performance will reflect a schools' positive school climate. While all groups in this study performed well during their intermediate years, it is unknown the impact school climate had on their primary years when the educational foundation was being created. The premise of this study is that students perform better in a positive school climate that is impacted by teachers' professional beliefs and where strong administrative leadership is present. Therefore, additional research must be conducted to follow these students to determine if this positive impact is sustained through their educational career.

School climate is an essential factor in students' academic, social, emotional, and ethical development and wellbeing. Students who experience a sense of safety, have healthy adult and peer relationships, feel respected, and are encouraged to take ownership in creating a positive school climate are well on their way to becoming productive

citizens with the academic resources necessary to make a positive difference in their own

lives--and the lives of others in their school community as well.

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