A Comparative Study of School Climate in Select Elementary Schools from One School Division in Virginia with Varied Title I and Accreditation Statuses

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Abstract

The purpose of this study was to compare school climate in a sampling of four Title I and four Non-Title I elementary schools in one school division in Virginia with varied accreditation statuses. The Organizational Climate Descriptive Questionnaire—Revised Elementary (OCDQ-RE), created by Hoy (1990) was utilized to measure school climate. The OCDQ-RE questionnaire were handed out during a regularly scheduled faculty meeting at each of the eight schools selected for the study. Of the 255 surveys that were distributed collectively, 165 participant surveys were collected for a return rate of 65%. In measuring school climate, the mean and standard deviation were computed for each of the six subtests of school climate: Supportive Principal Behavior, Directive Principal Behavior, Restrictive Principal Behavior, Collegial Teacher Behavior, Intimate Teacher Behavior, and Disengaged Teacher Behavior. These subtests were combined to determine teacher openness, principal openness and overall school climate. Descriptive and inferential statistics did not reveal significant differences in principal openness, teacher openness or overall school climate in schools of varying Title I and accreditation status. However, descriptive and inferential statistics revealed differences in component subtests of the OCDQ-RE. Specifically, a comparison of the standardized mean scores for each subset based on Title I status and accreditation status revealed some variations. Using inferential statistics, significant differences were found among school climate in the areas of supportive principal behavior, restrictive principal behavior and intimate teacher behavior.

Dedication

This paper is dedicated to the individuals who believed in me, supported me and encouraged me through this process. At the top of the list are my two favorite people on the planet, my husband, David, and my gift son, Matvei. This is yet another indication that my life is truly better with you two in it. Thank you for the time that you gifted me to complete this process and for constantly encouraging me along the way. From the many weekends that you two planned your own adventures to the hiring of a housekeeper (we are going to keep her) so that I could focus on my research, you are loved and appreciated more than you will ever know. I am truly excited about the wonderful opportunities that await us in the future.

This paper is also dedicated to my father, mother and three brothers. Growing up, my parents always stressed the importance of getting good grades and a quality education. I will always remember the day I graduated from college and the sheer pride on the faces of my parents. As the first person in my family to graduate from college, that degree belonged to all of us. Many years later, I was encouraged to pursue a doctoral degree. Although my father passed away before I began this program, he certainly had a role in the pursuit of this degree. I want to thank him and the rest of my family for always encouraging me to chase my dreams.

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To my doctoral cohort, I have enjoyed our years together and will miss the weekly discussions about how we try to juggle work, family and coursework. From the group projects and grueling statistics exams to the many papers and presentations, I have learned so much from each of you. Although we will not have a formal time to meet each week, I wish each of you continued success and I hope that we will have opportunities to keep in touch.

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Chapter 1

Introduction

With the implementation of the No Child Left Behind Act (NCLB) of 2001, a reauthorization of the Elementary and Secondary Education Act (ESEA), school administrators and teachers faced a new set of accountability measures in which student achievement on high-stakes assessments became the primary measure of school success and accountability. To the detriment of educational quality, this new accountability context created great anxiety for educators, (Steicher & Kirby, 2004). Schools with high rates of teacher dissatisfaction are likely to experience problems such as poor teacher morale, teacher turnover, and lower student achievement (Owens & Valesky, 2007). In response, principals work to reach targets for standardized test scores as well as strive to retain high quality teachers in the context of increasing pressures.

Current mandates from state and federal government have impacted school climate just as they have impacted the educational experience of students (Lashway, 2000). As school leaders analyze data to determine areas of concern in developing a school improvement plan, they should realize their inability to accomplish goals in isolation. Rather, administrators must support teachers and work collaboratively to reach the established goals. An avenue for increasing student performance is improving school climate (Hoy, Smith, & Sweetland, 2002) and the principal as school leader has a significant role to play in shaping the climate. Stover (2005) emphasized the importance of the principal's role:

> In the final analysis, researchers say, any serious look at school climate and culture should lead policymakers to a simple—and challenging conclusion: Almost everything depends on leadership. Forget about the fancy programs or interventions. Attitudes and behaviors in school are not going to change unless the principal understands how to work with existing culture—and knows how to help it evolve into a healthier one. (p. 32)

As more and more schools face the reality of not meeting federal and state benchmarks, principals are examining and retooling their leadership practices in hopes of making academic gains (Luizzi, 2007). Considering that school climate has a direct impact on staff morale, motivation, and student achievement (Darling-Hammond, 2007; Gurr, Drysdale, & Mulford, 2006; Levitt, 2008), it is necessary to delve into potential influences on school climate. One such

influencing factor is leadership practices (Smith, 2005), and the overarching context of school climate is the specific focus of this study. The purpose of this study is to examine the relationship between school climate, Title I status and school accreditation status, thereby adding to current body of knowledge regarding school climate.

Overview of the Study

The study was conducted in one of the largest suburban school divisions in Virginia. In order to protect anonymity, it was referred to as Apple Public Schools. The division has 28 elementary schools with 10 of these schools receiving school-wide Title I funding. Based on published data, 18 of these schools maintained fully accredited status for the 2013-2014 School Year, while 10 schools were identified as accredited with a warning for the first time. An equal sampling of eight schools, Title I and Non-Title I, that have been identified as fully accredited or not fully accredited were used for the study. Table 1 communicates the intersection of Title I and accreditation statuses for the eight schools in the sample.

Table 1

Identifying Factors of Schools Used in the Sample

	Fully Accredited Status	Not Accredited Status
Title I Funded Schools	2	2
Non-Title I Schools	2	2

The Organizational Climate Descriptive Questionnaire—Revised Elementary (OCDQ-RE), a survey instrument developed by Hoy (1990) to assess school climate, was administered to teachers in the sample. Once the surveys were collected, data were analyzed to determine the relationship between accreditation status, Title I status and school climate. Within SPSS, a two-way analysis of variance (ANOVA) test was used to examine differences in school climate based on school status designations.

Historical Perspective

Accountability pressures. With the implementation of NCLB of 2001, a reauthorization of the ESEA of 1965, states were required to make educational reforms aligned with four basic

principles of NCLB: increased accountability for results, improved flexibility and local control, expanded options for parents, and an emphasis on research-based teaching methods (U.S. Department of Education [USED], 2002). These reforms were designed to track the progress of schools and ensure that all students become grade level proficient in reading and math by 2014 (Spellings, 2007). Each state defines adequate yearly progress (AYP) differently. However, accountability measures remain the same across all states. In June 2012, the Commonwealth of Virginia was granted a waiver from the NCLB requirements. The waiver allowed Virginia's Board of Education to develop attainable goals for increasing overall student achievement and the achievement of students in demographic subgroups. AYP goals were replaced by annual measureable objectives (AMOs) in reading and math. Schools are required to meet established benchmarks. If a school fails to meet established benchmarks for 2 consecutive years, it is identified as needing improvement. Non-Title I schools or districts are *not* required to apply the same sanctions as do Title I schools as indicated above.

The Virginia Department of Education (VDOE) developed standards of learning (SOL) exams to measure student performance in the core content areas of English, math, science, and social studies in Grades 3 through 5, 6 through 9, and 10 through 12. Virginia schools that maintain a pass rate of 95% or higher in all content areas for two years are awarded full accreditation status for a 3-year period thereby exempt from testing for that time period. In contrast, accountability systems also include sanctions for schools not meeting expectations. Some examples of these sanctions include loss of funding, mandatory supplemental services for students and outright school restructuring or closure (VDOE, 2013). Considering that Title funds are designed to level the playing field for children living in poverty or children from disadvantaged backgrounds so that they may be better able to meet strict state academic achievement standards, a potential loss of funding impacts resources that exist in a school and potentially student achievement (Mackay, 2009). While state assessments are mandated for schools to show progress under state and federal accountability requirements, assessing school climate has received only minimal attention from policy makers as a critical element of accountability.

School climate. Research on the climate of a workplace began in the 1950s and was termed organizational climate. School climate research grew out of this larger, wide-ranging research base. To integrate this broader understanding into the concept of climate in schools, the

terms *school climate* and *organizational climate* were used interchangeably in this study. School climate is defined as the character of school life and the various patterns that reflect a school's goals, values and interpersonal relationships (Cohen, McCabe, Michelli, & Nicholas, 2009). These relationships include peer-to-peer collegial relationships as well as those with leadership (Leithwood, 2005; Marzano, 2003; Marzano, Waters, & McNulty, 2005). Owens (2004) stated that educational research on school climate offers evidence that learning takes place when there is a specific climate to enhance teaching and learning. Since climate impacts student achievement, an exploration of school climate is warranted, providing valuable information for school leaders.

The principal's role in shaping school climate. Researchers indicate the leadership style of the principal has an effect on school climate (Al-Askar, 2002; Al-Gasim, 1991; Hawkins, 2002; Laredo, 2006; O'Connor, 2001; Sims, 2005; Williamson, 2007). A principal has the responsibility of establishing a positive school climate by providing leadership in developing and sustaining a climate that is conducive to learning (Dietrich & Bailey, 1996). Research has indicated that employers and employees relate in ways that enable leaders to inspire motivation and commitment in a productive environment (Owens & Valesky, 2007). The relationship between school climate and leadership behaviors is one factor of school success, and the principal affects climate and the success of the school (Ali & Hale, 2009; Kelley, Thorton, & Daugherty, 2005).

Collegial conditions. In addition to the tone set by a principal, the relationships established in the workplace between staff members impact school climate. When teachers collaborate, morale is higher, positive attitudes flourish, teachers are more driven and a positive climate exists (Ali & Hale, 2009; Hoy, Tarter, & Kottkamp, 1991; Lehr, 2005; Mohan & Ashok, 2011), yet attrition rates suggest that these positive relationships are in short-supply—or are not enough to keep teachers in the workplace. Research indicates that a growing number of elementary teachers are quitting the profession due to burnout, specifically in the high-stakes testing grades, Grade 3 through 5 (Hanson, 2006). Hirsch and Emerick (2006) asserted, "Unfortunately, many schools across the country face persistent teacher working condition challenges that are closely related to high teacher turnover rates and chronic difficulties in recruiting and retaining teachers" (p. 1). Teacher burnout has been shown to have negative effects on teacher and student performance (Durr, 2008). It is vital that principals work to retain

quality teachers and create collaborative teams that share the responsibility of determining a path for academic improvement, especially in a time of high-stakes accountability (Wagner, Kegan, Lahey, Lemons, Garnier, Helsing, & Rasmussen, 2006).

Student achievement. Realizing the pivotal role of the school principal in shaping a positive climate, school leaders have the potential to establish a positive work environment characterized by determination and motivation by teachers, staff, and students. This creates a climate that promotes higher achievement by teachers and students (Hoyle, English, & Steffy, 1985; Robinson, 2010). Teachers' perceptions, demeanor and expectations—elements of school climate—directly influence student performance (Le Cornu, 2009). Research indicates that a positive climate increases student achievement while a negative climate makes it difficult to increase student achievement (Dorathi, 2011). Additionally, schools with high achievement rates are characterized by healthy school climate ratings (Adeogun & Olisaemeka, 2011; MacNeil, Prater, & Busch, 2009).

Student achievement impacts accreditation. The VDOE, a state educational agency tasked with developing state-level regulations to operationalize NCLB, devised a system of school accreditation ratings to comply with the federal mandate. These accreditation ratings are based on a school's performance on SOL tests in English, history/social science, math and science. Based on test performance, an elementary school can be rated as *fully accredited*, *accredited with warning*, or *accreditation denied* (VDOE, 2013). Table 2 illustrates the AMO benchmarks for Reading. Table 3 illustrates the AMO benchmarks for math. Test results and accompanying ratings are readily available for public review in newspapers and on state websites such as the VDOE, creating added pressure from the community to improve scores on an annual basis.

Table 2

Reading Annual Measurable Objectives (AMOs)

Accountability Year	2012-2013	2013-2014
Assessment Year	2011-2012	2012-2013
All Students	85	Reading AMOs for accountability years 2013-2014 through 2017-2018 will be calculated based on achievement on revised Reading SOL tests administered during 2012-2013
Proficiency Gap Group 1	76	
Proficiency Gap Group 2 (Black students)	76	
Proficiency Gap Group 3 (Hispanic students)	80	
Students with Disabilities	59	
ELL students	76	
Economically Disadvantaged Students	76	
Asian Students	92	
White Students	90	

Table 3

Math Annual Measurable Objectives (AMOS)

Accountability Year	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Assessment Year	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
All Students	61	64	66	68	70	73
Proficiency Gap Group 1	47	49	52	54	56	58
Proficiency Gap Group 2 (Black Students)	45	48	50	52	54	57
Proficiency Gap Group 3 (Hispanic Students	52	55	57	60	62	65
Students with Disabilities	33	36	39	42	45	49
ELL students	39	42	45	48	51	54
Economically Disadvantaged Students	47	50	52	54	56	59
Asian Students	82	83	85	86	88	89
White Students	68	70	72	74	76	78

Title I status. Title I of the ESEA provides supplementary funding to state educational agencies to distribute to local educational agencies for the purpose of improving instruction and providing disadvantaged students with the same opportunities to meet state standards (ESEA,

1965). Since student achievement impacts funding, the pressure to perform may be greater at schools receiving more federal and state aid.

Although the purpose of Title I legislation is to create a balance of opportunity, some argue that current accountability systems may exacerbate disparities. Poor performance and subsequent loss of funding would disproportionately impact schools that more heavily rely on these external sources of funding. Cunningham and Sanzo (2002) believe high stakes testing has several disadvantages including placing low SES schools in jeopardy of losing their accreditation, damaging the reputation of outstanding teachers, harming the self-image of those persons in communities with lower SES, and publicizing the looming threat of state takeover or privatization.

Statement of the Problem

Research indicates a relationship between school climate and student achievement (Allodi, 2002; Callison, 2002; Hirase, 2000; Parish, 2002; Scallion, 2010) and since student achievement results determine a school's accreditation rating, Virginia's accountability system may impact school climate, creating a feedback loop that may further damage the standing of struggling schools. The pressure to perform may lead to the implementation of different leadership practices by principals, potentially changing the nature of interpersonal relationships within a school. The change in school climate from the increased stress may lead to a decrease in morale and an increase in teacher turnover, factors that do not facilitate strong student achievement. Decreasing test scores trigger punitive labeling of schools and possible loss of funds in the accountability system, thus creating a cycle that may perpetuate. This study has strong significance in light of these theoretical dangers.

Significance of the Study

The study should contribute to educational research on the topic of school climate. At the local level, the superintendent of Apple Public Schools could use the information to assess school climate within the division and apply information learned to create school climates that are conducive to collaboration and student learning. At the state level, school divisions and superintendents can use the information to anticipate how school climate correlates with accreditation status within their own divisions. With an increase in the number of schools across

Virginia that are identified as not meeting state accreditation standards, this would serve as a resource regarding school climate characteristics at fully accredited schools and non-fully accredited schools within one school division. It may assist school divisions and superintendents in making personnel decisions and offering professional development opportunities. On the national level, colleges and universities could use the information to adjust graduate programs to better prepare individuals for the role of a school leader as an agent of change and a key player in the shaping of school climate.

Purpose of the Study

The purpose of this study was to compare school climate in a sampling of Title I and Non-Title I elementary schools in one school division in Virginia with varied accreditation statuses. The OCDQ-RE was utilized to determine if a relationship existed between teachers' perception of school climate, Title I status and accreditation status.

Justification for the Study

In a comparative study of school climate in Title I schools, Lowe (2010) concluded that teachers' perceptions of principals' leadership practices were "more directive than supportive and restrictive in high-poverty Title I schools" (p. 109) and recommended a future study to assess school climate in both Title I and Non-Title I schools.

A study of school climate in a variety of schools within one school division could determine if there are any differences in school climate in both types of schools. More specifically, a comparative study of school climate in Title I and Non-Title I elementary schools both fully accredited and not fully accredited within one school division can provide valuable information to administrators trying to improve teacher and student success.

This study contributes to body of knowledge on school climate by fulfilling a recommendation for future study from previous researchers. This study investigated if there were any differences in school climate in selected Title I and non-Title I schools that are fully accredited and schools that are not fully accredited**.**

Research Questions

The following questions were investigated in this study:

1. What are the differences in school climate in Title I elementary schools and Non-Title I elementary schools within the same school division in the Commonwealth of Virginia?

2. What are the differences in school climate in schools that met full accreditation and schools that failed to meet full accreditation within the same school division in the Commonwealth of Virginia?

3. What are the differences in school climate in fully accredited Title I elementary schools and fully accredited Non-Title I schools within the same school division in the Commonwealth of Virginia?

4. What are the differences in school climate in non-fully accredited Title I elementary schools and non-fully accredited Non-Title I schools within the same school division in the Commonwealth of Virginia?

Theoretical Framework

Climate is a critical component of school effectiveness (Zhang & Liu, 2010). A healthy school climate provides teachers a means in which they believe in themselves and set high goals for their students (Hoy & Sabo, 1998). A high-pressure system can contribute to effective work, but stress can also decrease job satisfaction (Ostroff, 1992). An intense work environment can negatively impact the school climate where unhappy teachers put less effort into their teaching, thereby, lowering their performance (Stiggins, 1999). Consequently, the pressure and stress felt by teachers and school leaders are exacerbated by accreditation consequences.

Definition of Terms

For clarity and to facilitate understanding, key terms in the study will be defined below:

Accountability is a form of checks and balances placed on the education in which states, districts, schools, and educators must meet predetermined benchmarks, for which sanctions or rewards are often determined (Diehl, 2012).

Accreditation denied is the rating given to a school when student pass rates fall below those required to earn the fully accredited rating for the current year as well as the three previous years (VDOE, 2013).

Accredited with warning is the rating given to a school when student pass rates fall below those required to meet the fully accredited rating. A school can hold the accredited with warning rating for no more than three consecutive years (VDOE, 2013).

Closed climate is a climate wherein the principal and teachers simply go through the motions at work. The principal emphasizes busywork and teachers respond but have little to no commitment to tasks at hand. The principal's leadership is viewed as controlling unsupportive and unsympathetic. Teachers have high level of frustration and lack of respect for colleagues and administration (Hoy, Tarter, & Kottkamp, 1991).

Collegial teacher behavior supports open and professional interactions among teachers. Indicators of a high level of collegial behavior are that teachers are proud of their school, enjoy working with their colleagues, and are enthusiastic, accepting, and mutually respectful of their colleagues (Hoy et al., 1991).

Directive principal behavior is characterized by rigid, close supervision. The principal constantly monitors every detail and controls teachers and school activities (Hoy et al., 1991).

Disengaged climate is described as a climate where the principal's leadership behavior is strong, supportive, and characterized by a high level of concern. However, the faculty reacts negatively, ignores initiatives and in some cases, works to sabotage the principal's efforts. Teachers do not like the principal and do not respect other staff members (Hoy et al., 1991).

Disengaged teacher behavior is characterized as a climate that signifies a lack of meaning and focus to professional activities. An indication of disengaged teacher behavior is that teachers are simply putting in time in unproductive group efforts; they have no common goals. In fact, their behavior is often negative and critical of their colleagues and the school (Hoy et al., 1991).

Engaged climate is characterized by ineffective attempts of the principal to lead and high professional performance of the teachers. The principal is viewed as an authoritarian and does not respect the professional expertise or the needs of the faculty. The principal is seen as burdening faculty with paperwork. However, the teachers ignore the principal's efforts to control and conduct themselves as productive professionals. Teachers respect and support each other, have pride in the school, and enjoy their work. They have both collegial and personal relationships. The teachers work cooperatively and are committed to the profession (Hoy et al., 1991).

Fully accredited is the rating given when the student pass rate of 75% in English, 70% in mathematics, science, and history/social science (VDOE, 2013).

Intimate teacher behavior is defined as cohesive and a climate that supports strong social relations among teachers. Indicators of intimate teacher behavior are that teachers know each other well, are close personal friends, socialize together regularly, and provide strong social support for each other (Hoy et al., 1991).

Open climate is a climate characterized by cooperation, respect, and openness among the faculty and between the faculty and principal. The principal listens and is receptive to teacher ideas, gives genuine and frequent praise, and respects the competence of the faculty. Principals also give their teachers freedom to perform. The faculty supports open and professional behavior among teachers. Teachers know each other well and are typically close friends. In addition, they work cooperatively and are committed to teaching and their job (Hoy et al., 1991).

Openness in principal behavior is marked by genuine concern for the ideas of teachers, freedom and encouragement for teachers to experiment and act independently, and a structure of the routine aspects of the job that prevents them from interfering with teaching (Hoy & Tarter, 1997).

Openness in teacher behavior is characterized by genuine interactions, especially with colleagues and students. Teachers are open and professional in their interactions with each other as well as their students. Teacher behavior is sincere, positive, friendly, and constructive (Hoy & Tarter, 1997).

Organizational Climate Descriptive Questionnaire—Revised Elementary (OCDQ-RE) is a short organizational climate descriptive measure for elementary schools developed and validated by Wayne K. Hoy and used by Lowe (2010) and Laredo (2006) in studies of school climate. The index has six dimensions: collegial teacher behavior, directive principal behavior, disengaged teacher behavior, intimate teacher behavior, restrictive principal behavior, and supportive principal behavior (Hoy & Tarter, 2004).

Restrictive principal behavior is behavior that hinders rather than facilitates teachers' work. An indication of restrictive principal behavior is that the principal burdens teachers with paperwork, committee requirements, routine duties, and other demands that interfere with their teaching responsibilities (Hoy et al., 1991).

School climate or *organizational school climate* were used interchangeably. These terms refer to "teachers' perceptions of the work environment of the school; it is the set of internal characteristics that distinguishes one school from another and influences the behavior of its members" (Tarter, Hoy, & Bliss, 1989, p. 296). School climate is a reflection of the informal stream of norms, values, beliefs, traditions, and rituals that shape how those in the school think, feel, and act (Peterson & Deal, 1998).

Supportive principal behavior reflects a basic concern for teachers. An indication of supportive principal behavior is that the principal listens and is open to teacher suggestions, gives praise genuinely and frequently, and handles criticism constructively. Additionally, the principal respects the competence of the faculty and exhibits both a personal and professional interest in teachers (Hoy et al., 1991).

Title I refers to "a federal program that provides financial assistance to local educational agencies and schools with high numbers or high percentages of poor children to help ensure that all children meet challenging state academic standards" (USED, 2008, p. 1).

Limitations

The researcher acknowledged several limitations of the study: First, teachers' responses regarding school climate may be impacted by the time of the year that the survey was administered (Moir, 2009). One of the eight groups was surveyed in December while the remaining seven groups were surveyed during the month of January. This type of inconsistency may limit the generalizability of the results to other times during the school year. Second, although confidentiality was emphasized throughout the process and every effort was be made to protect the anonymity of respondents, some teachers may have felt uncomfortable responding with their true perceptions. Third, the schools identified as not meeting full accreditation were all in their first year of having such a status. This limits the generalizability of the results to schools that are in their second or third year of not being fully accredited.

Delimitations

The researcher also acknowledged several delimitations: First, the OCDQ-RE survey was administered once, thereby giving a snapshot of climate at one moment in time, when in reality, climate may fluctuate over time. Second, the Title I schools used in the study represented schools

receiving school-wide assistance and did not include schools with targeted assistance. Third, all teachers in the schools sampled are from the same school division in Virginia, limiting the generalizability of findings on school climate beyond that division.

Organization of the Study

This report of the study of school climate in selected Title I and Non-Title I schools that are fully accredited and schools that are not fully accredited is organized into five chapters. Chapter 1 contains the introduction, background of the study, conceptual framework, statement of the problem, purpose of the study, research questions, significance of the study, definition of terms, limitations of the study, assumptions of the study, and organization of the study. Chapter 2 includes a review of selected literature related to school climate and school accreditation. Methodology that was used to gather the data for the study is presented in Chapter 3. The results of the data collection and the answers to the research questions are provided in Chapter 4. Finally, Chapter 5 provides a discussion of findings, implications of findings and recommendations for further study.

Chapter 2

Literature Review

This research study was designed to explore the relationship between school climate, as perceived by teachers in a sampling of Title I and Non-Title I elementary schools in one school division in Virginia that have varied accreditation statuses. Chapter 2 will address the following topics of literature relevant to the study: accountability pressures, school climate, school climate and the role of the principal, school climate and teacher relationships, school climate and student achievement, student achievement and accreditation status, and Title I status.

Accountability Pressures

Public schools across Virginia receive accountability ratings based on student performance on SOL tests. The Commonwealth has two distinct methods of holding schools and school divisions accountable for student performance. The first method uses state-determined criteria to accredit schools and school divisions. The second accountability method for Virginia schools is the requirement set forth by NCLB to achieve AYP or Annual Measurable Objectives (AMO).

Each year, schools across Virginia receive an accreditation rating from the VDOE. The school's state accreditation rating is based on overall achievement in English, history, mathematics, and science. Schools are required to meet or exceed achievement objectives established by the Virginia Board of Education in all four content areas. Table 4 provides the achievement objectives for the 2013-2014 school year.

Table 4

Accreditation Benchmarks for Virginia Public Schools for Fully Accredited Ratings Awarded in the 2013-2014 School Year (Based on Testing and Graduation Rate Data From the 2012-2013 School Year and Beyond)

Subject	Grade 3	Grade 4	Grade 5	Grades 6 to 12
English	75%	75%	75%	75%
Mathematics	70%	70%	70%	70%
Science	70%	-	70%	70%
History/Social Science	70%	-	70%	70%

Schools that meet or exceed all achievement objectives are considered fully accredited. Schools that fail to meet achievement objectives in one or more areas are not accredited. Schools

that score below the required pass rate in a given subject area will receive an accredited with warning classification with reference to that subject area. A school cannot maintain this status for more than 3 consecutive years. If a school fails to meet accreditation standards for more than three years, the school is denied accreditation (VDOE, 2013).

The AYP requirement from NCLB is another accountability measure for Virginia schools that is also based on SOL test performance. The NCLB act is built on four premises: (1) increased accountability for results, (2) increased local control and flexibility, (3) increased options for parents, and (4) emphasis on effective teaching strategies (Hamilton & Koretz, 2002). This legislation was created to hold states, schools, and districts accountable to the federal government for student achievement. Student progress is assessed on an annual basis in math and reading in Grades 3 through 8 and at least once in science during elementary, middle, and high school. The accountability measure, AYP, is a set of measurable objectives for each demographic subgroup. This reform was designed to track the progress of schools and ensure that all students become grade level proficient in reading and math by 2014 (Spellings, 2006).

Federal guidelines require states to test 95% of students in each subgroup and each subgroup must meet or exceed established benchmarks (NCLB, 2001). If a school does not meet established benchmarks for two consecutive years, it is identified as needing improvement. At that point, the law triggers a set of progressively harsher sanctions on school that continually fail to meet the established benchmarks. These sanctions are different for Title I and Non-Title I schools.

In June 2012, the USED, granted Virginia waivers from the NCLB requirements (VDOE, 2012). The waiver allowed Virginia's Board of Education to develop attainable goals for increasing overall student achievement and the achievement of students in demographic subgroups. As a result of the approved waiver, Virginia replaced AYP goals for AMOs in reading and math. The AMOs are designed to reduce the gaps that exist between low-performing and high-performing student groups. Schools that do not meet the established goals are identified as "priority" or "focus" schools (VDOE, 2012)

VDOE has established SOL exams to measure student performance in the core content areas of English, math, science, and social studies in Grades 3 through 5, 6 through 9, and 10 through 12. Schools within the Commonwealth that maintain a pass rate of 95% or higher in all content areas for two years are awarded full accreditation status for a three year period thereby

exempt from testing for that time period. In contrast, accountability systems also include sanctions for schools not meeting expectations. Some examples of these sanctions include loss of funding, mandatory supplemental services for students, and outright school restructuring or closure (VDOE, 2013). Considering that Title funds are designed to level the playing field for children living in poverty or children from disadvantaged backgrounds so that they may be better able to meet strict state academic achievement standards, a potential loss of funding may disproportionately impact critical resources for those most in need, and in turn, student achievement (Mackay, 2009).

Since the *A Nation at Risk* report (USED, 1983), politicians have increasingly focused their efforts on holding schools and school leaders accountable for student achievement (Carnoy, Elmore, & Siskin, 2003). In response to the intense scrutiny, school leaders at all levels are pressured to ensure that schools and school divisions meet established benchmarks.

School administrators are impacted by these new measures of accountability. These individuals must face a "myriad of responsibilities on a daily basis" which include "(a) developing, implementing, and monitoring procedures and practices, (b) leading the development and evaluation of data-driven plans, (c) assisting instructional staff in aligning curriculum, and (d) managing human and financial resources" (Normore, 2004, p. 70).

In addition to the pressure to address instructional programs, school administrators also face additional pressures. Lashway (2000) articulated the current challenge of accountability as "not just another task added to the already formidable list of the principal's responsibilities. It requires new roles and new forms of leadership carried out under careful public scrutiny while simultaneously trying to keep day-to-day management on an even keel" (p. 13). Another study (Hall & Hord, 2006), found that "politics is always a major factor in key decisions at every level of the school system; for most of us, political maneuvering can be a make-or-break game" (p. 525). Therefore, administrators must be prepared to deal with political accountability. Elmore (2006) emphasized that the "work of running schools—managing the use of time and money, motivating and supervising people, connecting the school to its clients, meeting performance targets—has meaning only if its effects can be seen in the classroom" (p. 517).

In addition to existing research that examined the impacts of accountability on the role of the school leader, there is also research regarding the impact of accountability on the curriculum and instructional practices of teachers. This new era is "based on the assumption that external

accountability and the imposition of sanctions will force schools to improve and motivate teachers to change their instructional practices, resulting in better school performance." (Sunderman, Orfield, & Kim, 2006, p. 16)

Researchers have shared that accountability pressures have resulted in schools narrowing the curriculum in favor of tested subjects and emphasizing test preparation and rote memorization of facts rather than creative and critical thinking (Cavanagh, 2005; Ravitch, 2010; Trilling & Fadel, 2009). It is irrefutable that there is increased pressure on schools and school leaders (Elmore, 2002, 2006; Firestone & Shipps, 2005; Sawchuk, 2008).

Accountability pressures funneled through school administrators often lead teachers to feel anxious and frustrated, feelings that would likely impact morale (Guskey, 2007; Zehavi, 2011). However, the level of accountability pressure may vary from school to school. Evidence shows that since the passage of NCLB, the amount of attention teachers' pay to curricular standards, the extent to which they study student data, and the value they place on accountability pressures vary more within schools than between schools or districts (Fuller, Henne, & Hannum, 2008).

School Climate

Scholars have proposed a variety of definitions for school climate. In generating a definition, most researchers agree that school climate is a multifaceted concept comprising physical (appearance, class size, safety, and resources), social (equality, relationships, level of competition, and role in decision-making) and academic dimensions (quality of instruction, expectations, and level of monitoring) working together to create the overall personality of the school (Loukas & Murphy, 2007). To integrate this broader understanding into the concept of climate in schools, the terms *school climate* and *organizational climate* were used interchangeably in this study. School climate is defined as the character of school life and the various patterns that reflect a school's goals, values and interpersonal relationships (Cohen et al., 2009). These relationships include peer-to-peer collegial relationships as well as those with leadership (Leithwood, 2005).

The earliest literature on school climate is Waller's (1961) the *Sociology of Teaching*. Waller was one of the first to investigate and study the importance of school culture. Although

Waller's work provided resources for scholars in the sociology of education and in educational administration, one would have to wait nearly three decades for subsequent research.

In the 1960s, researchers began to explore the climate associated with the public school classroom. Halpin and Croft (1963) began to discuss school climate and defined it as "the organization personality of a school; figuratively, personality is to the individual what climate is to the organization" (p.1). Although the definition lacks empirical significance, it provided the catalyst for exploration of the topic and inspired researchers to find ways to measure school climate.

Literature published in the 1960s revealed an influx of work associated with school climate and organizational school climate. Forehand and Gilmer (1964) compiled a definition of organizational school climate which they referred to as "the set of characteristics that describe an organization and that distinguish the organization from other organizations; are relatively enduring over time; and influence the behavior of people in the organization" (p. 362).

About the same time as the release of the Coleman (1966) report, *Equality of Educational Opportunity*, several individuals began publishing documents associated with school climate. Researchers began to explore the claim that schools had little effect on student achievement and that family background was the key factor influencing student achievement (Austin, 1979; Coleman, 1966; Cuban, 1998). Suddenly, the effectiveness of schools was in the spotlight, and this publicity opened the door for more literature on the topic of school climate (Parsons, 1967; Taguiri & Litwin, 1968).

Taguiri and Litwin (1968) delved into the study of organizational climate and its connection to school climate. They defined organizational climate as a "relatively enduring quality of the internal environment of an organization that is experienced by its members; influences their behavior; can be described in terms of the values of a particular set of characteristics (or attributes) of the organization" (p.27).

In the 1970s, school climate continued to be an area of focus. Teachers were becoming much more active as a group. As an example, the National Education Association was formed. With greater emphasis on the need for a positive working environment, researchers focused on the needs of teachers and narrowed climate down to three factors: individual autonomy; reward orientation; and consideration, warmth, and support (Campbell, Dunnette, Lawler, & Weick, 1970). *Individual autonomy* referred to the freedom that employees have and the amount of

structure in place in the organization. *Reward orientation* is the reward system in place for workers. *Consideration, warmth, and support* encompass the human relations that exist within the organization.

By the end of the 1960s and into the 1970s, school climate research was well underway (Van Houtte, 2005). Various definitions were proposed that included facets of school climate and organizational school climate. Instruments were created to measure school climate and identify the key features associated with school climate. Research on school climate from this point forward focused on applying the knowledge gained from the definitions and measurement tools to provide individuals with resources to bring organizational change.

The 1980s were characterized by a need for educational reform with the publication of *A Nation at Risk* (USED, 1983). This document emphasized the need for increased rigor and accountability in schools. More importantly, it took teacher satisfaction out of the limelight and replaced it with student achievement. Many researchers began working to ascertain the role students play in shaping school climate. In the early 1980s, studies determined that school climate has a profound impact on individual student experience (Comer, 1980). However, there was a need for more research to investigate the relationship between students and school climate. Freiberg and Stein (1999) epitomized the times when they discussed the focus on school effectiveness and student achievement in terms of educational research and continued inquiry into factors that influence school climate.

Anderson (1982) reviewed research-related articles and found four common threads in studies of school climate, focusing on observable characteristics such as the condition of the school. Her findings suggested that each school has a climate that is unique to the organization. Furthermore, each school has a climate that is characterized as complex and diverse. She also found that school climate affects academic behavior, values, and overall satisfaction of students. Finally, her research found that school climate has a role in improving student behavior.

Researchers continued to explore the relationship between students and school climate. One study investigated the concept of school climate and found that in order to achieve a positive school climate, basic human needs had to be met. These needs were determined to be physiological needs, safety needs, acceptance and friendship needs, achievement and recognition needs, and the need to maximize potential (Howard, Howell, & Brainard, 1987). These results were consistent with Maslow's theory that posited that an innate or inborn set of human needs is

arranged in a hierarchical order: (a) basic physiological needs, (b) security and safety, (c) social activities, (d) self-esteem and respect, and (e) self-actualization or self-fulfillment (Hoy & Miskel, 2008).

During the 1990s, the U.S. education system remained focused on raising academic achievement for all students. The premise remained that an effective educational environment can overcome challenges and enables all children to achieve at high levels. In addition, research identified that creating a positive school climate is paramount for the well-being of staff and students (Deal & Peterson, 1990). Researchers continued to explore factors that influence a positive school climate.

With continued emphasis on school climate and organizational climate, some researchers chose to explore a more succinct definition of each concept. Hoy and Miskel (1996) defined school climate as "a relatively enduring quality of the entire school that is experienced by its members . . . and affects their attitudes and behavior in the school" (p. 1). This definition emphasized Hoy's (1990) belief that school climate was directly impacted by the perceptions members of the organization have of each other's behaviors.

One study of school climate in the 1990s found that two aspects had a significant impact on school climate: commitment to school and positive feedback from students (Hoge, Smit, & Hanson, 1990). Research also determined that climate is a product of culture and is influenced by historical values, norms, and rules that influence daily behaviors (Hoy & Feldman, 1987; Schien, 2004). Research on the relationship between characteristics of the teaching staff and positive school climate revealed that three characteristics had a significant impact on school climate. These characteristics were organizational culture, feeling of competence, and administrative control (Ma & MacMillan, 1999).

The next decade of educational research was impacted by the release of the NCLB of 2001 (Azzam, Perkins-Gough, & Thiers, 2006). This act emphasized standards-based education reform and is rooted in the belief that setting high standards and establishing measurable goals can improve individual outcomes in education. The focus remained on schools and the need to address student achievement. Researchers worked to establish an understanding of school climate and the factors that influence it.

Literature revealed that researchers continued to explore the meaning of school climate as shared attitudes, values and beliefs that are essential components of school organizations at every

level (Johnson & Stevens, 2006; Koth, Bradshaw, & Leaf, 2008). Factors influencing school climate were also studied. Ninan (2006) identified the essential components of a healthy school climate as "people, places and processes" (p. 2). Ninan went on to emphasize that it is the positive example set by the teacher that leads to a positive school climate. Additional research indicated that when basic physical and emotional needs are met, teachers can focus on the greater good of the organization (Leithwood & McAdie, 2007).

School Climate and the Role of the Principal

As a result of increased media attention underscoring the fact that the U.S. was falling behind other countries in terms of academic excellence, there was in an influx of research in the 1990s regarding instructional leadership. Numerous studies have been conducted to determine if a relationship exists between school organizational climate and principal leadership style. A study by Hallinger and Murphy (1986) reviewed surveys, interviews and documentary analyses at California elementary schools. The results indicated strong leadership as a key factor in effective schools.

Schools and school leaders today face a number of demands. School leaders must respond to accountability pressures and guide teachers into framing instruction to meet increasing demands (Firestone & Shipps, 2005; Honig & Hatch, 2004; Spillane et al., 2002; Spillane, Reiser, & Reimer, 2002). Principals are ultimately responsible for articulating a plan and motivating stakeholders to respond (Bryk, Sebring, Allensworth, Luppescu, & Easton, 2010; Spillane et al, 2002; Weick, 2001). Davies and Davies (2006) identify that it is primary role of principals to employ a leadership style that promotes collaboration among educators, focuses on curriculum-driven instruction, and leads to improved academic achievement.

The principals of 21st century schools are tasked with encouraging, motivating, and energizing teachers and students in the pursuit of continuous improvement in school and student performance. Literature suggests that a harmonious school climate is contingent upon four managerial functions. These include the principal's ability to influence decisions, the principal's behavior toward students and teachers, the principal's behavior in relation to achievement, and the principal's ability to provide adequate materials for the school (Parsons, 1967).

Harchar and Hyle (1996) studied instructional leadership strategies and their relationship to student achievement. Open-ended interviews were conducted with new and experienced

administrators. Results of the interviews revealed that instructional expertise is imperative to a principal's ability to raise student achievement. Instructional leaders need to guide teachers, students and the community by collaborating and developing trust and a shared vision. This belief was echoed by Hoy and Sabo (1998) who concluded that a positive school climate fosters productive relationships between stakeholders and promotes a learning environment where academic goals are achieved.

When exploring effective leadership as it relates to school climate and student achievement, one particular leadership style is found more than others. This leadership style is referenced as transformational leadership. A transformational leader is identified as one who is transparent in his approach and collaborates with stakeholders to encourage them to become energized and focused (Sagor, 1992). Scholars have noted that this type of leadership leads to extra effort by stakeholders. Through this high level of commitment, there is greater productivity and unity in the pursuit of a shared vision for student achievement (Gamage & Pang, 2003; Gamage, Sipple & Partridge, 1996; Leithwood & Jantzi, 1999). Harris (2004) affirms the benefit of transformational leadership and points out that a successful leader emphasizes the importance of a collaborative approach and avoids singular leadership at all costs.

The positive impact of transformational leadership was also explored by Glanz (2007). He described this type of leadership as one that is found to increase organizational success because of the leader's ability to manage change, nurture and empower followers. In doing so, the leader moves beyond the basic needs of employees and focuses on investing in social and emotional needs of stakeholders.

Cotton (2003) conducted meta-analysis study on the topic of school leadership and student achievement. He reviewed over 80 studies and concluded that school with high achieving students had principals who were instructional leaders who were knowledgeable about the curriculum and active participants in the instructional process. The emphasis at these schools was placed on student achievement and the pursuit of the highest level of student learning. Instructional leaders who were accountable for affecting and supporting improvement through progress monitoring and data analysis continually met higher levels of achievement. This information enhanced an earlier study which indicated that principals who promote professional growth with an emphasis on enhancing the learning environment yielded greater results in terms of student achievement (Blase & Blase, 2000).

During an empirical study of the role of the instructional leader on shaping instructional practices that was conducted by the University of Washington in conjunction with Seattle public schools, it was determined that there was a relationship between strong instructional leadership and student success. More specifically, it was determined that the instructional leader's ability to provide resources and instructional support while being visible in classrooms directly impacts student achievement (Quinn, 2002).

Leadership practices and their connection to student achievement was the focus of a meta-analytic study conducted by Waters, Marzano, and McNulty (2004). The purpose of the study was to investigate the relationship between quality of leadership and student achievement. In addition, the study attempted to define specific leadership practices that had the greatest impact on student achievement. The results of Waters et al.'s research revealed that there were two key elements that had an impact, either positive or negative, on student achievement. The first one was the proper identification of area of academic focus. This included curriculum development, goal setting, feedback, stakeholder involvement, professionalism, collegiality and maintaining a safe and orderly environment. The second factor was the school principal's plan for change.

A qualitative study that was conducted by Fulmer (2006) assessed the impact of instructional leadership on instructional behaviors of teachers. The findings suggested that the role of instructional leader is crucial to bringing about change in a building. As Fulmer's study pointed out the need for instructional expertise, another study of principals in Delaware schools further cemented this as a vital piece to improving student achievement. Interviews with principals revealed that a building principal's leadership skills and competencies are crucial in affecting change (Janerette & Sherretz, 2007).

In the same year that Janerette and Sherretz (2007) explored the importance of leadership style in making strides in student achievement, another study that was conducted seemed to echo the findings. The study focused on eighth grade students' perceptions of instructional leadership. More specifically, the study looked at principal behaviors that positively influenced student learning and academic achievement. The results of the interviews revealed that instructional leaders have a positive influence on academic achievement because they motivated students to work harder to achieve goals. In addition, principals who were visible in classrooms and

interacted with students were perceived as more influential than those who were passive and less visible (Gentilucci & Muto, 2007).

Transformational leadership was also the focus of a study by Ross and Gray (2006). In this study, Ross and Gray (2006) surveyed 3,042 teachers from 205 schools in Ontario, Canada. The results of the survey suggested that principals who exhibit a transformational leadership style enhance teachers' ability to embrace commitment to organizational values. Furthermore, it was emphasized that transformational leadership influences teachers' commitment to the school's vision. When the teachers feel supported, they are more apt to adopt instructional strategies, collaborate and contribute to student achievement (Ross & Gray, 2006).

Researchers indicate the leadership style of the principal has an effect on school climate (Al-Askar, 2002; Al-Gasim 1991; Hawkins, 2002; Laredo, 2006; O'Connor, 2001; Sims, 2005; Williamson, 2007). A principal has the responsibility of establishing a positive school climate by providing leadership in developing and sustaining a climate that is conducive to learning (Dietrich & Bailey, 1996). Research has indicated that employers and employees relate in ways that enable leaders to inspire motivation and commitment in a productive environment (Owens & Valesky, 2007).

Fisher (2003) investigated the relationship between climate and principals' leadership styles at 36 elementary schools in Idaho. The Multifactor Leadership Questionnaire was used to identify leadership styles and the OCDQ-RE was used to measure teachers' perception of school climate. Student achievement was measured using data gathered from the Idaho Reading Indicator and the Direct Math and Writing. Results concluded that transformational leadership had a positive correlation to open school climate, which is attributed to student achievement (Fisher, 2003).

McIntyre's (2004) dissertation explored the perceptions of middle school teachers in regards to principal style and school climate in military communities in two Texas school districts. The Leadership Behavior Description Questionnaire (LBDQ), the Organizational Climate Descriptive Questionnaire Revised Middle School (OCDQ-RM) and a demographic questionnaire were administered to staff members. The results of the study indicated that there was no statistically significant correlation between principal leadership style and school climate.

Fullan's (2008) discussion of leadership practices with relation to teacher satisfaction, the author indicated "if anyone can influence teachers on a daily basis, it is the principal, both

directly and indirectly" (p. 25). Moreover, Kelley et al. (2005) indicated that leaders who understand leadership theory and use it to improve their leadership practices improve the work environment by minimizing employee frustration. This type of leader becomes versed in the connection between teacher satisfaction and school climate. Thus, the leader is able to take steps to improve the educational setting, which can lead to increased student achievement (Fleming, Haggerty, Catalano, Harachi, Mazza & Gruman, 2005; MacNeil et al., 2009; Stewart, 2008).

Teacher satisfaction is directly related to the working conditions of the school, which is directly influenced by leadership practices. Klann (2007) concluded:

> The leader is an important factor in the success or failure of any team. People who choose to follow leaders because of who they are and what they represent. Effective leaders create environment in which team members can function well. They ensure that needed resources are on hand. They do not create barriers and distractions that would hinder the team's operations-the remove them. (p. 12)

The relationship between school climate and leadership behaviors is one factor of school success, and the principal affects teachers' perceptions of climate and the success of the school (Ali & Hale, 2009; Kelley et al. 2005). With increased rigor, accountability and continued emphasis on student achievement, further exploration into school climate and its link to student success is vital. In addition to considering the role of the principal in shaping school climate, one must also explore the role of other stakeholders in developing school climate.

School Climate and Collegial Relationships

In addition to the tone set by a principal, the relationships established in the workplace between staff members impact school climate. Sergiovanni (2000) stressed that collegiality was necessary and attainable, he concluded that even a good teacher could not perform in the wrong climate. Teacher satisfaction is a key component to a successful classroom environment. Furthermore, teachers' perceptions of their principals' leadership practices could have a positive or negative impact on the classroom environment (Gorton, Alston, & Snowden, 2007).

Fuming and Jiliang (2007) identified job satisfaction as employees' attitudes regarding all aspect of the work environment. According to Nguni, Sleegers, and Denessen (2008), job satisfaction is made up of two components: intrinsic and extrinsic. Intrinsic satisfaction is "level of satisfaction associated with the job itself" (Nguni et al., 2008, p. 152) and extrinsic

satisfaction is "level of satisfaction associated with the environment in which the work is performed" (Nguni et al., 2008, p. 152). Moreover, recognition and achievement are intrinsic factors while relationships, supervision, and work conditions are extrinsic factors.

Klann (2007) emphasized that the collective team must work together and the focus shifts from individual to the benefit of the team. When teachers collaborate, morale is higher, positive attitudes flourish, teachers are more driven, and a positive climate exists (Ali & Hale, 2009; Hoy et al., 1991; Lehr, 2005; Mohan & Ashok, 2011), yet attrition rates suggest that these positive relationships are in short-supply—or are not enough to keep teachers in the workplace.

Low satisfaction among teachers may be associated with changes in education policy such as high-stakes accountability and an increase in standardized testing (Markow & Pieters, 2012). Research indicates that a growing number of elementary teachers are quitting the profession due to burnout, specifically in the high-stakes testing grades, Grade 3 through 5 (Hanson, 2006). Hirsch and Emerick (2006) assert, "Unfortunately, many schools across the country face persistent teacher working condition challenges that are closely related to high teacher turnover rates and chronic difficulties in recruiting and retaining teachers" (p. 1). Teacher burnout has been shown to have negative effects on teacher and student performance (Durr, 2008). It is vital that principals work to retain quality teachers and create collaborative teams that share the responsibility of determining a path for academic improvement, especially in a time of high-stakes accountability (Wagner et al., 2006). When staff turnover is high, the school climate and student achievement tends to suffer (Johnson, 2010).

School Climate and Student Achievement

Student achievement has become a key focus for educators and policymakers alike. The presence of federal and state accountability measures continues to put the need for improved student achievement at the forefront. As a result, states began to place emphasis on school climate in an effort to improve achievement and reduce the achievement gap (Shindler, Jones, Williams, Taylor, & Cadenas, 2009).

Stewart (1978) explored the relationship between school climate and student achievement in a study involving 85 elementary and junior high schools. School climate was measured using the Profile of Schools and student achievement was measured using the Iowa Test of Basic Skills. The results of the study indicated that there was a relationship between staff climate ($p <$

.01), principal leadership ($p < .05$), and student achievement. It is also important to note that schools with a less structured and a more participatory climate yielded higher results on the Iowa Test of Basic (Stewart, 1978). A similar study was conducted to determine the relationship between school climate and student achievement based on data from fourth grade students in 68 schools in Michigan. As with the Stewart's study, it was noted that school climate does impact student achievement (Brookover, Schweitzer, Schneider, Beady, Flood, & Weisenbaker, 1979).

As student achievement became the focus in the 1980s and newspaper and media headlines emphasized that countries were surpassing the U.S. in terms of quality education, the literature regarding the impact of school climate on student achievement grew rapidly. Research emerged in an effort to fix what was wrong and return the U.S. to the elite ranks of education. Hoyle et al. (1985) indicated the significant relationship between student achievement and school climate:

> School climate may be one of the most important ingredients of a successful instructional program. Without a climate that creates a harmonious and well-functioning school, a high degree of academic achievement is difficult, if not downright impossible to obtain. (p.15)

Researchers (Bliss, Firestone, & Richards, 1991; Cruickshank, 1990; Matluck, 1987) delved further into the relationship between student achievement and school climate. In addition to identifying the positive relationship between school climate and student achievement, they identified a core group of variables that impact student achievement: an orderly climate, leadership style, expectations, amount of instructional monitoring, involvement of all stakeholders, and instruction.

Many studies have been conducted to identify the relationship between school effectiveness and school improvement. One particular study by Gayton (1999) focused on the relationship between teacher-perceived school climate and the state accreditation status of elementary schools in West Virginia. One hundred elementary schools, with a mix of accredited and non-accredited standings, participated in the study. The Charles F. Kettering profile was used to measure school climate and the SAT-9 was used to measure student achievement. The study found that teachers in schools that were non-accredited had lower mean scores in overall school climate compared to results from teachers at accredited schools.

Another study (Davidson, 2000) of school climate examined the relationship between teacher perceptions of high-school climate and the characteristics of effective schools. Teachers from 30 high schools in Oklahoma with similar populations were given the OCDQ for secondary schools to assess school climate. The rationale for effective schools was based on the Oklahoma Educational Indicators Program, which identified three criteria: state standardized test scores, graduation rates, and dropout rates. The study found that there was a relationship between school climate and student achievement. However, it was determined that teacher perceptions of school climate had no impact on graduation rates or dropout rates (Davidson, 2000).

Hirase (2000) conducting a study wherein he explored the relationship between school climate and student achievement at 35 elementary schools in Utah. The Organizational Health Inventory (OHI) was used to measure school climate and Stanford Achievement Test scores were used to measure student achievement. The results of the study showed that there was a significant relationship between overall student achievement and school climate ($r = .53$, $p < .001$).

Two years after Davidson and Hirase conducted their respective studies, a similar study was conducted in Sioux Falls, South Dakota. Unlike the previous study, this one explored the differences between elementary and secondary school climate and student achievement. The study involved 22 elementary schools, five middle schools, and three high schools. The OHI was used to measure school climate. Student achievement was measured using the results of the 2002 SAT-9 given to fifth, eighth, and 11th grade students. Results of the study showed that there was no relationship between teachers' overall assessments of school climate and student achievement at the elementary and secondary levels. However, elementary and secondary teachers who shared similar perceptions of school climate had similar levels of academic achievement (Callison, 2002).

Parish (2002) studied the relationship between middle school climate and student achievement. The study was conducted across Virginia using and 696 teachers from 49 middle schools participated in the study. The School Climate Index (SCI) was used to measure school climate, and English/reading and math results from the 2001 SOL tests were used to measure student achievement. Parish found that a relationship does exist between school climate and student achievement in the areas of English/reading and math. Furthermore, a relationship exists between socioeconomic status (SES) and student achievement.

These studies reveal that this phenomenon is not linked to one region. Rather, the results remain fairly consistent among the various studies across the U.S. Allodi (2002) emphasized that academic success has less to do with the location of the school than with the learning environment and social context that exist within a school. It makes sense that a safe, caring, and cohesive school climate fosters attachment for stakeholders and creates an atmosphere for social, emotional, and academic learning (Blum, McNeely, & Rinehart, 2002).

Scallion (2010) investigated principals' perceptions of school climate in elementary schools located in western Massachusetts. Ten elementary school principals with less than five years of experience were selected for the study. The 10 principals completed the OCDQ-RE. Data revealed that principals who had an understanding of school climate were more apt to monitor it and make needed changes. For those principals who did not have an understanding of school climate, their leadership did not have an intentional influence on the school's climate.

Administrators should begin to examine the organizational climate in schools and put a greater emphasis on ways to address the attitudes and behaviors that exist within a school (Blase & Blase, 1998; DeMoss, 2002; Leithwood & Riehl, 2003; Waters, Marzano & McNulty, 2004). A positive work environment characterized by determination and motivation by teachers, staff, and students creates a climate that promotes higher achievement by teachers and students (Hoyle et al., 1985; Robinson, 2010). Research indicates that a positive climate increases student achievement while a negative climate makes it difficult to increase student achievement (Dorathi, 2011). Additionally, schools with high achievement rates are characterized by healthy school climate ratings (Adeogun & Olisaemeka, 2011; MacNeil et al., 2009).

Student Achievement and Accreditation Status

The VDOE, a state educational agency tasked with developing state-level regulations to operationalize NCLB, devised a system of school accreditation ratings to comply with the federal mandate. Table 5 identifies each of the 2012-2013 accreditation rating for elementary schools and their respective guidelines (VDOE, 2013).

Table 5

2012-2013 Accreditation Rating for Elementary Schools

Accreditation Rating	Guidelines for Rating
Fully accredited	Pass Rates English – 75% or higher Mathematics – 70% or higher Science – 70% or higher History – 70% or higher
Accredited with warning	One or more pass rates fall indicated level
Accreditation denied	One or more pass rates fall below indicated level for 4 consecutive years
Conditionally accredited	Status given to new schools or reconstituted schools

These accreditation ratings are based on a school's performance on SOL tests in English, history/social science, math, and science. Test results and accompanying ratings are readily available for public review in newspapers and on state websites such as the VDOE, creating added pressure from the community to improve scores on an annual basis.

Title I Status

Schools across America face enormous pressure to meet the AYP goals of students meeting proficiency in English, language arts, and mathematics (Brinson & Rhim, 2009; Pappano, 2010). The race to close the achievement gaps among students resonates in schools across the nation and has certainly increased with federal and state accountability measures. It would appear that a resounding amount of pressure has been placed on Title I schools due to the fact that federal funding is contingent upon meeting yearly benchmarks. This warrants an exploration of research regarding student achievement and Title I schools.

Title I, Part A of the ESEA enacted April 11, 1965 provides financial assistance to states and school districts to meet the needs of educationally at-risk students. The goal of Title I is to provide extra instructional services and activities which support students identified as failing or most at risk of failing the state's challenging performance standards in mathematics, reading, and writing. In terms of funding, the federal government provides money to each state. Then, each state educational agency distributes money to its eligible school districts. The amount of money each school receives is determined by the number of low-income students attending that school (ESEA, 1965).

In 2001, NCLB was enacted as a reauthorization of the ESEA, which included Title I. Schools that receive Title I funding through the ESEA of 1965 must make AYP in test scores. When Title I schools fail to make AYP, sanctions including loss of funding and school choice are viable options. School choice is offered to students at Title I schools who fail to meet AYP for 2 consecutive years. Students are given the option of attending a higher performing school, if one is available in the district (NCLB, 2001).

In recent years, states, including Virginia, have applied for a NCLB waiver. The waiver allows the state Board of Education to develop attainable goals for increasing overall student achievement and the achievement of students in demographic subgroups. As a result of the approved waiver, Virginia schools no longer receive annual AYP ratings. Instead, schools are required to meet annual federal benchmarks for narrowing proficiency gaps. Schools that do not meet the established goals are identified as "priority" or "focus" schools (VDOE, 2012).

The purpose of Title I legislation is to create a balance of opportunity. However, some argue that current accountability systems may actually be exacerbating an imbalance. Poor performance and subsequent loss of funding could disproportionately impact schools that rely on external sources of funding. Cunningham and Sanzo (2002) believe high stakes testing has several disadvantages including placing low SES schools in jeopardy of losing their accreditation, damaging the reputation of outstanding teachers, harming the self-image of those persons in communities with lower SES, and publicizing the looming threat of state takeover or privatization.

One of the springboards for research into the effectiveness of Title I schools is the Coleman (1966) report. This report is significant because of its premise that the SES of parents was a strong predictor of student achievement. As a result of this report, research into the effectiveness of schools and school climate gained momentum (Bulach, Malone, & Castelman, 1995).

Some of the earlier research involving Title 1 and student achievement identifies SES, enrollment and leadership behaviors as having an impact on school climate (Bulach et al., 1995; Gayton, 1999). Specifically, high rates of student mobility, discipline incidents, student retention, student enrollment, faculty turnover and students eligible for free or reduced lunch were related to lower ratings of school climate (Bevans, Bradshaw, Miech, & Leaf, 2007; Williamson, 2007).

Although the Coleman (1966) report brought much criticism to the effectiveness of low SES schools, research into school climate and student achievement found that some SES schools were creating climates that fostered high student achievement (Brookover et al., 1979). Much of the research into successful Title I schools has indicated that creating a positive school climate can be helpful in alleviating emotional, behavioral and academic concerns (Felner et al., 1995; Haynes, Emmons, & Ben-Avie, 1997). Based on the information shared in regards to the impact of school climate on student achievement discussed earlier, it would be hard to argue that this would hold true for Title I schools as well. However, this relationship became evident after reviewing two important studies conducted by Benson (2003) and Spence (2003) on the relationship between school climate and student achievement in Title I schools in Virginia.

A study conducted by Benson (2003) was designed to examine the relationship between a positive school climate and student achievement among four economically disadvantaged elementary schools in Southeastern Virginia. In this study, school climate was measured in terms of trust, respect, morale, collaboration opportunities, professional growth, and cohesiveness. Student achievement data were based on the mean pass rate on the third grade SOL tests. The results of the survey identified a significant positive relationship between school climate and student achievement. When the four schools were ranked by achievement, the climate results were aligned with the achievement results.

Spence (2003) examined the variation in achievement in low SES schools that had different climates. More specifically, teacher perception of school climate, relationship between school climate and SOL test performance and differences in school climate and achievement were all explored. The study involved 266 faculty members from a sampling of 11 schools in Virginia. School climate was measured using the Organizational Health Inventory for Elementary Schools. Student achievement was measure using data from English/reading and math SOL tests (Spence, 2003). The results of Spence's study showed that there is a positive relationship between climate and achievement in the eleven low SES elementary schools survey. It is important to note that a positive correlation was found between academic emphasis and student achievement in these schools (Spence, 2003). This leads one to believe that increased student achievement in low SES elementary schools should begin with an evaluation of school climate and academic emphasis.

Other significant studies in this arena include those conducted by Laredo (2006) and Lowe (2010). A quantitative study conducted by Laredo examined teachers' perceptions of school leadership in one suburban school district. The OCDQ-RE was administered to 385 teachers from eight elementary schools. A teacher demographic survey was also administered to each of the participants. The research determined that there were significant differences in principal behavior between Title I and Non-Title I schools. Additionally, teacher demographic results indicated that a teacher's level of education and tenure had an impact on teachers' perceptions of principal behaviors in Title I schools.

Lowe (2010) conducted a comparative study of school climate in Title I schools. The researcher administered the OCDQ-RE and a teacher demographic survey to 216 teachers in eight randomly selected, Title I schools in Alabama that met state and federal benchmarks for 2 consecutive years. Lowe concluded that principals' leadership practices were "more directive than supportive and restrictive in high-poverty Title I schools" (p. 109) and recommended a future study to assess school climate in both Title I and Non-Title I schools.

Summary

With the implementation of the two accountability measures described, administrators and teachers alike are under tremendous pressure to constantly exceed federal and state benchmarks while facing reductions in staff, loss of benefits and decreases in staff morale (Leithwood, Begley, & Cousins, 1994; Reeves, 2009). The political pressure of such high accountability in the face of adversity requires principals to improve instruction and raise achievement while also ensuring schools safety, managing budgets, and keeping up with aging school buildings (Catano & Strong, 2006), all factors that could impact school climate. The review of literature indicates that there is a tremendous amount of pressure on all stakeholders and there is a need for further research regarding school climate. More specifically, research regarding school climate at both Title and Non-Title elementary schools with varied accreditation statuses could prove to be a valuable tool in school reform and student achievement.

Chapter 3

Methodology

Schools are complex organizations that face daily challenges and pressures to meet academic benchmarks. Understanding the environment surrounding student learning and the factors that have a direct or indirect influence on student achievement can be a monumental task. Despite the enormity, an analysis of school climate can guide administrators to enact instructional practices to improve student achievement (Marshall, 2004). The purpose of this study was to compare school climate in a sampling of Title I and Non-Title I elementary schools in one school division in Virginia with varied accreditation statuses. A quantitative study was chosen in an effort to provide a "measurement orientation where data can be gathered from many individuals and trends can be analyzed" (Creswell, 2008, p. 48).

Chapter 3 provides a description of the research process used for the study. The chapter contains the following sections: a review of the statement of the problem, research questions and hypotheses, the research methodology, the study's design, sample selection, instrumentation, data collection, and data analysis procedures.

Statement of the Problem

School climate has a direct impact on teacher satisfaction, staff morale, and retention. Research has indicated that employers and employees relate in ways that enable leaders to inspire motivation and commitment in a productive environment (Owens & Valesky, 2007). Researchers have concluded the leadership style of the principal had a positive effect on school climate (Al-Askar, 2002; Al-Gasim 1991; Hawkins, 2002; Laredo, 2006; O'Connor, 2001; Sims, 2005; Williamson, 2007). In a comparative study of school climate in Title I schools conducted by Lowe (2010), the researcher concluded that principals' leadership practices were "more directive than supportive and restrictive in high-poverty Title I schools" (p. 109) and recommended a future study to assess school climate in both Title I and Non-Title I schools.

A study of school climate in a variety of schools within one school division could determine if there are any differences in school climate in both types of schools. More specifically, a comparative study of school climate in Title I and Non-Title I elementary schools both fully accredited and not fully accredited within one school division can provide valuable

information to administrators trying to improve teacher and student success in their educational organizations. This study investigates if there are any differences in school climate in selected Title I and Non-Title I schools that are accredited and non-accredited**.**

Schools are complex organizations with complicated social dynamics that face daily challenges and pressures to meet academic benchmarks. Understanding the environment surrounding student learning and the factors that have a direct or indirect influence on student achievement can be a monumental task. Despite the enormity, an analysis of school climate can guide administrators to enact instructional practices to improve student achievement (Marshall, 2004). The purpose of this study was to compare school climate in a sampling of Title I and Non-Title I elementary schools in one school division in Virginia with varied accreditation statuses. A quantitative study was chosen in an effort to provide a "measurement orientation where data can be gathered from many individuals and trends can be analyzed" (Creswell, 2008, p. 48).

Research Questions

To complete this research study, the following questions were investigated:

1. What are the differences in school climate in Title I elementary schools and Non-Title I elementary schools within the same school division in the Commonwealth of Virginia?

2. What are the differences in school climate in schools that met full accreditation and schools that failed to meet full accreditation within the same school division in the Commonwealth of Virginia?

3. What are the differences in school climate in fully accredited Title I elementary schools and fully accredited Non-Title I schools within the same school division in the Commonwealth of Virginia?

4. What are the differences in school climate in non-fully accredited Title I elementary schools and non-fully accredited Non-Title I schools within the same school division in the Commonwealth of Virginia?

Hypotheses

Based on the research questions, four hypotheses were developed and were tested using a 0.05 level of significance:

H1:   There are statistically significant differences in school climate in Title I elementary schools and Non-Title I elementary schools within a school division in the Commonwealth of Virginia.

H2:   There are statistically significant differences in school climate in fully accredited elementary schools and non-accredited elementary schools within a school division in the Commonwealth of Virginia that failed to meet full accreditation.

H3:   There are statistically significant differences in school climate in fully accredited Title I elementary schools and fully accredited Non-Title I schools within the same school division in the Commonwealth of Virginia.

H4:   There are statistically significant differences in school climate in non-accredited Title I elementary schools and non-accredited Non-Title I schools within the same school division in the Commonwealth of Virginia.

Research Methodology

There are many research design options, qualitative to quantitative, and experimental to non-experimental, that will determine the foundation on which a study can be conducted (Lodico, Spaulding, & Voegtle, 2006). Quantitative research is a method used to explore the relationship between dependent and independent variables (Pole, 2007). Looking to establish a relationship, this approach has a degree of control with the intention of establishing a reaction in the dependent variable by changing the independent variable (Lodico et al., 2006). In quantitative research, numeric data are collected, mathematical models are used as the methodology of data analysis, and inquiry methods are aligned with statistical data collection methodology (Creswell, 2003). "Data gathered through quantitative methods has sometimes been described as more objective and accurate because it is collected using standardized methods, can be replicated, and analyzed using statistical procedures" (Pole, 2007, p. 36).

In quantitative research, the descriptive method is typically used. The researcher examines the situation in its present state, identifies attributes of a particular phenomenon based on an observational basis, or explores the relationship between two or more phenomena

(Creswell, 2008; Williams, 2007). Creswell (2003) advocates the use of quantitative research as an organized process used to analyze information in an effort to support or disprove "alternate knowledge claims" (p. 153). For these reasons, a quantitative research design was employed to explore and describe the relationship between school climate (independent variable) and accreditation status (dependent variable) within elementary schools selected from one school division in Virginia. A quantitative methodology was selected in order to compare school climate in a sampling of Title I and Non-Title I elementary schools that are fully accredited and not fully accredited in a school division in Virginia.

McIntyre (2004), Laredo (2006), and Lowe (2010) conducted quantitative research studies similar to the proposed study. Specifically, the researchers explored the relationship between leadership and school climate as perceived by teachers. Similar to these previous foundational studies, descriptive and statistical procedures were used to determine school climate in select schools within a school division in the Commonwealth of Virginia.

Research Design

Survey research designs are procedures in quantitative research in which investigators administer a survey to a sample or to "the entire population of people to describe the attitudes, opinions, behaviors, or characteristics of the population" (Creswell, 2008, p. 388). Many research studies have utilized survey research designs and questionnaires to measure leadership and school climate and teacher demographic data (Edwards, 2008; Hawkins, 2002; Lowe, 2010; McIntyre, 2004). According to Gall, Gall, and Borg (2003), questionnaires are used to compile and analyze data from a predetermined population for the purpose of making generalizations. This emphasis on population generalization is emblematic of quantitative research.

A previously validated survey instrument, the OCDQ-RE, was used to gather school climate data. The researcher analyzed the data from the questionnaires with the assistance of the Statistical Package for the Social Sciences (SPSS) software to determine the relationship between school climate and accreditation status within the school division. Descriptive statistics were used for interval data. More specifically, the mean and standard deviation were computed for each of the six subtests: Supportive Principal Behavior, Directive Principal Behavior, Restrictive Principal Behavior, Collegial Teacher Behavior, Intimate Teacher Behavior, and Disengaged Teacher Behavior. These subtests were combined to determine teacher openness,

principal openness and overall school climate. A two-way ANOVA was selected to determine the main effect of each independent variable and to also identify if there was a significant interaction effect between the independent variables. Specifically, a two-way ANOVA was conducted to determine the influence that accreditation status, SES, and combinations of these two factors have on school climate.

Survey research designs are procedures in quantitative research in which investigators administer a survey to a sample or to "the entire population of people to describe the attitudes, opinions, behaviors, or characteristics of the population" (Creswell, 2008, p. 388). Many research studies have utilized survey research designs and questionnaires to measure leadership and school climate and teacher demographic data (Edwards, 2008; Hawkins, 2002; Lowe, 2010; McIntyre, 2004). According to Gall et al. (2003), questionnaires are used to compile and analyze data from a predetermined population for the purpose of making generalizations. This emphasis on population generalization is emblematic of quantitative research.

Considering the purpose of this study was to compare school climate in a sampling of Title I and Non-Title I elementary schools in one school division in Virginia with varied accreditation statuses, questionnaires were used for this research study. The OCDQ-RE was used to measure school climate. The researcher analyzed the data from the questionnaires with the assistance of the SPSS to determine the relationship between teachers' perception of school climate and student achievement within the school division.

Data analysis was conducted using SPSS for Windows. Descriptive statistics were used for ordinal-level data. More specifically, the mean and standard deviation were computed for each of the six subtests, teacher openness, and principal openness that related to school climate. Afterward, a two way ANOVA statistical analysis was conducted to determine the main effect of each independent variable and to determine if a significant interaction effect between the independent variables existed.

Population

The population for this study was comprised of teachers within Apple Public Schools. The fictitious name was chosen to protect the anonymity of the school division in Virginia. Apple Public Schools is one of the largest school divisions in Virginia. The division has 28 elementary schools, 10 of which are identified as Title I schools, and 18 not receiving Title I

assistance. Based on published data, 18 of these schools maintained a fully accredited status for the 2013-2014 school year, while 10 schools were identified as accredited with warning for the first time. Out of the 18 fully accredited schools, three are Title I schools and 15 are Non-Title I schools. Out of the 10 non-fully accredited schools, eight are Title I schools and two are Non-Title I schools.

Sample

The schools selected for the study included four elementary schools that are fully accredited and four elementary schools that are not fully accredited based on information released from the VDOE for the 2013-2014 school year. Table 6 illustrates the sample participants in this study include elementary teachers from four elementary schools (equal representation of Title I and Non-Title I elementary schools) that are fully accredited and four elementary schools (equal representation of Title I and Non-Title I elementary schools) that are not-fully accredited.

Table 6

Elementary Schools Selected for the Study

School	Grades	Accreditation Status	Socio-Economic Classification
A	K-5	Fully accredited	Title I
B	4-5	Fully accredited	Title I
C	K-5	Fully accredited	Non-Title I
D	3-5	Fully accredited	Non-Title I
E	K-5	Not fully accredited	Title I
F	3-5	Not fully accredited	Title I
G	3-5	Not fully accredited	Non-Title I
H	K-3	Not fully accredited	Non-Title I

The schools were purposely selected to achieve balance in grade level composition and similar student populations. Schools selected for the study had at least one testing grade and similar student enrollments. In the event that one of the selected school principals did not wish to

participate in the study, the researcher was prepared to use an alternate school with similar demographic characteristics. However, all of the principals consented to having their school participate in the study.

The principals at each of the eight schools invited the researcher to speak at a scheduled faculty meeting. As faculty members arrived, the researcher provided each teacher with a letter explaining the study with the survey instrument attached. Sampling all teachers in attendance enabled the researcher to get the most accurate picture possible of school climate.

Instrumentation

For this study, the researcher selected the OCDQ-RE to determine school climate. The instrument was designed to capture and describe teacher-teacher interactions and teacher-principal interactions in schools. The OCDQ-RE examines many factors of school climate including school climate, teacher and leader behaviors, and other variables surrounding the learning environment. This instrument is not used to establish a cause-effect relationship between the variables. Rather, this instrument is used to assess the strength of relationships between variables.

The OCDQ-RE consists of 42 items that offer a response on a continuum from rarely occurs, to sometimes occurs, often occurs, and very frequently occurs. It measures six dimensions of school climate, three each for principals' and teachers' behavior.

Principals' behaviors are identified as supportive, directive, or restrictive. Supportive behavior is characterized by a basic concern for teachers and a general respect for the competency of the faculty. Directive behavior is exhibited by a principal who operates with close supervision, rigidness, and control. A principal is viewed as having restrictive behavior if he places the burden on teachers and hinders their ability to effectively provide instruction.

Teachers' behaviors are collegial, intimate, and disengaged. Teachers who are enthusiastic, have school pride, and positive working relationships exhibit collegial behavior. Teachers who are cohesive, have personal friendships, and socialize outside of school with colleagues, exhibit intimate teacher behavior. Teachers who are unproductive and criticize colleagues and the school exhibit disengaged teacher behavior.

The question items used to identify and measure these traits are as follows:

- Supportive - 4, 9, 15, 16, 22, 23, 28, 29, and 42

- Directive - 5, 10, 17, 24, 30, 34, 35, 39, 41
- Restrictive -11, 18, 25, 31, and 36
- Collegial - 1, 6, 12, 19, 26, 32, 37, and 40
- Intimate - 2, 7, 13, 20, 27, 33, and 38
- Disengaged - 3, 8, 14, and 21

By quantifying measures of teacher and principal behavior, the OCDQ-RE establishes an overall

school climate index. Figure 1 illustrates the relationship among the six dimensions of the

OCDQ-RE and the overall school climate.
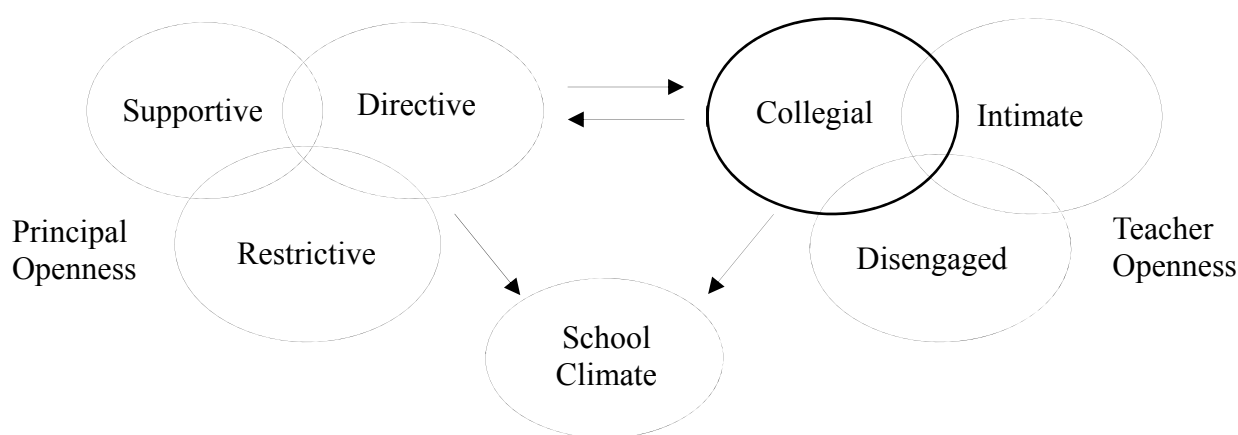
Figure 1. Relationship among six dimensions of OCDQ-RE and overall school climate.

 The four different types of climate are open, engaged, disengaged, and closed. Schools
that have an open climate are characterized by cooperation, respect, and open communication
between the faculty and the principal are viewed. Schools that have high performing and
productive teachers despite ineffective leadership are viewed as having an engaged climate.
Schools wherein the principal is supportive and the faculty is unsupportive of leadership and
each other are viewed as having a disengaged climate. Schools wherein the principal is
unsupportive and the faculty is divided are viewed as having a closed climate (Hoy et. al, 1991).

 The Organizational Climate Description Questionnaire (OCDQ) was originally developed
by Halpin and Croft in 1963 to measure organizational climate. Hoy and Clover (1986) revised
the instrument for elementary schools, developing the OCDQ-RE. Hoy (1972) and Hoy et al.
(1991) asserted that the validity of principal-teacher relations and teacher-teacher relations was
supported by correlating the two dimensions with the initial version of the OCDQ index of

openness. There was a positive relationship between the teacher openness index and the initial general school openness ($r = .67$, $p < .01$). Furthermore, the principal openness index had a correlation of $r = .52$, ($p < .01$). Therefore, the construct validity of organizational climate supported the factor analysis (Hoy et al., 1991). According to Hoy and Tarter (2004), each of the six dimensions of school climate was measured using a subtest of the OCDQ-RE. Results indicated that the reliability score for each of the scales was significant: Supportive (.94), Directive (.88), Restrictive ($\alpha = .81$), Collegial ($\alpha = .87$), Intimate ($\alpha = .83$), and Disengaged ($\alpha = .78$).

Data Collection Procedures

The researcher successfully completed the Training in Human Subjects Protection certification exam on Sep 9, 2012 (see Appendix A). The researcher requested and was granted permission to conduct the study from Virginia Tech Institutional Review Board (IRB): Human Subjects (see Appendix B). Permission was obtained from Wayne K. Hoy to use the OCDQ-RE instrument, and written documentation is included (see Appendix B). Permission to complete the study within the school division was obtained from the superintendent (see Appendix C).

After receiving permission from IRB, Hoy, and the division superintendent, the researcher sent letters to the principals of the eight schools selected to explain the purpose of the research study (see Appendix D). The principals were given the rationale for choosing the school and were assured that the school and the school division would not be identified in the study. In addition, the researcher followed up with phone calls to each of the schools. A copy of the OCDQ-RE instrument was provided to principals for their review (see Appendix E).

Once a principal granted permission, a date and time to administer the survey instruments was determined. Each visit was planned during a regularly scheduled faculty meeting. Prior to the start of the meeting, teachers received a letter explaining the study's purpose, requesting their participation, and identifying the research instrument. At the meeting, the researcher explained the purpose of the study, emphasized that participation was strictly voluntary, and ensured participant anonymity. The researcher explained directions for completing the questionnaire and then answered any questions. After ensuring that teachers had an understanding of the questionnaire (see Appendix F), the researcher left the meeting and selected a volunteer who was

participating to collect the questionnaires and seal them in a large brown envelope coded for each school.

The researcher intentionally chose a teacher volunteer for this role, ensuring that administrators had no access to the completed questionnaires. The researcher collected the envelopes from the volunteers a few days after each meeting. Data from the questionnaires were entered into SPSS and were kept on a password protected computer in the researcher's home. The paper documents were stored in a locked drawer in the researcher's home office in an effort to maintain confidentiality and the anonymity of participants. The researcher had the only key to the drawer, and the questionnaires will be destroyed upon satisfactory completion of the dissertation defense.

Data Analysis

A two-way ANOVA was conducted to determine significance differences in the responses based accreditation status, and Title I status on school climate. Organizing the data through this process yielded four groups (see Table 7).

Table 7

Matrix of Accreditation Status and Title I Status

	Fully Accredited	Non- Fully Accredited
Title I	Fully accredited/ Title I	Non-fully Accredited/Title I
Non-Title I	Fully accredited/ Non-Title I	Non-fully Accredited/Non- Title I

A two-way ANOVA test was used because it examines the influence of different independent variables on one dependent variable. The two-way ANOVA determines the main effect of contributions of each independent variable as well as the interaction effect between the independent variables (Mendoza, 2006).

Data gathered from the questionnaires were compiled in a computer database and analyzed using SPSS. Descriptive statistics were employed to analyze the relationship between school climate (dependent variable), accreditation status (independent variable) and Title I status (independent variable), and an alpha level of $p = 0.05$ was used to test the stated hypotheses.

Summary

Chapter 3 describes the research methodology that was used in this study. In an effort to determine the relationship between school climate and accreditation status at selected schools within a school division in the Commonwealth of Virginia, a quantitative research design was employed. The data collection instrument for the study was the OCDQ-RE, a previously established tool for quantifying organizational climate, and the resulting data was analyzed using ANOVA to test hypotheses. The resulting data are reported in Chapter 4.

Chapter 4
Results of the Study/Findings

This research study was designed to explore the relationship between school climate, as perceived by teachers in a sampling of Title I and Non-Title I elementary schools in one school division in Virginia that have varied accreditation statuses. Chapter 4 presents the findings of the survey data that were analyzed to answer the following research questions:

1. What are the differences in school climate in Title I elementary schools and Non-Title I elementary schools within the same school division in the Commonwealth of Virginia?

2. What are the differences in school climate in schools that met full accreditation and schools that failed to meet full accreditation within the same school division in the Commonwealth of Virginia?

3. What are the differences in school climate in fully accredited Title I elementary schools and fully accredited Non-Title I schools within the same school division in the Commonwealth of Virginia?

4. What are the differences in school climate in non-fully accredited Title I elementary schools and non-fully accredited Non-Title I schools within the same school division in the Commonwealth of Virginia?

For each of the research questions, descriptive and statistical procedures were used to analyze school climate in all eight schools. Results are categorized and compared by each of the six dimensions used to measure school climate: supportive behavior, directive behavior, restrictive behavior, collegial behavior, intimate behavior and disengaged behavior. Following the data for each of the six dimensions, these results were combined to determine principal openness, teacher openness, and over school climate, and are presented in a similar format.

Data Analysis

The OCDQ-RE questionnaire were handed out during a regularly scheduled faculty meeting at each of the eight schools selected for the study. At the meeting, the researcher explained the purpose of the study, emphasized that participation was strictly voluntary, and ensured participant anonymity. Prior to leaving the meeting, the researcher selected a volunteer to collect the questionnaires and seal them in a large brown envelope coded for each school. Of

the 255 surveys that were distributed collectively, 165 participant surveys were collected for a return rate of 65%. The distribution of survey participation is provided below in Table 8 with response rates ranging from 53 – 80% at the school level.

Table 8

Surveys Collected from Each School in Study

School	Grade Levels	Title 1	Accreditation	Surveys Distributed	Surveys Collected	Response Rate
A	K-5	Yes	Yes	30	16	53%
B	4-5	Yes	Yes	35	23	66%
C	K-5	No	Yes	30	22	73%
D	3-5	No	Yes	35	24	69%
E	K-5	Yes	No	30	16	53%
F	3-5	Yes	No	30	21	70%
G	3-5	No	No	35	19	54%
H	K-3	No	No	30	24	80%

The researcher utilized the formulas provided by Hoy et al. (1991) to score the OCDQ-RE. The following guidelines were used (Hoy et al., 1991) to score the OCDQ-RE:

1. Every participant's survey was scored with the number value on the Likert scale that corresponded with their agreement (1, 2, 3 or 4). Scores for items 6, 31 and 37 were inverted because the items were stated negatively.

2. The average school scores were calculated for each item by adding the scores for each item for each participant, then dividing by the total number of respondents.

3. The average scores were added based on information provided in Table 9. The six component scores represent the climate profile of the school.

Table 9

Dimensions of School Climate and Formulas as Developed by Hoy (1991)

Dimension of School Climate	Questions from OCDQ-RE Associated With Dimension
Supportive behavior (S)	$4 + 9 + 15 + 14 + 22 + 23 + 28 + 29 + 42$
Directive behavior (D)	$5 + 10 + 17 + 24 + 30 + 34 + 35 + 39 + 41$
Restrictive behavior (R)	$11 + 18 + 25 + 31 + 36$
Collegial behavior (C)	$1 + 6 + 12 + 19 + 26 + 32 + 37 + 40$
Intimate behavior (Int)	$2 + 7 + 13 + 20 + 27 + 33 + 38$
Disengaged behavior (Dis)	$3 + 8 + 14 + 21$

Once the school subset scores were calculated, these scores were converted to standardized scores (SdS) with a mean of 500 and a standard deviation of 100. According to Hoy (1990), standardization of the scores allows the researcher to make direct comparisons among schools. Using large and diverse sampling of elementary schools in New Jersey, Hoy created the index and related formulas (Hoy, 1990). Considering previous research on school climate from a variety of states used the OCDQ-RE or the OCDQ-RM for their studies (McIntyre 2004; Laredo, 2006; Lowe, 2010), the researcher assumed that the normative sample was appropriate for the school division in this study. Table 10 outlines the formulas for creating standardized scores.

Table 10

Formulas for Determining Standardized Scores (SdS)

Dimension of School Climate	Formula for Determining SdS
Supportive behavior (S)	SdS for S = 100 × (S − 23.34) / 4.85 + 500
Directive behavior (D)	SdS for D = 100 × (D − 19.34) / 3.20 + 500
Restrictive behavior (R)	SdS for R = 100 × (R − 12.98) / 1.55 + 500
Collegial behavior (C)	SdS for C = 100 × (C − 23.11) / 2.69 + 500
Intimate behavior (Int)	SdS for Int = 100 × (Int − 17.23) / 2.14 + 500
Disengaged behavior (Dis)	SdS for Dis = 100 × (Dis − 6.98) / 1.26 + 500

Once the SdS scores were established, they were used to calculate the two openness indices: principal openness and teacher openness. The two openness measures were computed using the following formulas:

Principal Openness = (SdS for S) + (1000 − SdS for D) + (1000 − SdS for R) / 3

Teacher Openness = (SdS for C) + (SdS for Int) + (1000 − SdS for Dis) / 3

The principal openness and teacher openness scores were used to calculate the overall school climate scores of each school. The overall school climate scores were computed using the calculations in Table 11.

Table 11

Calculations for Determining Overall School Climate

Climate classification	Rules
Open climate	Teacher Openness > 500
	Principal Openness > 500
Closed climate	Teacher Openness < 500
	Principal Openness <500
Engaged climate	Teacher Openness > 500
	Principal Openness < 500
Disengaged climate	Teacher Openness < 500
	Principal Openness >500

Once data were compiled to calculate mean scores for each of the six dimensions of school climate and the subsequent levels of openness and overall school climate, the component and aggregated values were transferred into SPSS to assess the differences between and among schools. It was hypothesized that the variables of Title I status and accreditation status that would impact a school's climate rating. A two-way ANOVA was conducted to assess the impact of the variables of accreditation status and Title I status of schools in the sample on the schools' climate measures. This statistical procedure allowed the researcher to determine if there was statistical significance of each variable on climate as well as whether or not these two variables acted together to impact climate. The ANOVA produced three p-values, one for each parameter independently, and one measuring the interaction between the two parameters. This information was vital for testing the following hypotheses and corresponding null hypotheses, which form the basis for this study:

H1:   There are statistically significant differences in school climate in Title I elementary schools and Non-Title I elementary schools within a school division in the Commonwealth of Virginia.

$H1_O$: There are no statistically significant differences in school climate in Title I elementary schools and Non-Title I elementary schools within a school division in the Commonwealth of Virginia.

H2:   There are statistically significant differences in school climate in fully accredited elementary schools and non-accredited elementary schools within a school division in the Commonwealth of Virginia that failed to meet full accreditation.

$H2_O$:   There are no statistically significant differences in school climate in fully accredited elementary schools and non-accredited elementary schools within a school division in the Commonwealth of Virginia that failed to meet full accreditation.

H3:   There are statistically significant differences in school climate in fully accredited Title I elementary schools and fully accredited Non-Title I schools within the same school division in the Commonwealth of Virginia.

$H3_O$:   There are no statistically significant differences in school climate in fully accredited Title I elementary schools within the same division in the Commonwealth of Virginia.

H4:   There are statistically significant differences in school climate in non-accredited Title I elementary schools and non-accredited Non-Title I elementary schools within the same school division in the Commonwealth of Virginia.

$H4_O$:   There are no statistically significant differences in school climate in non-accredited Title I elementary schools and non-accredited Non-Title I elementary schools within the same school division in the Commonwealth of Virginia.

Results

Supportive principal behavior. This type of behavior is characterized by a basic concern for teachers (Hoy, 1991). The principal listens and is open to teacher suggestions. The principal gives praise on a regular basis, and criticism is handled constructively. The faculty is viewed as competent and respected, and the principal exhibits both a personal and professional interest in teachers. Table 12 shows the mean scores for questions from the OCDQ-RE that are associated with supportive principal behavior at each school. The mean is based on responses to scale that ranges from 1 (*rarely occurs*), 2 (*sometimes occurs*), 3 (*often occurs*), to 4 (*very frequently occurs*).

Table 12

Mean Scores for Questions Associated with Supportive Principal Behavior

Items Associated with Supportive Principal Behavior	School A	School B	School C	School D	School E	School F	School G	School H	Mean for all Schools
4. The principal goes out of his/her way to help teachers.	2.94	2.09	3.14	2.79	2.13	2.57	2.68	2.53	2.60
9. The principal uses constructive criticism.	2.5	2.39	3.09	2.71	2.31	2.76	2.56	2.6	2.62
15. The principal explains his/her reasons for criticism to teachers.	2.4	2.26	3.09	2.77	2.44	2.8	2.63	2.6	2.62
16. The principal listens to and accepts teachers' suggestions.	2.88	1.96	2.59	3	2.31	2.67	2.74	2.4	2.57
22. The principal looks out for the personal welfare of teachers.	3	1.87	3.14	3.25	2.19	2.24	2.79	2.6	2.64
23. The principal treats teachers as equals.	3.19	2.09	2.91	2.92	2.19	2.05	2.63	2.13	2.51
28. The principal compliments teachers.	2.94	2.09	3.18	3.04	2.25	2.86	2.95	2.53	2.73
29. The principal is easy to understand.	2.94	2.13	3.27	3.33	2.88	2.71	2.89	2.53	2.84
42. The principal goes out of his/her way to show appreciation to teachers.	2.75	1.83	3.27	2.67	2.44	2.47	2.37	2.5	2.54

Once each school's score for supportive principal behavior was calculated, the scores were converted to SdS with a mean of 500 and a standard deviation of 100, using the formulas references earlier in Table 10. The mean standardized scores for Title I schools (355.25), Non-Title I schools (534.75), fully accredited schools (523.75), and non-fully accredited schools (366.25) were determined. A comparison of ratings derived from the formula for supportive principal behavior presented in Table 13 revealed that the all schools had scores below the mean score established by the normative sample, with the lowest ratings exclusive to two Title I schools that were non-fully accredited.

Table 13

Comparison of Supportive Principal Behavior

Hoy's Rating for Supportive Principal Behavior	Number of Schools with the Rating	Title 1 Status	Non-Title I Status	Fully Accredited	Non-Fully Accredited
Lower than 99% of Schools	2	2	-	-	2
Lower than 97% of Schools	0	-	-	-	-
Lower than 84 % of Schools	2	1	1	1	1
Average	4	1	3	3	1
Higher than 84% of Schools	0	-	-	-	-
Higher than 97% of Schools	0	-	-	-	-
Higher than 99% of Schools	0	-	-	-	-

Data from each school were recorded in SPSS and a two-way ANOVA was conducted to assess both accountability status and Title I status in relation to supportive principal behavior, one dimension of school climate. Furthermore, the test analyzed whether there was an interaction between these two parameters. This test produced three *p* values, one for each parameter independently, and one measuring the interaction between the two parameters. The results presented in Table 14 were analyzed to test the hypotheses guiding the study.

Table 14

Two-Way ANOVA Output for Supportive Principal Behavior

	Type III Sum of Squares	*df*	Mean Square	*F*	Sig.
Corrected Model	126598.375[a]	3	42199.458	15.623	.011
Intercept	1592220.125	1	1592220.125	589.466	.000
Socio	62835.125	1	62835.125	23.263	.009**
Accred	51360.125	1	51360.125	19.014	.012*
Socio * Accred	12403.125	1	12403.125	4.592	.099
Error	10804.500	4	2701.125		
Total	1729623.000	8			
Corrected Total	137402.875	7			

*p<.05, **p<.01, ***p<.001

This output was analyzed to determine if there were statistically significant differences in supportive principal behavior, a dimension of school climate, with respect to Title I status (Socio) and accreditation status (Accred). The two-way analysis of variance yielded a main effect for the Title I status, $F(1, 4) = 23.263$, $p = .009$, such that supportive principal behavior was significantly higher for Non-Title I schools ($M = 534.75$, $SD = 25.99$) than for Title I schools ($M = 357.50$, $SD = 25.99$). A main effect for accreditation status was also determined, $F(1, 4) = 19.014$, $p = .012$, indicating that supportive principal behavior were significantly higher in fully accredited schools ($M = 526.25$, $SD = 25.99$) than schools that are not fully accredited ($M = 366.00$, $SD = 25.99$). The interaction effect was not statistically significant at the 95% confidence interval, $F(1, 4) = 4.59$, $p = .099$.

In summary, data analysis revealed that supportive principal behavior, one dimension of school climate, varied according to according to Title I status and accreditation status. However, Title I status and accreditation status did not have an interactive effect on supportive principal behavior.

Directive principal behavior. This type of behavior is characterized by rigid supervision (Hoy et al., 1991) wherein the principal monitors and controls teacher and school activities. Table 15 shows the mean scores for questions from the OCDQ-RE that are associated with directive principal behavior at each school. The mean is based on responses to scale that ranges from 1 (*rarely occurs*), 2 (*sometimes occurs*), 3 (*often occurs*), to 4 (*very frequently occurs*).

Table 15

Mean Scores for Questions Associated with Directive Principal Behavior

Items Associated with Directive Principal Behavior	School A	School B	School C	School D	School E	School F	School G	School H	Mean for all Schools
5. The principal rules with an iron fist.	1.75	2.5	2.14	1.38	2.56	2.71	1.58	2.53	2.14
10. The principal checks the sign-in sheet every morning.	2.33	1.63	2	1.95	1.69	2.56	1.93	2.47	2.07
17. The principal schedules the work for the teachers	1.81	2.41	2.3	1.92	2.94	2.95	1.81	2.27	2.30
24. The principal corrects the teachers' mistakes.	2.19	3.05	2.67	2.54	2.5	3.1	2.56	2	2.58
30. The principal closely checks classroom (teacher) activities.	2.13	3.09	2.59	3.04	2.44	3.57	1.89	3.2	2.74
34. The principal supervises teachers closely.	2.19	3.13	2.91	2.67	2.69	3.43	1.95	3.47	2.81
35. The principal checks lesson plans.	1.75	3.26	2.41	2.08	2.93	3.43	2.05	3.67	2.70
39. The principal is autocratic.	2.17	2.55	2.24	1.56	2.79	2.28	2.28	3	2.36
41. The principal monitors everything teachers do.	1.75	2.83	2.36	2	2.75	3.25	1.42	3.27	2.45

Once each school's score for directive principal behavior was calculated, the scores were converted to SdS with a mean of 500 and a standard deviation of 100, using the formulas references earlier in Table 10. The mean standardized scores for Title I schools (343.75), Non-Title I schools (552.75), fully accredited schools (546.25) and non-fully accredited schools (350.25) were determined. A comparison of ratings derived from the formula for directive principal behavior presented in Table 16 revealed a wide distribution of rating, with a majority of schools rated higher than the mean established by the normative sample. The two schools with the lowest ratings were Title I schools that were not fully accredited.

Table 16

Comparison of Directive Principal Behavior

Hoy's Rating for Directive Principal Behavior	Number of Schools with the Rating	Title 1 Status	Non-Title I Status	Fully Accredited	Non-Fully Accredited
Lower than 99% of Schools	2	2	-	-	2
Lower than 97% of Schools	0	-	-	-	-
Lower than 84 % of Schools	3	1	2	2	1
Average	1	-	1	1	-
Higher than 84% of Schools	1	1	-	1	-
Higher than 97% of Schools	1	-	1	-	1
Higher than 99% of Schools	0	-	-	-	-

Data from each school were recorded in SPSS and a two-way ANOVA was conducted to assess both accountability status and Title I status in relation to directive principal behavior, one dimension of school climate. Furthermore, the test analyzed whether there was an interaction between these two parameters. This test produced three *p* values, one for each parameter independently, and one measuring the interaction between the two parameters. The results presented in Table 17 were analyzed to test the hypotheses guiding the study.

Table 17

Two-Way ANOVA Output for Directive Principal Behavior

	Type III Sum of Squares	*df*	Mean Square	*F*	Sig.
Corrected Model	271218.500[a]	3	90406.167	5.749	.062
Intercept	1589544.500	1	1589544.500	101.073	.001
Socio	83232.000	1	83232.000	5.292	.083
Accred	80802.000	1	80802.000	5.138	.086
Socio * Accred	107184.500	1	107184.500	6.815	.059
Error	62907.000	4	15726.750		
Total	1923670.000	8			
Corrected Total	334125.500	7			

*p<.05, **p<.01, ***p<.001

This output was analyzed to determine if there was a statistically significant difference in directive principal behavior, a dimension of school climate, with respect to Title I status (Socio) and accreditation status (Accred). The two-way analysis of variance did not reveal a statistically significant main effect for the Title I status, $F(1,4)=5.292$,p=.083, nor for accreditation status, $F(1,4)=5.138$ p=.086. The interaction effect was also determined not to be statistically significant, $F(1,4)=6.815$ p=.059. In summary, data analysis revealed that directive principal behavior, one dimension of school climate, did not vary according to according to Title I status or accreditation status. Furthermore, Title I status and accreditation status did not have an interactive effect on directive leadership behavior.

Restrictive principal behavior. Hoy et al. (1991) established that this term was characterized by behaviors that impede teacher work, wherein teachers are burdened with requirements, paper work, and other demands that interfere with teaching responsibilities. Table 18 shows the mean scores for questions from the OCDQ-RE that are associated with restrictive principal behavior at each school. The mean is based on responses to scale that ranges from 1 (*rarely occurs*), 2 (*sometimes occurs*), 3 (*often occurs*), to 4 (*very frequently occurs*).

Table 18

Mean Scores for Questions Associated with Restrictive Principal Behavior

Items Associated with Restrictive Principal Behavior	School A	School B	School C	School D	School E	School F	School G	School H	Mean for All of the Schools
11. Routine duties interfere with the job of teaching.	2.19	2.43	3.05	2.17	1.69	2.5	2.37	1.73	2.27
18. Teachers have too many committee requirements.	2.19	2.61	2.36	1.96	3.25	2.62	2.32	3.2	2.56
25. Administrative paperwork is burdensome at this school.	1.94	2.83	2.82	2.17	3.63	3.05	2.74	3.8	2.87
31. Clerical support reduces teachers' paperwork.	2	3	3.14	2.58	3.75	3.15	2.95	3.87	3.06
36. Teachers are burdened with busy work.	2	2.7	2.36	2.54	3.69	2.95	2.79	3.47	2.81

Once each school's score for restrictive principal behavior was calculated, the scores were converted to SdS with a mean of 500 and a standard deviation of 100, using the formulas references earlier in Table 10. The mean standardized scores for Title I schools (243.38), Non-Title I schools (478.25), fully accredited schools (453.25), and non-fully accredited schools (268.38) were determined. A comparison of ratings derived from the formula for restrictive principal behavior presented in Table 19 revealed that all schools had a score either comparable to the mean score established by the normative sample or lower. Once again, the two schools with the lowest ratings were Title I schools that were not fully accredited.

Table 19

Comparison of Restrictive Principal Behavior

Hoy's Rating for Restrictive Principal Behavior	Number of Schools with the Rating	Title 1 Status	Non-Title I Status	Fully Accredited	Non-Fully Accredited
Lower than 99% of Schools	2	2	-	-	2
Lower than 97% of Schools	1	1	-	1	-
Lower than 84 % of Schools	2	-	2	1	1
Average	3	1	2	2	1
Higher than 84% of Schools	0	-	-	-	-
Higher than 97% of Schools	0	-	-	-	-
Higher than 99% of Schools	0	-	-	-	-

Data from each school were recorded in SPSS and a two-way ANOVA was conducted to assess both accountability status and SES in relation to restrictive principal behavior, one dimension of school climate. Furthermore, the test analyzed whether there was an interaction between these two parameters. This test produced three *p* values, one for each parameter independently, and one measuring the interaction between the two parameters. The results presented in Table 20 were analyzed to test the hypotheses guiding the study.

Table 20

Two-Way ANOVA Output for Restrictive Principal Behavior

	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	254253.344	3	84751.115	8.904	.030
Intercept	1041485.281	1	1041485.281	109.421	.000
Socio	110332.531	1	110332.531	11.592	.027*
Accred	68357.531	1	68357.531	7.182	.055
Socio * Accred	75563.281	1	75563.281	7.939	.048*
Error	38072.625	4	9518.156		
Total	1333811.250	8			
Corrected Total	292325.969	7			

*p<.05, **p<.01, ***p<.001

The two-way analysis of variance yielded a main effect for the Title I status, $F(1,4)$=11.59 ,p=.027, such that restrictive principal behavior was significantly higher for Non-Title I schools (M = 478.25, SD = 75.378) than for Title I schools (M =243.38, SD = 75.378). In contrast, a statistically significant main effect was not established for accreditation status $F(1,4)$=7.182, p=.055. The interaction effect was determined to be significant, $F(1,4)$=7.94, p=.048. In summary, data analysis revealed that restrictive principal behavior, one dimension of school climate, varied according to Title I status but not accreditation status. However, Title I status and accreditation status did have an interactive effect on restrictive principal behavior.

Collegial teacher behavior. Hoy et al. (1991) defined this type of behavior as open and professional interactions among teachers. Teachers have pride in their school, work collaboratively and are respectful of colleagues. Table 21 shows the mean scores for questions from the OCDQ-RE that are associated with collegial teacher at each school. The mean is based on responses to scale that ranges from 1 (*rarely occurs*), 2 (*sometimes occurs*), 3 (*often occurs*), to 4 (*very frequently occurs*).

Table 21

Mean Scores for Questions Associated with Collegial Teacher Behavior

Items Associated with Collegial Teacher Behavior	School A	School B	School C	School D	School E	School F	School G	School H	Mean of All Schools
1. The teachers accomplish their work with vim, vigor, and pleasure.	3.07	2.17	2.86	2.92	2.56	2.62	2.31	2.33	2.61
6. Teachers leave school immediately after school is over.	2.5	1.96	1.41	3.25	1.6	2.86	2.16	2.2	2.24
12. Most of the teachers here accept the faults of their colleagues.	2.44	2.57	2.52	2.54	2.56	2.4	2.69	2.2	2.49
19. Teachers help and support each other.	3.38	3.09	3.27	3.33	2.81	2.81	3	2.8	3.06
26. Teachers are proud of their school.	3.31	1.96	3.45	3.17	2.25	2.19	2.63	2.4	2.67
32. New teachers are readily accepted by colleagues.	2.94	3.52	2.86	3.29	3	3.14	3.11	2.53	3.05
37. Teachers socialize together in small, select groups.	2.88	2.39	2	2.38	2.32	2.62	2	1.93	2.32
40. Teachers respect the professional competence of their colleagues.	3.19	2.83	2.95	3.08	2.94	2.86	2.68	2.6	2.89

Once each school's score for collegial teacher behavior was calculated, the scores were converted to SdS with a mean of 500 and a standard deviation of 100, using the formulas references earlier in Table 10. The mean standardized scores for Title I schools (260.25), Non-Title I schools (378.75), fully-accredited schools, (442.25), and non-fully accredited schools (196.75) were determined. A comparison of ratings derived from the formula for collegial teacher behavior presented in Table 22 revealed that all schools had a score either comparable to the mean score established by the normative sample or lower. The three schools with the lowest ratings were not fully accredited.

Table 22

Comparison of Collegial Teacher Behavior

Hoy's Rating for Collegial Teacher Behavior	Number of Schools with the Rating	Title 1 Status	Non-Title I Status	Fully Accredited	Non-Fully Accredited
Lower than 99% of Schools	3	2	1	-	3
Lower than 97% of Schools	1	-	1	1	-
Lower than 84 % of Schools	2	1	1	1	1
Average	2	1	1	2	-
Higher than 84% of Schools	0	-	-	-	-
Higher than 97% of Schools	0	-	-	-	-
Higher than 99% of Schools	0	-	-	-	-

Data from each school were recorded in SPSS and a two-way ANOVA was conducted to assess both accountability status and Title I status in relation to collegial behavior, one dimension of school climate. Furthermore, the test analyzed whether there was an interaction between these two parameters. This test produced three *p* values, one for each parameter independently, and one measuring the interaction between the two parameters. The results presented in Table 23 were analyzed to test the hypotheses guiding the study.

Table 23

Two-Way ANOVA Output for Collegial Teacher Behavior

	Type III Sum of Squares	*df*	Mean Square	*F*	Sig.
Corrected Model	199187.000	3	66395.667	6.343	.053
Intercept	816642.000	1	816642.000	78.019	.001
Socio	28084.500	1	28084.500	2.683	.177
Accred	120540.500	1	120540.500	11.516	.027*
Socio * Accred	50562.000	1	50562.000	4.830	.093
Error	41869.000	4	10467.250		
Total	1057698.000	8			
Corrected Total	241056.000	7			

*p<.05, **p<.01, ***p<.001

The two-way analysis of variance did not reveal a statistically significant main effect for Title I status, $F(1,4)=2.683$, p=.177. However, a main effect for accreditation status, $F(1,4)=11.516$, p=.027, was determined indicating that the mean score for collegial teacher behavior was significantly higher in fully accredited schools (M=442.25, SD=67.98) than for schools that are not fully accredited (M=196.75, SD=67.98). The interaction effect was not determined to be significant, $F(1,4)=.093$, p=.093. In summary, data analysis revealed that collegial teacher behavior, one dimension of school climate, varied according to according to accreditation status but not Title I status. In addition, Title I status and accreditation status did not have an interactive effect on collegial teacher behavior.

Intimate teacher behavior. This type of behavior is characterized by strong social relations among teachers (Hoy et al., 1991), wherein teachers have a good rapport, support each other, socialize together on a regular basis, and are personal friends. Table 24 shows the mean scores for questions from the OCDQ-RE that are associated with intimate teacher behavior at each school. The mean is based on responses to scale that ranges from 1 (*rarely occurs*), 2 (*sometimes occurs*), 3 (*often occurs*), to 4 (*very frequently occurs*).

Table 24

Mean Scores for Questions Associated with Intimate Teacher Behavior

Items Associated with Intimate Teacher Behavior	School A	School B	School C	School D	School E	School F	School G	School H	Mean for all Schools
2. Teachers' closest friends are other faculty members at this school.	2.5	2.39	2.67	2.33	1.93	2.24	2.68	2.67	2.43
7. Teachers invite faculty members to visit them at home.	1.94	1.86	2	2.42	1.88	1.57	2.11	2.6	2.05
13. Teachers know the family background of other faculty members.	2.56	2.52	2.73	2.42	2.19	2.38	2.26	2.47	2.44
20. Teachers have fun socializing together during school time.	2.69	1.83	2.23	2.54	1.69	1.67	2.53	2.13	2.16
27. Teachers have parties for each other.	2.88	2.17	2.29	2.63	1.88	1.71	2.44	2.47	2.31
33. Teachers socialize with each other on a regular basis.	2.69	2.35	2.55	2.88	1.94	2	2.37	2.67	2.43
38. Teachers provide strong social support for colleagues.	2.63	2.43	2.68	2.96	2.38	2.15	2.16	2.53	2.49

Once each school's score for intimate teacher behavior was calculated, the scores were converted to SdS with a mean of 500 and a standard deviation of 100, using the formulas references earlier in Table 10. The mean standardized scores for Title I schools (311.00), Non-Title I schools (476.75), fully accredited schools (498.00), and non-fully accredited schools (289.75) were determined. A comparison of ratings derived from the formula for intimate teacher behavior presented in Table 25 revealed that all schools had a score either comparable to the mean score established by the normative sample or lower. The two schools with the lowest ratings form intimate teacher behavior were Title I schools that were not fully accredited. In contrast, the three schools that were found to have "average" ratings for intimate teacher behaviors were fully accredited.

Table 25

Comparison of Intimate Teacher Behavior

Hoy's Rating for Intimate Teacher Behavior	Number of Schools with the Rating	Title 1 Status	Non-Title I Status	Fully Accredited	Non-Fully Accredited
Lower than 99% of Schools	2	2	-	-	2
Lower than 97% of Schools	0	-	-	-	-
Lower than 84 % of Schools	3	1	2	1	2
Average	3	1	2	3	-
Higher than 84% of Schools	0	-	-	-	-
Higher than 97% of Schools	0	-	-	-	-
Higher than 99% of Schools	0	-	-	-	-

Data from each school were recorded in SPSS and a two-way ANOVA was conducted to assess both accountability status and Title I status in relation to intimate teacher behavior, one dimension of school climate. Furthermore, the test analyzed whether there was an interaction between these two parameters. This test produced three *p* values, one for each parameter independently, and one measuring the interaction between the two parameters. The results are presented in Table 26 were analyzed to test the hypotheses guiding the study.

Table 26

Two Way ANOVA Output for Intimate Teacher Behavior

	Type III Sum of Squares	*df*	Mean Square	*F*	Sig.
Corrected Model	171328.375	3	57109.458	23.760	.005
Intercept	1241100.125	1	1241100.125	516.345	.000
Socio	54946.125	1	54946.125	22.860	.009**
Accred	86736.125	1	86736.125	36.086	.004**
Socio * Accred	29646.125	1	29646.125	12.334	.025*
Error	9614.500	4	2403.625		
Total	1422043.000	8			
Corrected Total	180942.875	7			

*p<.05, **p<.01, ***p<.001

The two-way analysis of variance yielded a main effect for the Title I status, $F(1,4)=22.860$ p=.009, indicating that the mean score for intimate teacher behavior was significantly higher in non-Title I schools (M=476.75, SD=44.31) than Title I schools (M=311, SD=44.31). A main effect was also established for accreditation status, $F(1,4)=36.09$ p=.004, indicating that the mean score for intimate teacher behavior is significantly higher in fully accredited schools (M=498.00,SD=44.31) than schools that are not fully accredited (M=289.75,SD=44.31).The interaction effect was also determined to be significant, $F(1,4)=.025$, p=.025. In summary, data analysis revealed that intimate teacher behavior, one dimension of school climate, varied according to according to Title I status and accreditation status. In addition, Title I status and accreditation status did have an interactive effect on intimate teacher behavior.

Disengaged teacher behavior. This behavior is characterized by a lack of meaning and focus to professional activities (Hoy et al., 1991). The group has no common goals and is simply going through the motions. Teachers are often negative and critical of the school and colleagues. Table 27 shows the mean scores for questions from the OCDQ-RE that are associated with disengaged teacher behavior at each school. The mean is based on responses to scale that ranges from 1 (*rarely occurs*), 2 (*sometimes occurs*), 3 (*often occurs*), to 4 (*very frequently occurs*).

Table 27

Mean Scores for Questions Associated With Disengaged Teacher Behavior

Items Associated with Disengaged Teacher Behavior	School A	School B	School C	School D	School E	School F	School G	School H	Mean for all Schools
3. Faculty meetings are useless.	1.75	1.7	1.68	1.96	2.44	1.76	2	2.4	1.96
8. There is a minority group of teachers who always oppose the majority.	1.69	1.74	1.59	1.42	1.56	2.45	1.63	2.33	1.80
14. Teachers exert group pressure on non-conforming faculty members.	1.69	1.39	1.59	1.42	1.44	1.5	1.32	1.8	1.52
21. Teachers ramble when they talk at faculty meetings.	1.75	1.74	1.41	1.96	1.88	2.05	2.16	2.47	1.93

Once each school's score for disengaged teacher behavior was calculated, the scores were converted to SdS with a mean of 500 and a standard deviation of 100, using the formulas references earlier in Table 10. The mean standardized scores for Title I schools (534.25), Non-Title I schools (401.50), fully accredited schools (395.00), and non-fully accredited schools (540.75) were determined. A comparison of ratings derived from the formula for disengaged teacher behavior presented in Table 28 revealed a wide distribution of rating, with a majority of schools rated comparable to mean established by the normative sample or lower. The two schools with the highest ratings for disengaged teacher behavior were not fully accredited. Only one school, which was Non-Title I and fully accredited, was identified as having a rating "lower than 99% of schools."

Table 28

Comparison of Disengaged Teacher Behavior

Hoy's Rating for Disengaged Teacher Behavior	Number of Schools with the Rating	Title 1 Status	Non-Title I Status	Fully Accredited	Non-Fully Accredited
Lower than 99% of Schools	1	-	1	1	-
Lower than 97% of Schools	0	-	-	-	-
Lower than 84 % of Schools	3	1	2	1	2
Average	3	2	1	1	2
Higher than 84% of Schools	1	1	-	1	-
Higher than 97% of Schools	0	-	-	-	-
Higher than 99% of Schools	0	-	-	-	-

Data from each school were recorded in SPSS and a two-way ANOVA was conducted to assess both accountability status and Title I status in relation to disengaged teacher behavior, one dimension of school climate. Furthermore, the test analyzed whether there was an interaction between these two parameters. This test produced three *p* values, one for each parameter independently, and one measuring the interaction between the two parameters. The results presented in Table 29 were analyzed to test the hypotheses guiding the study.

Table 29

Two Way ANOVA Output for Disengaged Teacher Behavior

	Type III Sum of Squares	*df*	Mean Square	*F*	Sig.
Corrected Model	82261.375	3	27420.458	2.854	.169
Intercept	1745646.125	1	1745646.125	181.689	.000
Socio	36046.125	1	36046.125	3.752	.125
Accred	43365.125	1	43365.125	4.513	.101
Socio * Accred	2850.125	1	2850.125	.297	.615
Error	38431.500	4	9607.875		
Total	1866339.000	8			
Corrected Total	120692.875	7			

*p<.05, **p<.01, ***p<.001

The two-way analysis of variance did not yield a statistically significant main effect for Title I status, $F(1,4)=3.756$, p=.125. Similarly, a statistically significant main effect was not established for accreditation status, $F(1,4)=4.513$, p=.101. Furthermore, the interaction effect was not determined to be significant, $F(1,4)=.297$, p=.615. In summary, data analysis revealed disengaged principal behavior, one dimension of school climate, did not vary according to Title I status or accreditation status. In addition, Title I status and accreditation status did not have an interactive effect on disengaged principal behavior.

Open principal behavior. Hoy et al. (1991) indicated that this type of behavior is characterized by genuine relations with teachers. The principal establishes a supportive, encouraging environment free from routine busy work. Teachers are able to concentrate on teaching. The principal is approachable, open to the ideas of teachers and is genuinely concerned with both their social and professional needs In contrast, closed principal behavior is rigid, close, and unsupportive. Principal Openness is determined using the following formula: (SdS for S) + (1000 − SdS for D) + (1000 − SdS for R) / 3. The mean standardized scores for Title I schools (540.75), Non-Title I schools (516.25), fully accredited schools (508.50), and non-fully accredited schools (548.50) were determined. A comparison of ratings derived from the formula for principal openness presented in Table 30 revealed a wide distribution of rating, with a majority of schools rated comparable to the mean established by the normative sample or higher. The three schools with the highest rating for principal openness were all Title I schools.

Table 30

Comparison of Rating for Principal Openness

Hoy's Rating for Principal Openness	Number of Schools with the Rating	Title 1 Status	Non-Title I Status	Fully Accredited	Non-Fully Accredited
Very High	1	-	1	-	1
High	2	2	-	1	1
Above Average	0	-	-	-	-
Slightly Above Average	1	-	1	1	-
Average	2	2	-	1	1
Slightly Below Average	0	-	-	-	-
Below Average	0	-	-	-	-
Low	2	-	2	1	1
Very Low	0	-	-	-	-

Data from each school were recorded in SPSS and a two-way ANOVA was conducted to assess both accountability status and Title I status in relation to principal openness, a component of school climate. Furthermore, the test analyzed whether there was an interaction between these two parameters. This test produced three *p* values, one for each parameter independently, and one measuring the interaction between the two parameters. The results presented in Table 31 were analyzed to test the hypotheses guiding the study.

Table 31

Two-Way ANOVA Output for Principal Openness

	Type III Sum of Squares	*df*	Mean Square	*F*	Sig.
Corrected Model	13948.500	3	4649.500	.536	.682
Intercept	2190324.500	1	2190324.500	252.596	.000
Socio	2450.000	1	2450.000	.283	.623
Accred	840.500	1	840.500	.097	.771
Socio * Accred	10658.000	1	10658.000	1.229	.330
Error	34685.000	4	8671.250		
Total	2238958.000	8			
Corrected Total	48633.500	7			

*p<.05, **p<.01, ***p<.001

The two-way analysis of variance did not reveal a statistically significant main effect for Title I status, $F(1,4)=.283$, p=.623, nor was a statistically significant main effect established for accreditation status, $F(1,4)=.097$, p=.771. Furthermore, the interaction effect was not determined to be significant, $F(1,4)=.1.229$, p=.330. In summary, data analysis revealed that principal openness, a factor of school climate, did not vary according to according to Title I status or accreditation status. Moreover, Title I status and accreditation status did not have an interactive effect on principal openness.

Open teacher behavior. Hoy et al. (1991) characterized this type of behavior as having genuine interactions between staff members, wherein teachers are sincere, positive and friendly in their interactions with colleagues. Teacher Openness is determined using the following formula: Teacher Openness = (SdS for C) + (SdS for Int) + (1000 − SdS for Dis) / 3. The mean standardized scores for Title I schools (346.25), Non-Title I schools (485.00), fully-accredited schools (515.25), and non-fully accredited schools (316.00) were determined. A comparison of ratings derived from the formula for teacher openness presented in Table 32 revealed a wide distribution of rating, with a majority of schools rated below the mean established by the normative sample. In addition, four of the six schools with the lowest rating for teacher openness were not fully accredited.

Table 32

Comparison of Rating for Teacher Openness

Hoy's Rating for Teacher Openness	Number of Schools with the Rating	Title 1 Status	Non-Title I Status	Fully Accredited	Non-Fully Accredited
Very High	1	-	1	1	-
High	0	-	-	-	-
Above Average	0	-	-	-	-
Slightly Above Average	0	-	-	-	-
Average	1	1	-	1	-
Slightly Below Average	0	-	-	-	-
Below Average	3	1	2	2	1
Low	0	-	-	-	-
Very Low	3	2	1	-	3

Data from each school were recorded in SPSS and a two-way ANOVA was conducted to assess both accountability status and Title I status in relation to teacher openness, a component of school climate. Furthermore, the test analyzed whether there was an interaction between these two parameters. This test produced three *p* values, one for each parameter independently, and one measuring the interaction between the two parameters. The results presented in Table 33 were analyzed to test the hypotheses guiding the study.

Table 33

Two Way ANOVA Output for Teacher Openness

	Type III Sum of Squares	*Df*	Mean Square	*F*	Sig.
Corrected Model	90376.375	3	30125.458	1.204	.416
Intercept	1174278.125	1	1174278.125	46.923	.002
Socio	11325.125	1	11325.125	.453	.538
Accred	36856.125	1	36856.125	1.473	.292
Socio * Accred	42195.125	1	42195.125	1.686	.264
Error	100102.500	4	25025.625		
Total	1364757.000	8			
Corrected Total	190478.875	7			

*p<.05, **p<.01, ***p<.001

The two-way ANOVA did not reveal a statistically significant main effect for Title I status, $F(1,4)=.453$, p=.538. Similarly, a statistically significant main effect was not established for accreditation status, $F(1,4)=1.47$, p=.292. Furthermore, the interaction effect was also not determined to be significant, $F(1,4)=1.686$, p=.264. In summary, data analysis revealed that teacher openness, a factor of school climate, did not vary according to according to Title I status or accreditation status. Moreover, Title I status and accreditation status did not have an interactive effect on teacher openness.

Overall school climate. The characteristics of an open climate are cooperation, respect, and openness; all attributes that exist within the school environment, among the faculty and between the faculty and principal (Hoy et al., 1991). Additionally, the principal within an open school listens and is receptive to feedback and provides frequent and genuine praise. The criteria for overall school climate is referenced in Table 11. A comparison of ratings derived from the criteria for overall school climate presented in Table 34 revealed a presence of each type of

school climate, with the exception of engaged climate. In addition, both of the schools that were found to have an open climate were both fully accredited.

Table 34

Comparison of Overall School Climate

Hoy's Rating for Overall School Climate	Number of Schools with the Rating	Title 1 Status	Non-Title I Status	Fully Accredited	Non-Fully Accredited
Open Climate	2	1	1	2	-
Closed Climate	3	1	2	2	1
Engaged Climate	0	-	-	-	-
Disengaged Climate	3	2	1	-	3

Data from each school were recorded in SPSS and a two-way ANOVA was conducted to assess both accountability status and Title I status in relation to overall school climate. Furthermore, the test analyzed whether there was an interaction between these two parameters. This test produced three *p* values, one for each parameter independently, and one measuring the interaction between the two parameters. The results presented in Table 35 were analyzed to test the hypotheses guiding the study.

Table 35

Two-Way ANOVA Output for School Climate

	Type III Sum of Squares	*df*	Mean Square	*F*	Sig.
Corrected Model	2.500	3	.833	.476	.716
Intercept	60.500	1	60.500	34.571	.004
Socio	.000	1	.000	.000	1.000
Accred	2.000	1	2.000	1.143	.345
Socio * Accred	.500	1	.500	.286	.621
Error	7.000	4	1.750		
Total	70.000	8			
Corrected Total	9.500	7			

*p<.05, **p<.01, ***p<.001

The two-way analysis of variance did not reveal a statistically significant main effect for Title I status $F(1,4)=.000$, p=.1.000. Similarly, a statistically significant main effect was not

established for accreditation status, $F(1,4)=1.143$, p=.345. Furthermore, the interaction effect was not determined to be significant, $F(1,4)=.286$, p=.621. In summary, data analysis reveals that overall school climate does not vary according to according to Title I status or accreditation status. Moreover, Title I status and accreditation status do not have an interactive effect on overall school climate.

Summary of descriptive statistics. An analysis of the six subtests of the OCDQ-RE revealed some variations in the mean standardized scores with respect to Title I status and accreditation status. Figure 2 shows the mean score for each of the subtests and the differences between Title I and Non-Title I schools and fully accredited and non-fully accredited schools.
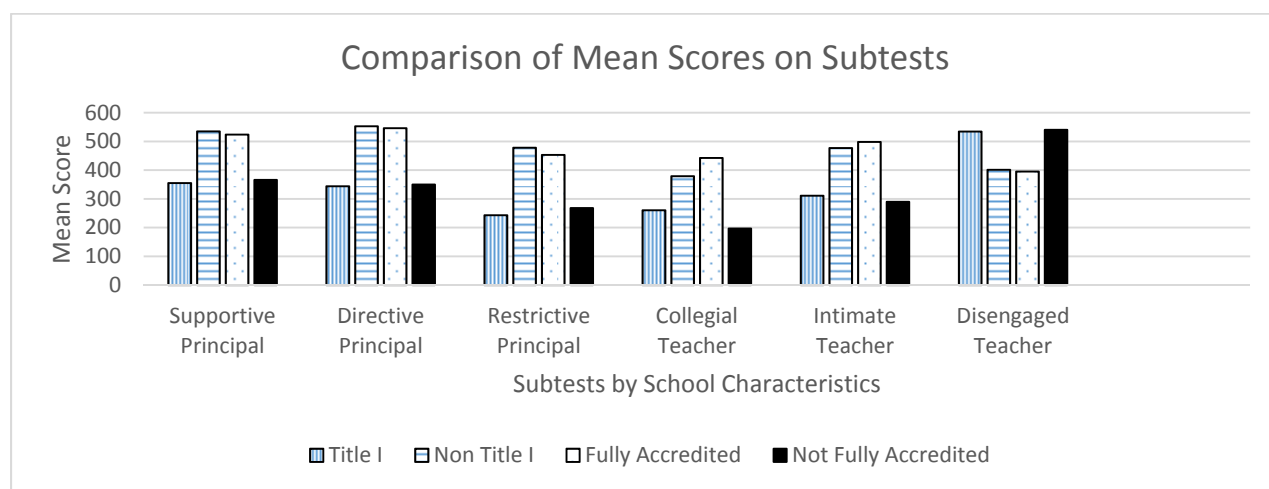
Figure 2. Comparison of mean scores on subtests of OCDQ-RE.

Summary of inferential statistics. Although principal openness, teacher openness and overall school climate did not reveal significant results based on α=.05, some of the subsets of school climate did vary significantly based on Title I status, accreditation status or a combination of both variables. Table 36 shows the statistical analysis for each of the factors, including their interaction, used to determine school climate with asterisks indicating levels of significance.

Table 36

Summary of Statistical Analysis of Factors Determining School Climate

Factors Determining School Climate	Title I	Accreditation	Interaction	Areas of Significance
Supportive Principal Behavior (S)	.009**	.012*	.099	Title I Accreditation
Directive Principal Behavior (D)	.083	.086	.059	None
Restrictive Principal Behavior (R)	.027*	.055	.048*	Title I Interaction of Title I & Accreditation
Collegial Teacher Behavior (C)	.177	.027*	.093	Accreditation
Intimate Teacher Behavior (I)	.009**	.004**	.025*	Title I Accreditation Interaction of Title I & Accreditation
Disengaged Teacher Behavior (Dis)	.125	.101	.615	None
Principal Openness (function of S, D, R)	.623	.771	.330	None
Teacher Openness (function of C, I, Dis)	.538	.292	.264	None

*$p<.05$, **$p<.01$, ***$p<.001$

Significant differences were found between school climate in the areas of supportive principal behavior, restrictive principal behavior and intimate teacher behavior. With respect to principal behaviors, more Title I teachers viewed the principal as lacking basic concern and interfering with teachers' work than Non-Title I teachers. Title I teachers also identified less cohesiveness among teachers as compared to Non-Title I teachers. Significant differences were also found between school climate in the areas of collegial teacher behavior and intimate teacher behavior. Teachers at fully accredited schools perceived the teachers as having more cohesive, open interactions as compared to schools that were not fully accredited.

Summary

This chapter provided the aggregated data from OCDQ-RE surveys administered to teachers in eight schools with varying Title I and accreditation status within on school division in the Commonwealth of Virginia. Although overall school climate did not vary significantly according to the variables of Title I and accreditation status, the researcher discovered variations in some of the subtest dimensions of school climate. In the concluding chapter, the researcher

will report the findings of the study, provide implications for practice, and recommendations for future research.

Chapter 5

Summary and Conclusions

Introduction

Chapter 5 includes the following sections: (a) review of the topic and purpose of the study, (b) findings and discussion, (c) implications of findings, (d) suggestions for future studies, (e) reflections and (f) summary.

Review of Topic and Purpose of the Study

School climate is defined as the character of school life and the various patterns that reflect a school's goals, values and interpersonal relationships (Cohen et al., 2009). School climate is comprised of the crucial interactions between principal and teachers as well as among teachers (Leithwoood, 2004; Marzano, 2003; Marzano et al., 2005). These interpersonal behaviors are operationalized and quantified by the Organizational Climate Descriptive Questionnaire for Elementary Schools (Halpin & Croft, 1963; Hoy et al., 1991), the instrument utilized in the study.

Research indicates that when basic physical and emotional needs are met, teachers can focus on the greater good of the organization (Leithwood & McAdie, 2007). In contrast, accountability pressures, as a result of federal and state accountability measures channeled through school administrators, often lead teachers to feel anxious and frustrated, which would likely impact morale (Guskey, 2007; Zehavi, 2011). Research indicates that these feelings associated with the level of accountability pressure may vary between schools and districts (Fuller, Henne, & Hannum, 2008), thus driving the inquiry behind this study.

The purpose of this quantitative study was to compare school climate in a sampling of Title I and Non-Title I elementary schools with varied accreditation statuses within one school division in the Commonwealth of Virginia, as assessed by the Organizational Climate Description Questionnaire for Elementary Schools. The population for this study was comprised of teachers from eight schools of varying Title I and accreditation statuses from one public school division in the Commonwealth of Virginia. The following research questions guided this study:

1. What are the differences in school climate in Title I elementary schools and Non-Title I elementary schools within the same school division in the Commonwealth of Virginia?

2. What are the differences in school climate in schools that met full accreditation and schools that failed to meet full accreditation within the same school division in the Commonwealth of Virginia?

3. What are the differences in school climate in fully accredited Title I elementary schools and fully accredited Non-Title I schools within the same school division in the Commonwealth of Virginia?

4. What are the differences in school climate in non-fully accredited Title I elementary schools and non-fully accredited Non-Title I schools within the same school division in the Commonwealth of Virginia?

Findings and Discussion

A thorough data analysis produced several findings and conclusions, which are discussed with respect to each of the subtest dimensions of school climate, principal openness, teacher openness and overall school climate.

1. Teachers at Title I schools perceived principals to be less supportive than teachers at Non-Title I schools. When reviewing the data derived from Hoy's formula for determining supportive principal behavior, it was noted that a majority of the Title I schools (3 of 4) were found to have ratings of either "lower than 84% of schools" (1of 4) or "lower than 99% of schools" (2 of 4). Only one Title I school scored an "average" rating (1 of 4) for this subtest. In contrast, a majority of Non-Title I schools had an "average" rating (3 of 4) for supportive principal behavior with only one school identified as having a supportive principal behavior rating "lower than 84%" (1 of 4).

Using inferential statistics, there were statistically significant differences in supportive principal behavior between Title I schools and Non-Title I schools. Specifically, the two-way analysis of variance determined a main effect for Title I status, $F(1,4)=23.263$, p=.009, such that supportive principal behavior were significantly higher for Non-Title I schools ($M=534.75$, $SD=25.99$) than for Title I schools ($M=357.50$, $SD=25.99$).

Teachers at Title I schools perceived their principals as less sympathetic and responsive than teachers at Non-Title I schools. Laredo (2006) would support the findings of this study, considering he also found significant differences in supportive principal behavior between schools with varied socio-economic statuses. Laredo's study determined that Non-Title I schools had higher ratings for principal supportive behavior than Title I schools.

2. Teachers at schools that were not fully accredited perceived principals to be less supportive than teachers at fully accredited schools. When reviewing the data derived from Hoy's formula for determining supportive principal behavior, it was noted that a majority of non-fully accredited schools (3 of 4) were found to have ratings of either "lower than 84% of schools" (1of 4) or "lower than 99% of schools" (2 of 4). Only one school that was not fully accredited scored an "average" rating (1 of 4) for this subtest. In contrast, a majority of schools that met full accreditation had an "average" rating (3 of 4) for supportive principal behavior with only one school identified as having a supportive principal behavior rating "lower than 84%" (1 of 4).

Using inferential statistics, there were statistically significant differences in supportive principal behavior between fully accredited schools and schools that were not fully accredited. Specifically, the two-way analysis of variance determined a main effect for accreditation status, $F(1,4)=19.014$, p=.012, such that supportive principal behavior were significantly higher for fully accredited schools (M=526.25, SD=25.99) than for schools that were not fully accredited (M=366.00, SD=25.99).

Laredo (2006) would support the findings of this study considering he also found significant differences in supportive principal behavior between schools with varied performance ratings. Laredo's study determined that at schools with higher academic performance, teachers rated their principal higher with regards to supportive behaviors.

3. Teachers at Title I schools and Non-Title I schools did not have significant differences in perceptions of directive principal behavior. When reviewing the data derived from Hoy's formula for determining directive principal behavior, it was noted that 5 out of 8 schools had scores lower than the "average" rating. Furthermore, none (0 of 8) of the school in the study had the highest rating for directive behavior that was "higher than 99% of schools." There was significant variation in the ratings of directive principal behavior in Title I schools. Two schools were noted as having directive principal behavior "lower than 99% of schools" (2

of 4); one school was found to have a rating "lower than 84% of schools" (1 of 4); and one school had a rating "higher than 84% of schools" (1 of 4). Similarly, the results for Non-Title I schools were also widespread. Two schools had a rating "lower than 84% of schools" (2 of 4); one school had a rating "average" (1 of 4); and one school had a rating "higher than 97% of schools" (1 of 4).

Using inferential statistics, the two-way analysis of variance did not reveal a statistically significant main effect for the Title I status, $F(1,4)=5.292$, p=.083. The differences in the mean scores of Title I schools (343.75) and Non-Title I schools (552.75) were more likely a result of differences in leadership styles from school to school. In contrast, Lowe (2010) found that in high-performing Title I schools, teachers perceived principals as having higher levels of rigid supervision.

4. Teachers at fully accredited schools and non-fully accredited schools did not have significant differences in perceptions of directive principal behavior. When reviewing the data derived from Hoy's formula, non-fully accredited schools had widespread teacher ratings of directive principal behavior. Two schools were noted as having directive principal behavior "lower than 99% of schools" (2 of 4); one school was found to have a rating "lower than 84% of schools" (1 of 4); and one school had a rating "higher than 97% of schools" (1 of 4). Two schools had a rating "lower than 84% of schools" (2 of 4); one school had a rating "average" (1 of 4); and one school had a rating "higher than 84% of schools" (1 of 4). Although schools that were fully accredited had a higher mean score for directive principal behavior (546.25) than schools that were not fully accredited (350.25), both categories of schools had a wide range of scores with respect to ratings. Standardized scores for directive behavior in fully accredited schools ranged from 460-660 and from 118-704 in non-fully accredited schools.

Using inferential statistics, the two-way analysis of variance did not reveal a statistically significant main effect for accreditation status, $F(1,4)=5.138$, p=.086. This may suggest that the differences have less to do with the differences between accreditation status and more to do with the individual leadership styles of principals. Again, these findings are contradictory to that of the study by Laredo (2006) wherein principals at high performing schools were less controlling and were more apt to give teachers freedom to teach.

5. Teachers at Non-Title I schools perceive the principal as being more restrictive than teachers at Title I schools. When reviewing the data derived from Hoy's formula for

determining restrictive principal behavior, it was noted that no schools (0 of 8) in the study that had a rating above "average." A majority of the Title I schools had ratings "lower than 97%" (1 of 4) or "lower than 99% of schools" (2 of 4). Only one school was found to have a rating "average." In contrast, all Non-Title I schools were found to have ratings "lower than 84%" (2 of 4) or "average" (2 of 4).

Using inferential statistics, there was a significant difference between restrictive principal behavior based on Title I status of schools. The two-way analysis of variance yielded a main effect for Title I status, $F(1,4)=11.59$, p=.027, such that restrictive principal behavior was significantly higher for Non-Title I schools (M=478.25, SD=75.378) than for Title I schools (M=243.38, SD=75.378). The results of this study are similar to the findings of Lowe (2010) who also indicated that teachers at Title I schools identified their principals as having low levels of restrictive behavior.

6. Teachers at fully accredited schools and non-fully accredited schools did not have significant differences in perceptions of restrictive principal behavior. When reviewing the data derived from Hoy's formula for determining restrictive principal behavior, half of the non-fully accredited schools had ratings "lower than 99% of schools" (2 of 4). In addition one school had a rating "lower than 84% of schools" (1 of 4), and one school had a rating "average" (1 of 4). In comparison, half of the fully accredited schools had ratings "average" (2 of 4), and the remaining schools had ratings "lower than 97% of schools" (1 of 4) and "lower than 84% of schools" (1 of 4) respectively.

Using inferential statistics, the two-way analysis of variance determined that there was no significant difference between restrictive principal behavior based on their school's accreditation status $F(1,4)=7.182$, p=.055. Although schools that were fully accredited had a higher mean score for restrictive principal behavior (453.25) than schools that were not fully accredited (268.38), both categories of schools had a wide range of scores with respect to ratings. Standardized scores for restrictive behavior in fully accredited schools ranged from 13.5-512 and from 94-548 in non-fully accredited schools. This may suggest that the differences have less to do with the differences between accreditation status and more to do with the individual leadership styles of principals.

The results of this study contradict the research of Laredo (2006) in which perceived restrictive principal behaviors occurred less frequently in schools with higher levels of academic

achievement. In contrast, this research found that the lowest levels of restrictive principal behavior were in schools that were not fully accredited.

7. Teachers' perceptions of restrictive principal behavior within schools varied according to combinations of Title I status and accreditation status. Using statistical analysis, the two-way analysis of variance determined that there was a statistically significant interaction effect between Title I status and accreditation status $F(1,4)=7.94$, p=.048. When analyzing the mean scores, teachers at fully accredited Title I schools (170.75) viewed principal behavior as less restrictive than teachers at non-fully accredited Title I schools (473.50). In addition, teachers at Non-Title I schools that were fully accredited (483.00) viewed principal behavior as more restrictive than Non-Title I schools that were non-fully accredited (316.00). Again, these results are in direct contrast to research conducted by Laredo (2006), wherein he found that restrictive behavior occurs less frequently in schools with higher achievement levels.

8 Teachers at Title I schools and Non-Title I schools did not have significant differences in perceptions of collegial teacher behavior. When reviewing the data derived from Hoy's formula for determining collegial teacher behavior, it was noted none of the schools in the study (0 of 8) had a score above the "average" rating. Half of the Title I schools had a rating "lower than 99% of schools" (2 of 4). In addition, one school had a rating "lower than 84% of schools" (1 of 4), and one school had a rating "average" (1 of 4). In comparison, all four of the Non-Title I schools had a different rating: "lower than 99% of schools" (1 of 4), "lower than 97% of schools" (1 of 4), "lower than 84% of schools" (1 of 4) and "average" (1 of 4). This disparity would indicate that school climate do not vary according to Title I status.

Using inferential statistics, the two-way analysis of variance did not reveal a statistically significant main effect for Title I status, $F(1,4)= 2.683$, p=.177. Although the mean standardized score for Non-Title I schools (378.75) was lower than the mean standardized score for Title I schools (260.25), both categories of schools had a wide range of scores with respect to ratings. Standardized scores for collegial behavior in Title I schools ranged from 40-544 and from 76-406 in Non-Title I schools. This may suggest that the differences have less to do with the differences in Title I status and more to do with individual leadership styles of principals.

Lowe (2010) found results that were comparable to this study. Lowe found that Title I teachers had low levels of collegial teacher behavior, with only 43.5% of surveyed teachers perceiving their relationship with other teachers as collegial. McIntyre (2004) attributes this

disconnect to the fact that teachers spend a majority of their time working on lesson plans and remediation of students, leaving little time to socialize and interact with colleagues. Therefore, the efforts of staff members are done in isolation.

9. Teachers in fully accredited schools perceive more open and professional interactions than teachers in non-fully accredited schools. When reviewing the data derived from Hoy's formula for determining collegial teacher behavior, it was noted nearly all of the schools that were non-fully accredited had a rating "lower than 99% of schools" (3 of 4). The remaining school that was non-fully accredited had a rating "lower than 84% of schools" (1 of 4). In contrast, half of the fully accredited schools had an "average" rating (2 of 4), and the remaining fully accredited schools had ratings "lower than 97% of schools" (1 of 4) and "lower than 84% of schools" (1 of 4).

Using inferential statistics, the two-way analysis of variance revealed a main effect for accreditation status, $F(1,4)=11.516$, p=.027, such that the mean score for collegial teacher behavior was significantly higher in fully accredited schools (M=442.25, SD=67.98) than for schools that are non-fully accredited (M=196.75, SD=67.98). Teachers at schools that were fully accredited perceived the staff as more collegial than teachers at schools that were not fully accredited. Teachers in fully accredited schools appeared to perceive respect and support for each other, as compared to teachers in schools that were not fully accredited. More importantly, this could indicate that teachers in schools that are not fully accredited collaborate less effectively than teachers in fully accredited schools.

Lowe (2010) found results that were comparable to this study. Lowe found that Title I teachers perceived low levels of collegial teacher behavior, with only 43.5% of surveyed teachers perceiving their relationship with other teachers as collegial. McIntyre (2004) attributes this disconnect to the fact that teachers spend a majority of their time working on lesson plans and remediation of students, leaving little time to socialize and interact with colleagues. Therefore, the efforts of staff members are done in isolation.

10. Teachers in non-Title I schools are perceived as having more intimate teacher relationships than Title I schools. When reviewing the data derived from Hoy's formula for determining intimate teacher behavior, it was noted that none of the schools in the study (0 of 8) had a rating for intimate teacher behavior above "average" category. Half of the Title I schools had a ratings "lower than 99% of schools" (2 of 4), and the remaining schools had ratings "lower

than 84% of schools" (1 of 4) and "average" (1 of 4) respectively. In comparison, Non-Title I schools had ratings that fell between "average" (2 of 4) and "lower than 84% of schools" (2 of 4).

Using inferential statistics, the two-way analysis of variance revealed a main effect for Title I status, $F(1,4)=22.860$, p=.009, such that the mean score for intimate teacher behavior was significantly higher in non-Title I schools (M=476.75, SD=44.31) than Title I schools (M=311, SD=44.31). This indicates that teachers in non-Title I schools have stronger social relationships than teachers in Title I schools. A lack of intimate teacher behaviors in Title I schools may be attributed to the high level of teacher turnover rates in these schools.

A lack of intimate teacher behaviors in Title I schools and schools that are not fully accredited might be attributed to the high level of teacher turnover rates in these schools. In addition, division and state mandates associated with not being fully accredited result in potentially structured use of planning time and more initiatives that may interfere with teachers' ability to socialize with colleagues. Although Lowe's study (2010) examined only Title I schools, he discovered similar results, as all eight schools in his sample had low ratings for intimate teacher behavior.

11. Teachers in fully accredited schools rate intimate teacher relationships higher than teachers in non-fully accredited schools. When reviewing the data derived from Hoy's formula for determining intimate teacher behavior, it was noted that fully accredited schools had higher ratings than non-fully accredited schools. All four of the fully accredited schools had either a rating "lower than 84% of schools" (2 of 4) or "average" (2 of 4). In comparison, non-fully accredited schools had ratings "lower than 99% of schools" (2 of 4) or "lower than 84% of schools" (2 of 4).

Using inferential statistics, the two-way analysis of variance revealed a main effect for accreditation status, $F(1,4)=36.09$, p=.004, such that the mean score for intimate teacher behavior was significantly higher in fully accredited schools (M=498, SD=44.31) than non-fully accredited schools (M=289.75, SD=44.31). This indicates that teachers in fully accredited schools perceive stronger social relationships than teachers in non-fully accredited schools.

A lack of intimate teacher behaviors in non-fully accredited schools may be attributed to pressures associated with school status. Division and state mandates associated with not being fully accredited result in potentially structured use of planning time and more initiatives that may

interfere with teachers' ability to socialize with colleagues. In the study by Lowe (2010), the researcher found in his study, levels of intimate teacher behavior were low in all eight elementary schools that met the performance standards.

12. Teachers' perceptions of intimate teacher behavior within schools varied according to combinations of Title I status and accreditation status. Using statistical analysis, the two-way analysis of variance determined that there was a statistically significant interaction effect between Title I status and accreditation status $F(1,4)=.025$, $p=.025$. When analyzing the mean scores, teachers at fully accredited Title I schools (340.5) viewed teacher behavior as less intimate than teachers at non-fully accredited Title I schools (520.00). In addition, teachers at Non-Title I schools that were fully accredited (433.50) viewed teacher behavior as more intimate than Non-Title I schools that were non-fully accredited (281.50). Again, these findings are comparable to the finding of Lowe's study (2010).

13. Teachers at Title I schools and Non-Title I schools did not have significant differences in perceptions of disengaged teacher behavior. When reviewing the data derived from Hoy's formula for determining disengaged teacher behavior, it was noted that none of the schools in the study (0 of 8) had a rating for disengaged teacher behavior "above 97% of schools." All four Title I schools' ratings were clustered between "lower than 84% of schools" (1 of 4), "average" (2 of 4), and "higher than 84% of schools" (1 of 4). In comparison, non-Title I schools had ratings between "lower than 99% of schools" (1 of 4), "lower than 84% of schools" (2 of 4) and "average" (1 of 4). Overall, the ratings reveal that disengaged teacher behavior for Title I schools and Non-Title I schools were fairly similar.

Using inferential statistics, the two-way analysis of variance did not reveal a statistically significant main effect for Title I status, $F(1,4)= 3.756$, $p=.125$. Although the mean standardized score for Title I schools (534.25) was higher than the mean standardized score for Non-Title I schools (401.50), both categories of schools had a wide range of scores with respect to ratings. Standardized scores for disengaged teacher behavior in Title I schools ranged from 171-600 and from 467-578 in Non-Title I schools. This may suggest that the differences have less to do with the differences in Title I status and more to do with differences that exist between faculty members in each building.

The results of this study are comparable with the findings of a study conducted by Lowe (2010). Lowe's study reported comparable scores for disengaged teacher behavior for Title I and

non-Title I schools. In both cases, perceived teacher-teacher relationships were lower than the mean established by Hoy (1990). Similar to this study, McIntyre's study (2004) found that middle school teachers in two distinct school divisions had similar views regarding disengaged teacher behavior. Results varied within schools in the division and across the two school divisions. The difference between this study and McIntyre's study involved the difference in the overall rating scores for disengaged teacher behavior. McIntyre's study found that six out of eight schools were identified as having ratings "higher than 84%" or above for disengaged teacher behavior, whereas this study found that seven out of eight schools had an "average" rating or lower.

 14. Teachers at fully accredited schools and non-fully accredited schools did not have significant differences in perceptions of disengaged teacher behavior. When reviewing the data derived from Hoy's formula for determining disengaged teacher behavior, it was noted that each of the fully accredited schools had a different rating: "lower than 99% of schools" (1 of 4), "lower than 84% of schools" (1 of 4), "average: (1 of 4), and "higher than 84% of schools" (1 of 4). All four non-fully accredited schools had ratings clustered between "lower than 84% of schools" (2 of 4) and "average" (2 of 4). Overall, the ratings reveal disengaged teacher behavior for fully accredited schools and non-fully accredited schools may be related to faculty composition and not accreditation status.

 Using inferential statistics, the two-way analysis of variance did not reveal a statistically significant main effect for accreditation status, $F(1,4)= 4.513$, p=.101. Although the mean standardized score for non-fully accredited schools (540.75) was higher than the mean standardized score for fully accredited schools (395.00), both categories of schools had a wide range of scores with respect to ratings. Standardized scores for disengaged teacher behavior in fully accredited schools ranged from 475-600 and from 171-578 in non-fully accredited schools. This may suggest that the differences have less to do with the differences in accreditation status and more to do with differences that exist between the faculty members in each building.

 15. Teachers at Title I schools and Non-Title I schools did not have significant differences in perceptions of principal openness. When reviewing the data derived from Hoy's formula for determining principal openness, it was noted that a majority of the schools in the study (6 of 8) were said to have a rating of "average" or higher for principal openness. The ratings for Title I schools were similar, with half of the schools rating "average" (2 of 4) and half

of the schools rating "high" (2 of 4). On the contrary, non-Title I schools ratings were more widespread, with half of the schools rating "low" (2 of 4), and the remaining schools rating either "slightly above average" (1of 4) or "very high" (1 of 4). This discrepancy within the group indicates that differences are not related to Title I status, but to the leadership characteristics within each school.

Using inferential statistics, the two-way analysis of variance did not reveal a statistically significant main effect for Title I status, $F(1,4)=.283$, p=.623, such that principal openness, a component of school climate, did not vary according to Title I status. The differences in ratings of principal openness at these schools may have less to do with Title I status and more to do with teachers' varying perceptions of individual principal behaviors.

McIntyre (2004) would agree with these findings, she found that mean scores for supportive, directive and restrictive principal behaviors did not vary within Title I schools. For example, the mean scores for Title I supportive, restrictive and directive behaviors were about the same. In addition, out of those six schools in McIntyre's study that were identified as having high levels of supportive principal behavior, four were also identified as having high levels of the other two principal behaviors.

16. Teachers at fully accredited schools and non-fully accredited schools did not have significant differences in perceptions of principal openness. When reviewing the data derived from Hoy's formula for determining principal openness, it was noted that the ratings for fully accredited and non-fully accredited schools were widespread. Fully accredited schools were found to have ratings from "high" (1 of 4), "slightly above average" (1 of 4), to "average" (1 of 4), to "low" (1 of 4). Similarly, non-fully accredited schools had ratings from "very high" (1 of 4), to "high" (1 of 4), to "average" (1 of 4), to "low" (1 of 4). This discrepancy within the groups indicates that differences are not related to accreditation status, but to the leadership characteristics within each school.

Using inferential statistics, the two-way analysis of variance did not reveal a statistically significant main effect for accreditation status, $F(1,4)=.097$, p=.771, such that principal openness, a component of school climate, did not vary according to accreditation status. The differences in ratings of principal openness at these schools may have less to do with accreditation status and more to do with teachers' varying perceptions of individual principal behaviors.

Laredo (2006) found that teachers at Title I schools that met accreditation rated principals as highly supportive, highly directive and less restrictive. In contrast, this study found that teachers in non-fully accredited schools perceived low levels of supportive, directive, and restrictive principal behaviors. These differences suggest that variance in principal openness ratings are not related to Title I, nor to accreditation status. Rather, these differences are based on individual differences in faculty relationships that are specific to each school.

17. Teachers at Title I schools and Non-Title I schools did not have significant differences in perceptions of teacher openness. When reviewing the data derived from Hoy's formula for determining teacher openness, it was noted that all but one school (7 out of 8), rated in the average range or lower for teacher openness. Six schools in the study fell in the "below average" to "very low" range with respect to teacher openness. Title I schools were found to have ratings from "average" (1 of 4), and "below average" (1 of 4), to "very low" (2 of 4). In comparison, the classification of non-Title I schools was more widespread, ranging from 'very high" (1 of 4), to "below average" (2 of 4), to "very low" (1 of 4). The variability in the results indicates that differences in levels of teacher openness are a result of differences in individual faculties and not Title I status.

Using inferential statistics, the two-way analysis of variance did not determine a statistically significant main effect for Title I status, $F(1,4)= .453$, p=.538, such that teacher openness, a component of school climate, did not vary according to Title I status. The differences in the mean scores of Title I schools (346.25) and Non-Title I schools (485.00) were more likely a result of differences in individual school faculties.

Similar to research by Laredo (2006), the results of this study indicated that regardless of Title I status and accreditation status, mean scores for collegial behavior and intimate behavior were below the mean score established by the normative sample, while the scores for disengaged behavior were closer to the mean score established by Hoy (1990). The differences in ratings of teacher openness at these schools had less to do with Title I or accreditation status and more to do with collegial behaviors in each of the schools. It is interesting that the schools (3 of the 4) with the lowest ratings for teacher openness were not fully accredited. As stated previously, this may be credited to an increase in the paperwork associated with the school improvement process.

18. Teachers at fully accredited schools and non-fully accredited schools did not have significant differences in perceptions of teacher openness. When reviewing the data

derived from Hoy's formula for determining teacher openness, it was noted that fully accredited schools had ratings from "very high" (1 of 4), to "average" (1 of 4), to "below average" (2 of 4). In comparison, ratings for non-fully accredited schools were more clustered. Ratings for these schools ranged from "below average" (1 of 4) to "very low" (3 of 4). The variability in ratings from fully accredited schools indicates that differences in levels of teacher openness are a result of differences in individual faculties and not accreditation status.

Using inferential statistics, the two-way analysis of variance did not yield a statistically significant main effect for accreditation status, $F(1,4)= 1.47$, p=.292, such that teacher openness, a component of school climate, did not vary according to accreditation status. Therefore, the differences in the mean scores of fully accredited schools (515.25) and non-fully accredited schools (316.00) were more likely a result of differences in individual school faculties. These findings are also supported by research Laredo's (2006) study that found similar scores regardless of Title I status and accreditation status.

19. Teachers at Title I schools and Non-Title I schools did not have significant differences in perceptions of overall school climate. Based on the criteria for determining the four types of school climate (open climate, closed climate, engaged climate, and disengaged climate) referenced in Table 11, it was determined that three of the four types of school climate were present in the schools used in the study. Specifically, open climates, closed climates and disengaged climates were found. With respect to Title I schools, one school was found to have an "open climate" (1 of 4); one school had a "closed climate" (1 of 4); and two school had a "disengaged climate' (2 of 4) The findings for Non-Title 1 schools were also widespread with ratings from "open climate" (1 of 4), to "closed climate" (2 of 4), to "disengaged climate" (1 of 4). The variance of ratings within each group indicates that overall differences in school climate are not due to Title I status.

Using inferential statistics, the two-way analysis of variance did not reveal a statistically significant main effect for Title I status $F(1,4)=.000$, p=1.000. This indicates that the differences overall school climate are not related to Title I status. As supported in studies by McIntyre (2004) and Lowe (2010), a difference in the overall rating for school climate has more to do with each teacher's perception of principal behaviors and less to do with Title I status or accreditation status.

20. Teachers at fully accredited schools and non-fully accredited schools did not have significant differences in perceptions of overall school climate. Based on the criteria for determining the four types of school climate (open climate, closed climate, engaged climate, and disengaged climate) referenced in Table 11, it was determined that fully accredited schools had one of two types of overall school climate: either "open climate" (2 of 4) or "closed climate" (2 of 4). Similarly, non-accredited schools were found to have one of two distinct climates: either "closed climate" (1 of 4) or "disengaged climate" (3 of 4). It is important to note that neither of the climate categories identified for non-fully accredited schools were favorable. However, the variance of ratings within each group indicates that overall school climate did not vary according to accreditation status.

Using inferential statistics, the two-way analysis of variance did not reveal a statistically significant main effect for Title I status $F(1,4)=.000$, $p=1.000$. This indicates that the differences overall school climate are not related to Title I status. As supported in studies by McIntyre (2004) and Lowe (2010), a difference in the overall rating for school climate may have more to do with each teacher's perceptions of principal behaviors and less to do with Title I status or accreditation status.

Implications of Findings

1. Policymakers should incorporate measures of school climate into current national and state policies. At the national level, policymakers should take note of these findings and other research related to school climate. If policymakers are looking to improve the educational system through systematic change, then it must be meaningful and based on the current school climate research. Presently, policies to improve academic achievement are too narrowly focused (Cohen et al., 2009). As stated previously, these state and federal accountability systems require accountability for schools in the core areas of math, reading, science, and social studies. However, there is no assessment of school climate in determining and measuring school success. Considering that school climate has a direct impact on staff morale, motivation, and student achievement (Darling-Hammond, 2007; Gurr, Drysdale, & Mulford, 2006; Levitt, 2008), a school climate measure could be a valuable tool in creating healthy, productive schools.

2. College and universities should include or continue to include training on school climate measures in principal preparation programs. Aspiring school leaders should be

aware of both theoretical and practical implications of school climate and have strategies in their professional repertoire to assess and improve school climate. Additionally, academic researchers in school leadership programs could investigate the relationship between school climate, teacher satisfaction, and the student achievement. Research indicates schools with high rates of teacher dissatisfaction are likely to experience problems such as poor teacher morale, teacher turnover, and lower student achievement (Owens & Valesky, 2007). As the focus remains on instructional leadership, colleges and universities must develop principal preparation programs that put a greater emphasis on assessing school climate and addressing school climate concerns.

3. Superintendents are encouraged to consider using or continue using school climate measures to assess principal effectiveness and program implementation. The Superintendent of Apple Public Schools could review the information provided and evaluate the school climate at the remaining schools in the division. This information could prove to be valuable when considering whether to make administrative changes, implementing instructional initiatives or other changes.

4. Principals are encouraged to use a school climate instrument similar to the one used in this study to assess school climate at various times during the school year. Principals and their leadership styles are critical to the success of a school. Principals must be change agents, and effective leadership initiating a change of culture and climate is the key to bringing about meaningful change. Since effectiveness of leadership is one component of the OCDQ-RE instrument, principals could use this instrument to assess the school climate at multiple intervals to inform leadership practices.

5. Principals of Title I schools and non-fully accredited schools should explore ways to develop supportive principal behaviors. As one subset of school climate, increasing the level of supportive principal behavior could improve principal openness and overall school climate. Considering that this type of principal behavior is characterized by a basic concern for teachers (Hoy et al. 1991), increasing levels of supportive principal behaviors could create an environment where teachers and administrators are working together to achieve academic success. Specifically, principals should take more opportunities to show appreciation for staff and listen and accept suggestions of staff when making decisions.

6. Principals of Title I schools should explore ways to decrease restrictive principal behaviors. As one subset of school climate, decreasing the level of restrictive principal behavior

could improve principal openness and overall school climate. Considering that this type of principal behavior is characterized by behaviors that interfere with teaching responsibilities (Hoy et al. 1991), reducing restrictive principal behaviors could help teachers focus on improving classroom instruction. Specifically, principals at Title I schools should explore ways to reduce paperwork and routine duties that impede teachers' ability to teach.

7. Principals of non-fully accredited schools should explore ways to increase collegial teacher behaviors. As one subset of school climate, increasing the level of collegial teacher behavior could improve teacher openness and overall school climate. Considering that this type teacher behavior is characterized by open and professional interactions among teachers (Hoy et al., 1991), a high level of collegial teacher behaviors could help teachers develop pride in their schools and increase the level of collaboration.

8. Principals of Title I schools should explore ways to increase intimate teacher behaviors. As one subset of school climate, increasing the level of intimate teacher behavior could improve teacher openness and overall school climate. Results of this study showed that collegial teacher behavior and intimate teacher behavior were significantly higher in Non-Title I schools than Title I schools. Specific attention should be given to teachers in Title I schools that were fully accredited. as these schools were found to have the lowest mean scores for intimate teacher behavior. Considering that this type of teacher behavior is characterized by friendly relationships and strong social support for each other (Hoy et al., 1991), increasing the level of intimate teacher behavior could help teachers deal with the stress and could increase collaboration in the school building. Furthermore, building strong relationships among staff members could potentially reduce teacher attrition.

Suggestions for Future Studies

1. Researchers could conduct a similar study in schools that have missed accreditation for two years or more. For this particular study, all of the schools identified as not meeting accreditation were in their first year of this status. Conducting such a study would provide research into the impact that accreditation status has on school climate over time.

2. Researchers could conduct a similar study in schools that are fully accredited but failed to meet federal Annual Measureable Objectives (AMOs). This would be an

interesting study considering that many schools across the Commonwealth of Virginia met accreditation standards but failed to meet federal benchmarks because of the new stipulation that schools not only have to meet established benchmarks but they must maintain or exceed the pass percentage from the previous school year.

3. Researchers could assess school climate by administering the OCDQ-RE at different times during the school year. In this this study, the OCDQ-RE was given during the months of December and January. Studies have shown that the time of year that a survey is given has an impact on responses.

4. Researchers could track the responses of the sample group at different times during the school year. This would enable the researcher to explore trends that occur in school climate at various points during the school year.

5. This quantitative study only examined the perceptions of teachers, but researchers could triangulate by conducting a similar study to ascertain other stakeholders' perceptions (i.e., parents, students and community leaders).

6. Researchers could expand the sample size to include more schools from the one school division. In this study, the researcher selected eight school from one school division.

7. Researchers could conduct a similar study to include more school divisions within the Commonwealth of Virginia and possibly different states.

8. Researchers could conduct a similar study to include elementary, middle and high schools. Considering that there are fewer secondary level schools that are identified as Title I schools, the researcher could use free and reduced lunch percentages as an indicator of student socio-economic status.

9. Researchers could conduct a qualitative study to determine school climate in schools with varying Title I and accreditation statuses. This would allow researchers to obtain in-depth information about teachers' perceptions of principals' leadership practices and school climate when responding to pre-selected, open-ended questions on surveys or during personal interviews.

Reflections

Current national and state mandates emphasize the importance of improved student achievement. As researchers have indicated, school climate plays a vital role in achieving academic success. Therefore, an analysis of principal-teacher interactions and teacher-teacher interactions are just as important as analysis of student performance.

As a principal, I have always made it a priority to find ways to improve staff morale through incentives, staff events and opportunities for staff recognition. As a principal of a Title I school that is not fully accredited, this study has made me reflect more on the everyday interactions between teachers-teachers and principal- teachers in the school building as a tool for improving student achievement. Much like the common assessments that guide remediation efforts in my school, I realize that school climate assessments should be administered and reviewed on a regular basis to determine areas of concern.

Summary

Chapter 5 provides a review of the topic and purpose of the study, findings, implications for practice, suggestions for future studies, and reflections. This research concluded that there were no significant differences in school climate at schools with varying Title I status and accreditation status within one school division in the Commonwealth of Virginia. That said, some of the component dimensions of school climate varied significantly based on Title I and accreditation status. The results of this study could be used as a basis for additional research into school climate, specifically, the relationship between Title I status, accreditation status and other variables surrounding the learning environment. In the age of increased accountability, additional research would enable school administrators to create productive schools and, ultimately, improve student performance.

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Appendix A

Training in Human Subjects Protection Certification

Appendix B

IRB Approval
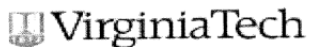
VirginiaTech

MEMORANDUM

DATE: November 27, 2013

TO: Carol S Cash, Angela Lake Isbell

FROM: Virginia Tech Institutional Review Board (FWA00000572, expires April 25, 2018)

PROTOCOL TITLE: A Comparative Study of School Climate in Select Elementary Schools from One School Division in Virginia with Varied Socio-Economic and Accreditation Statuses

IRB NUMBER: 13-1096

Effective November 27, 2013, the Virginia Tech Institution Review Board (IRB) Chair, David M Moore, approved the New Application request for the above-mentioned research protocol.

This approval provides permission to begin the human subject activities outlined in the IRB-approved protocol and supporting documents.

Plans to deviate from the approved protocol and/or supporting documents must be submitted to the IRB as an amendment request and approved by the IRB prior to the implementation of any changes, regardless of how minor, except where necessary to eliminate apparent immediate hazards to the subjects. Report within 5 business days to the IRB any injuries or other unanticipated or adverse events involving risks or harms to human research subjects or others.

All investigators (listed above) are required to comply with the researcher requirements outlined at:

http://www.irb.vt.edu/pages/responsibilities.htm

(Please review responsibilities before the commencement of your research.)

PROTOCOL INFORMATION:

Approved As: **Exempt, under 45 CFR 46.110 category(ies) 2**
Protocol Approval Date: **November 27, 2013**
Protocol Expiration Date: **N/A**
Continuing Review Due Date*: **N/A**

*Date a Continuing Review application is due to the IRB office if human subject activities covered under this protocol, including data analysis, are to continue beyond the Protocol Expiration Date.

FEDERALLY FUNDED RESEARCH REQUIREMENTS:

Per federal regulations, 45 CFR 46.103(f), the IRB is required to compare all federally funded grant proposals/work statements to the IRB protocol(s) which cover the human research activities included in the proposal / work statement before funds are released. Note that this requirement does not apply to Exempt and Interim IRB protocols, or grants for which VT is not the primary awardee.

The table on the following page indicates whether grant proposals are related to this IRB protocol, and which of the listed proposals, if any, have been compared to this IRB protocol, if required.

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Appendix C

Permission for Survey Use

Dr. Hoy,

I am writing to you to ask permission to use the OCDQ-RE instrument, found in your website, as the data collection tool for my dissertation.

I am currently in the educational leadership doctoral program at Virginia Tech. I am also an elementary school principal in Chesapeake, Virginia.

I am interested in comparing teachers' perceptions of school climate in a sampling of Title I and Non-Title I elementary schools with different accreditation statuses within one school division.

I look forward to your response and thank you for your assistance in this process.

Respectfully,
Angie Isbell
Principal
Carver Intermediate School
(757)494-7505

Isbell, Angela

From:	Wayne Hoy <whoy@mac.com>
Sent:	Friday, October 25, 2013 10:36 AM
To:	Isbell, Angela
Subject:	Re: Permission for Use of Survey

Hi Angela--

You have my permission to use the OCDQ-RE in your dissertation research.

Good luck.

Wayne

Wayne K. Hoy
Fawcett Professor Emeritus in
Education Administration
The Ohio State University
www.waynekhoy.com

7687 Pebble Creek circle, #102
Naples, FL 34108
Email: whoy@mac.com
Phone: 239 595 5732

On Oct 24, 2013, at 5:54 PM, "Isbell, Angela" <Angela.Isbell@cpschools.com> wrote:

Dr. Hoy,

I am writing to you to ask permission to use the OCDQ-RE instrument, found in your website, as the data collection tool for my dissertation.

I am currently in the educational leadership doctoral program at Virginia Tech. I am also an elementary school principal in Chesapeake, Virginia.

 I am interested in comparing teachers' perceptions of school climate in a sampling of Title I and non-Title I elementary schools with different accreditation statuses within one school division.

I look forward to your response and thank you for your assistance in this process.

Respectfully,
Angie Isbell
Principal
Carver Intermediate School
(757)494-7505
******** Confidentiality Statement: This electronic message and attachments are intended only for the use of the addressee and may contain confidential or privileged information.

1

Appendix D

Letter to the Superintendent

Date:

Dear Superintendent,

My name is Angie Isbell, an Ed.D student from Virginia Tech. I am requesting permission to conduct a study in the school division. The research will compare teachers' perceptions of school climate in eight elementary schools within the school division. The sample will include both Title I and Non-Title I elementary schools with different accreditation statuses.

Your support will assist school leaders in understanding the relationship between teachers' perceptions of school climate, Title I status and accreditation status. The findings from this study could assist principals in creating a healthy school climate.

The primary data collection instruments for my research study will include the Organizational Climate Descriptive Questionnaire-Revised Elementary (OCDQ-RE) and a Teacher Demographic Questionnaire. The OCDQ-RE assesses school climate using a 42-item Likert scale. The Teacher Demographic Questionnaire is a six-item questionnaire used to identify teacher' demographic data (age, gender, race, education level, years of experience, and years working with current principal).

Once permission is granted from the school division, select principals will be contacted to discuss participation in the study. Once approval is granted from the principal, a date will be established to visit the school, explain the study to teachers and distribute the survey instruments. The meeting will take place during a regular scheduled faculty meeting or staff development meeting between December and January 2013. I will explain that each teacher's participation is voluntary and will administer the questionnaires willing participants at all eight elementary schools. It should take approximately 20 minutes to complete the OCDQ-RE and the Teacher Demographic Survey.

A designee will be selected to collect the questionnaires from each site and place them in a marked envelope that will be sealed. All of the questionnaires will remain in a secure location throughout the study. Upon successful completion of the doctoral program, I will destroy all of the questionnaires that were submitted. For your review, I have attached a copy of both data collection instruments that will be used for the study.

Thank you for taking the time to review my research request. If you have any questions, please contact me at (757)617-7899.

Sincerely,

Angie Isbell

Appendix E

Letter to the Principal

Date:

Dear School Principal,

My name is Angie Isbell, an Ed.D student from Virginia Tech. I am requesting permission to conduct a study in the school division. The research will compare teachers' perceptions of school climate in eight elementary schools within the school division. The sample will include both Title I and Non-Title I elementary schools with different accreditation statuses.

Your support will assist school leaders in understanding the relationship between teachers' perceptions of school climate, Title I status and accreditation status. The findings from this study could assist principals in creating a healthy school climate.

The primary data collection instruments for my research study will include the Organizational Climate Descriptive Questionnaire-Revised Elementary (OCDQ-RE) and a Teacher Demographic Questionnaire. The OCDQ-RE assesses school climate using a 42-item Likert scale. The Teacher Demographic Questionnaire is a six-item questionnaire used to identify teacher' demographic data (age, gender, race, education level, years of experience, and years working with current principal).

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Thank you for taking the time to review my research request. If you have any questions, please contact me at (757)617-7899.

Sincerely,

Angie Isbell

Appendix F

Organizational Climate Descriptive Questionnaire—Revised Elementary

OCDQ-RE

Directions: The following are statements about your school, Please indicate the extent to which each statement characterizes your school.

	Rarely Occurs	Sometimes Occurs	Often Occurs	Very Frequently Occurs
1. The teachers accomplish their work with vim, vigor, and pleasure.	①	②	③	④
2. Teachers' closest friends are other faculty members at this school.	①	②	③	④
3. Faculty meetings are useless.	①	②	③	④
4. The principal goes out of his/her way to help teachers	①	②	③	④
5. The principal rules with an iron fist.	①	②	③	④
6. Teachers leave school immediately after school is over.	①	②	③	④
7. Teachers invite faculty members to visit them at home.	①	②	③	④
8. There is a minority group of teachers who always oppose the majority.	①	②	③	④
9. The principal uses constructive criticism.	①	②	③	④
10. The principal checks the sign-in sheet every morning.	①	②	③	④
11. Routine duties interfere with the job of teaching.	①	②	③	④
12. Most of the teachers here accept the faults of their colleagues.	①	②	③	④
13. Teachers know the family background of other faculty members.	①	②	③	④
14. Teachers exert group pressure on non-conforming faculty members.	①	②	③	④
15. The principal explains his/her reasons for criticism to teachers.	①	②	③	④
16. The principal listens to and accepts teachers' suggestions.	①	②	③	④
17. The principal schedules the work for the teachers.	①	②	③	④
18. Teachers have too many committee requirements.	①	②	③	④
19. Teachers help and support each other.	①	②	③	④
20. Teachers have fun socializing together during school time.	①	②	③	④
21. Teachers ramble when they talk at faculty meetings.	①	②	③	④
22. The principal looks out for the personal welfare of teachers.	①	②	③	④
23. The principal treats teachers as equals.	①	②	③	④
24. The principal corrects teachers' mistakes.	①	②	③	④
25. Administrative paperwork is burdensome at this school.	①	②	③	④
26. Teachers are proud of their school.	①	②	③	④
27. Teachers have parties for each other.	①	②	③	④
28. The principal compliments teachers.	①	②	③	④
29. The principal is easy to understand.	①	②	③	④
30. The principal closely checks classroom (teacher) activities.	①	②	③	④
31. Clerical support reduces teachers' paperwork.	①	②	③	④
32. New teachers are readily accepted by colleagues.	①	②	③	④
33. Teachers socialize with each other on a regular basis.	①	②	③	④
34. The principal supervises teachers closely.	①	②	③	④
35. The principal checks lesson plans.	①	②	③	④
36. Teachers are burdened with busy work.	①	②	③	④
37. Teachers socialize together in small, select groups.	①	②	③	④
38. Teachers provide strong social support for colleagues.	①	②	③	④
39. The principal is autocratic.	①	②	③	④
40. Teachers respect the professional competence of their colleagues.	①	②	③	④
41. The principal monitors everything teachers do.	①	②	③	④
42. The principal goes out of his/her way to show appreciation to teachers.	①	②	③	④

Appendix G

Demographic Profile Sheet

Check or write in the appropriate response.

1. What is your age range?
_____20-25
_____26-30
_____31-35
_____36-40
_____41-45
_____46-50
_____51-55
_____56-60
_____61 or more

2. What is your gender? Male____   Female_____

3. What is our race? Black_____   White_____   Hispanic_____   Other_____

4. What is your highest education level? BS____   MS____   EdS_____   EdD/PhD_____

5. How many years of experience do you have in teaching?_____

6. How many years supervised at present school by current principal?_____

Appendix H

Guidelines for Administering the Ocdq-Re

Scoring
The responses vary along a four-point scale defined by the categories "rarely occurs", "sometimes occurs", "often occurs", and "very frequently occurs." (1 through 4, respectively).
Step 1: Score each item for each teacher with the appropriate number (1, 2, 3, or 4). Be sure to reverse score items 6, 31, 37.
Step 2: Calculate an average school score for each item. In the example above, one would add all 15 scores on each item and then divide by 15. Round the scores to the nearest hundredth. This score represents the average school item score. You should have 42 average school item scores before proceeding.
Step 3: Sum the average school item scores as follows:
Supportive Behavior (S)=4+9+15+16+22+23+28+29+42
Directive Behavior (D)=5+10+17+24+30+34+35+39+41
Restrictive Behavior (R)=11+18+25+31+36
Collegial Behavior (C)=1+6+12+19+26+32+37+40
Intimate Behavior (Int)=2+7+13+20+27+33+38
Disengaged Behavior (Dis)=3+8+14+21
These six scores represent the climate profile of the school.
How does you school compare with others? We have supplied information on a large and diverse sample of New Jersey elementary schools, which gives a rough basis for comparing your school with others. The average scores and standard deviations for each climate dimension are summarized below. Standard deviations tell us how close most schools are to the average; the smaller the standard deviation, the closer most schools are to the typical school.

	Mean (M)	Std. Deviation (SD)
Supportive Behavior (S)	23.34	4.85
Directive Behavior (D)	19.34	3.20
Restrictive Behavior (R)	12.98	1.55
Collegial Behavior (C)	23.11	2.69
Intimate Behavior (Int)	17.23	2.14
Disengaged Behavior (Dis)	6.98	1.26

To make the comparisons easy, we recommend you standardize each of your subtest scores. Standardizing the scores gives them a "common denominator" that allows direct comparisons among all schools.
Computing Standardized Scores of the OCDQ-RE
First: Convert the school subtest scores to standardized scores with a mean of 500 and a standard deviation of 100, which we call SdS scores. Use the following formulas:
SdS for S=100 X (S-23.34)/4.85+500
Then compute the difference between your school score on S and the mean of 23.34 for the normative sample (S-23.34). Then multiply the difference by 100 [100 X (S-23.34)]. Next divide

the product by standard deviation of the normative sample (4.85). Then add 500 to the result. You have computed a standardized score (SdS) for the supportive behavior subscale (S).

Next: Repeat the process for each dimension as follows:

SdS for D=100 X (D-19.34)/3.20+500

SdS for R=100 X (R-12.98)/1.55+500

SdS for C=100 X (C-23.11)/2.69+500

SdS for Int=100 X (Int-17.23)/2.14+500

SdS for Dis=100 X (Dis-6.98)/1.26+500

You have standardized your school scores against the normative data provided in the New Jersey sample. For example, if your school score is 600 on supportive behavior, it is one standard deviation above the average score on supportive behavior of all schools in the sample; that is, the principal is more supportive than 84% of the other principals. A score of 300 represents a school that is two standard deviations below the mean on the subtest. You may recognize this system as the one used in reporting individual scores on the SAT, CEEB, and GRE. The range of these scores is presented below:

If the score is 200, it is lower than 99% of the schools.

If the score is 300, it is lower than 97% of the schools.

If the score is 400, it is lower than 84% of the schools.

If the score is 500, it is average.

If the score is 600, it is higher than 84% of the schools.

If the score is 700, it is higher than 97% of the schools.

If the score is 800, it is higher than 99% of the schools.

There are two other scores that can be easily computed and are usually of interest to teachers and principals. Recall that two openness dimensions were determined in the second-order factor analysis of the OCDQ-RE. Accordingly, the two openness measures can be computed as follows:

Principal Openness= ((SdS for S)+(1000-SdS for D)+(1000-SdS for R)) / 3

Teacher Openness = ((SdS for C)+(SdS for Int)+(1000-SdS for Dis)) / 3

These openness indices are interpreted the same way as the subtest scores, that is, the mean of the "average" school is 500. Thus, a score of 650 on teacher openness represents a highly open faculty. Numbers were converted into categories ranging from high to low using the following conversion table:

Above 600 VERY HIGH

551-600 HIGH

525-550 ABOVE AVERAGE

511-524 SLIGHTLY ABOVE AVERAGE

490-510 AVERAGE

476-489 SLIGHTLY BELOW AVERAGE

450-475 BELOW AVERAGE

400-449 LOW

Below 400 VERY LOW