

A COMPARISON OF THE PERCEIVED LEADERSHIP CHARACTERISTICS
OF CENTRAL FLORIDA MIDDLE AND HIGH SCHOOL PRINCIPALS
AND SCHOOL ACHIEVEMENT SCORES

by

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A dissertation submitted in partial fulfillment of the requirements
for the degree of Doctor of Education
in the Department of Educational Research, Technology, and Leadership
in the College of Education
at the University of Central Florida
Orlando, Florida

March 2005

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ABSTRACT

The purpose of this inquiry was to examine the possible extent to which specific identifiable leadership characteristics of Central Florida school principals differ between middle and high school administrators, and to examine if these leadership characteristics display a relationship, either positively or negatively, with the obtainment of student scores on state measures of education accountability. The population for this inquiry included the teachers in the middle and high schools (125 total schools) in five Central Florida school districts (Brevard, Lake, Orange, Seminole, and Volusia Counties). The research sample was obtained by distributing the survey instrument, accompanied by a list of 15 randomly selected teacher names (10 primary and 5 alternates), to each of the 104 participating schools (59 middle schools and 45 high schools). The sample was limited to active teachers (no administrative or support personnel) with at least one academic year of teaching experience at their present (2004-2005) location. The minimum acceptable sample size from each school was calculated to be 7.

Data from the research sample were collected through the administration of a modified version of the *Audit of Principal Effectiveness*, a survey instrument developed by Dr. Jerry Valentine through the Middle Level Leadership Center at the University of Missouri-Columbia (Valentine & Bowman, 1984). The survey instrument used for this study contained 52 statements regarding principal leadership characteristics divided into two domains (organizational environment and educational program). Teachers were asked to rate their principal on a 9-point Likert-type scale (1 = not effective, 5 =

moderately effective, 9 = very effective) on the extent they perceived the principal to be effective in that leadership skill. A sufficient number of surveys (minimum of 7) were returned from teachers at 60 schools (35 middle schools and 25 high schools) out of a possible 104 for a response rate of 57.7%. The research sample ($N = 60$) represented 48% of the 125 middle and high schools in the five school districts comprising the study.

Research questions focused on the relationships between middle school and high school teacher responses to the survey instrument and examined possible correlations between teacher mean rating scores of principal leadership effectiveness and student achievement. The investigation found the following:

- 1) There was no statistically significant difference between the mean scores representing teacher perceptions of principal leadership on either the organizational environment or educational program domains of the *Audit of Principal Effectiveness* (APE) between middle schools and high schools.
- 2) There was no statistically significant correlation, when middle school and high school principals were treated as one group, between the mean scores representing teacher perceptions of principal leadership on either the organizational environment or educational program domains of the APE and student achievement.
- 3) There was a statistically significant negative (inverse) correlation between FCAT reading percentage and low-SES percentage for all schools.
- 4) As teacher rating mean scores on the APE organizational environment domain increased, the negative (inverse) correlation between FCAT reading

percentage and low-SES percentage decreased but not at statistically significant levels.

- 5) There was a negative (inverse) relationship between middle school teacher rating mean scores on both the organizational environment and educational program domains of the APE and FCAT reading percentage. A positive correlation between teacher rating mean scores and FCAT reading percentage was indicated for high school principals on both the organizational environment and educational program domains of the APE. These correlations were not statistically significant at the higher alpha required for multiple correlation tests, but they were positive and the correlation for the organizational environment domain approached significance.

This work is dedicated to my father, William S. Fisher, who was an outstanding educational administrator and a great role model. I miss his wise counsel.

ACKNOWLEDGMENTS

I wish to acknowledge the patience, understanding, and mathematical skills of my wife, Peg Fisher, whose love and support made this part of my educational career possible. Thank you also to the professors in the Educational Leadership program at the University of Central Florida, and to the Daytona cohort.

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CHAPTER 1

PROBLEM STATEMENT AND DESIGN COMPONENTS

Introduction

The American school principal has always had an important role as an educational leader. Recent state and federal legislation mandating the use of prescribed assessment tools and standards of evaluation have added a significant new dimension to the principal's leadership role. Methods of evaluating both individual schools and principals have traditionally included such elements as: graduation rates; percent of graduates entering higher education, the work force, or the military; test scores; drop-out rates; school safety; curriculum issues; fiscal responsibility; professional development; and an overall rating by students, faculty, district-level administration, and the community at large (Duke, 1987; Goodwin, Cunningham, & Childress, 2003; Sergiovanni, 2001; Seyfarth, 1999). "Historically, principal accountability involved a more general approach of doing a job well, maintaining strong teacher relationships, assuming the role of instructional leader, and exhibiting sound budgeting practices" (Lashway, 2000, p. 8). The schools, and thereby the principals of those schools, exhibiting a reasonable level of success in these areas were considered to have achieved generally stated educational goals and objectives.

Yesterday's principal was often a desk-bound, disciplinarian building manager who was more concerned with the buses running on time than academic outcomes. Today's principal must concern herself with not only discipline, school safety, and building management, but also must act as an instructional leader who

knows how to use research and testing data to improve teaching methods, student achievement, and classroom management. Today's principal is a visionary leader who spends significant time working with faculty and interacting with students and rarely sees her desk. Today's principal coordinates staff development and community engagement (Tirozzi & Ferrandino, 2004, Changing, ¶ 2).

The nature of the principalship has changed significantly over the past few decades.

Nowhere is this more evident than in the current emphasis on outcomes assessment and the use of high-stakes testing procedures.

With the enactment of the *Florida A+ Accountability Plan* and the federal *No Child Left Behind* accountability plan, schools and principals are now being evaluated on a fairly narrow set of criteria, largely based on standardized test scores and measures of “adequate yearly progress.” The role of the principal as education leader has taken on increased significance as these new measurement criteria are being used to determine a single “grade” assigned to each school. Those schools (principals) achieving high grades are eligible for increased funding and bonus money for showing significant academic gains. Conversely, those schools (principals) receiving poor or failing grades are subject to budget constraints, program and personnel review, loss of students through voucher programs, and possible de-certification and reorganization under state control.

(Dahlkemper, 2002; Simpson, LaCava, & Gardner, 2004)

No principal, school, community, or school district wants to suffer the stigma attached to being labeled as failing (Newbold, 2004). Significant pressure from various sources is currently being applied to principals to ensure that their schools receive passing scores, as a bare minimum, on these measures of accountability. The philosophy, methodology, and personality comprising a principal’s leadership style become critically

important in determining how a principal interacts with the various stakeholders in and around his or her school and the success or failure of that institution. Therefore, any knowledge gained by understanding the possible relationships between higher achieving schools and the leadership characteristics of their principals could benefit the education field.

Purpose Statement

A review of the research and literature presents a strong case for the supposition that the leadership role of the principal is critical to the success or “failure” of most schools. This seems to be particularly true in the context of current trends in which school success is largely determined by student test scores on large-scale assessment instruments. The difficult part is identifying specific principal leadership traits and the degree to which these traits might impact student achievement. Studies conducted by Austin (1978); Pellicer, Anderson, Keefe, Kelley, & McCleary (1990); Springer (1996); Waters, Marzano, & McNulty (2004) provide support for the precept that schools with principals who exhibit certain leadership qualities tend to have higher scores on various measures of student achievement. The purpose of this inquiry is to examine the possible extent to which specific identifiable leadership characteristics of Central Florida school principals differ between middle and high school administrators, and to examine if these leadership characteristics display a relationship, either positively or negatively, with the obtainment of student scores on state measures of education accountability.

Conceptual Framework

Educational research and scholarly writings, both historical and present day, are generally in agreement that the leadership capabilities of principals play a significant role in determining the overall success of individual schools. In her analysis of research into the relationship between principals and student achievement, Cotton (2003) places these investigations into two primary categories: studies which produced a list of common attributes displayed by principals of higher achieving schools, and more recent studies which focused on the instructional leader role of principals and specific student outcomes. Cotton points out a major issue in both categories, which is the question of whether a principal's influence on student achievement is direct or indirect.

Writing on principal effectiveness for the Gallup Organization, Gordon (2003) stated that early research reported that principals had a more direct influence on student achievement through their role as curriculum and instructional leaders. He sees little empirical evidence to support this idea. Gordon's analysis of current research points to four factors (team, climate, resources, and parent involvement) as key areas in which principals display an indirect influence on student achievement. Hallinger and Heck (1998) explored the dynamics between principals and school effectiveness and found the relationship to be more indirect than direct. They discuss a fairly complex scheme combining antecedent variables and principal leadership attributes, and how these impact classroom variables and ultimately, student achievement.

A study undertaken by the Southwest Educational Developmental Laboratory (Morrissey, 2000) examining school improvement listed principal leadership capacity as

the most critical factor among five core issues (organizational structures, focus on improvement work, personal and social dynamics, contextual influences, and leadership) in determining overall school improvement. The study indicates that the leadership capabilities of the principal may have an overriding impact on the other four variables.

The meta-analysis conducted by the McREL organization (Waters et al., 2004) examined 30 years of research into the effects of leadership practices on student achievement. This analysis indicated a significant correlation between certain leadership characteristics of principals and measures of student achievement. The researchers identified 21 leadership responsibilities that could be significantly associated with higher student achievement. Most of these responsibilities are fairly broad in nature (culture, communication, visibility, etc.) and represent a more indirect line of influence.

In the final analysis, the actual mechanism of leadership influence, either direct or indirect, may not be the critical issue. What research seems to indicate is that principals who exhibit certain identifiable leadership characteristics or skill sets are able to influence student achievement in a positive way. The current study seeks to determine the nature of this relationship in the selected schools of Central Florida.

Research Questions

This study was guided by six research questions:

1. What mean differences, if any, exist between the teacher ratings of principals in middle and high schools in Central Florida on the organizational environment domain of the *Audit of Principal Effectiveness Survey*?

2. What mean differences, if any, exist between the teacher ratings of principals in middle and high schools in Central Florida on the educational program domain of the *Audit of Principal Effectiveness Survey*?
3. Is there a positive correlation between the teacher ratings of middle and high school principals in Central Florida on the organizational environment domain of the *Audit of Principal Effectiveness Survey* and student achievement as measured by the percentage of students at their respective schools scoring at levels 3 and above on the 2003-2004 FCAT Reading Test (8th grade – middle school; 10th grade – high school)?
4. Is there a positive correlation between the teacher ratings of middle and high school principals in Central Florida on the educational program domain of the *Audit of Principal Effectiveness Survey* and student achievement as measured by the percentage of students at their respective schools scoring at levels 3 and above on the 2003-2004 FCAT Reading Test (8th grade – middle school; 10th grade – high school)?
5. To what extent do the schools with principals whose teachers rated them in the top third, the middle third, and the bottom third on the organizational environment domain of the *Audit of Principal Effectiveness Survey* differ on: (a) average years of teaching experience of the surveyed faculty; (b) educational level of the surveyed faculty; (c) overall school socio-economic status (SES) as measured by the percentage of students listed as economically disadvantaged; and (d)

percentage of students achieving levels 3 and above on the FCAT reading section?

6. To what extent do the schools with principals whose teachers rated them in the top third, the middle third, and the bottom third on the educational program domain of the *Audit of Principal Effectiveness Survey* differ on: (a) average years of teaching experience of the surveyed faculty; (b) educational level of the surveyed faculty; (c) overall school socio-economic status (SES) as measured by the percentage of students listed as economically disadvantaged; and (d) percentage of students achieving levels 3 and above on the FCAT reading section?

Definitions

The following definitions were used throughout this study and are presented here to clarify terminology:

Adequate Yearly Progress (AYP): A measurement of the progress of public schools towards enabling students to meet Florida's academic achievement standards. All students, including eight identified subgroups, must meet certain proficiency standards in order for a school to achieve AYP.

Audit of Principal Effectiveness (APE): Survey instrument developed by the Middle Level Leadership Center at the University of Missouri-Columbia to allow teachers to rate the perceived leadership effectiveness of school principals.

Educational Program Domain: Section of the APE where questions provide insight into the leadership abilities of principals to serve as the education leader of the school through involvement in instructional leadership and curriculum development.

Economically Disadvantaged Students: The number of students in a school or district who qualify for the Federal free or reduced price lunch program. Reported as a percentage and calculated by dividing the number of students identified as economically disadvantaged by the school's or district's total enrollment.

Florida Comprehensive Assessment Test: The FCAT is an assessment instrument administered to public school students in grades 3-10 in the spring of each year in the State of Florida. The FCAT was formulated around educational standards found in the Sunshine State Standards and measures student achievement in Reading, Writing, and Mathematics. The instrument contains both criterion and norm referenced sections.

Organizational Environment Domain: Section of the APE where questions provide insight into the leadership abilities of principals to nurture the on-going climate of the school through development of positive interpersonal relationships among the staff members and effective daily operational procedures.

Socioeconomic Status (SES): An indicator of the social and economic climate of a given school. Usually stated as the percentage of students considered to be economically disadvantaged (qualify for free or reduced price lunch) within the school population.

Student Achievement: For the purposes of this investigation, student achievement is defined as the percentage of students at a given school scoring at levels 3 and above on the Reading portion of the Florida Comprehensive Assessment Test (FCAT).

Assumptions

The following assumptions have been made:

1. The participants selected for this study will be representative of teachers, principals, and schools in the Central Florida region.
2. Teachers will be honest and forthright in responding to the surveys.
3. The job descriptions of principals within each category (middle school and high school) will be essentially the same in each of the school districts surveyed.

Population and Sample

The population for this inquiry included the middle and high schools (125 total schools) in five Central Florida school districts (Brevard, Lake, Orange, Seminole, and Volusia Counties). Certain charter and other unique schools were omitted from the population as their curriculums and student populations were considered too specialized for this inquiry. District superintendents were contacted requesting permission to conduct the survey within their school system. Once permission letters were obtained from the superintendents, each middle and high school principal was contacted requesting permission to conduct the investigation in their respective schools. The research sample was obtained by distributing the survey instrument, accompanied by a list of 15 randomly selected teacher names (10 primary and 5 alternates), to a total of 104 schools (59 middle schools and 45 high schools). The sample was limited to active teachers (no administrative or support personnel) with at least one academic year of teaching

experience at their present (2004-2005) location. Instructions provided to each school asked that names on the alternate teacher list be used should any of the names on the primary teacher list fail to meet study qualification requirements.

The minimum sample size (survey return rate from each school) required for statistical purposes was determined by using the standard deviation from a previous administration of the *Audit of Principal Effectiveness* and a chosen degree of confidence at the .05 level. The minimum sample size was calculated to be 7. Schools returning less than seven usable or qualifying surveys were not counted in the data analyses. Packets containing 10 questionnaires, 10 unmarked white envelopes, a list of selected teachers, instructions for administering the survey, and a stamped, self-addressed return envelope were sent to each of the 104 schools. Several follow up contacts were initiated in an attempt to get the required seven qualifying surveys from each school. To the extent possible, every effort was made to maintain the confidentiality and anonymity of individual schools, principals, and teachers.

Data Collection and Instrumentation

Data from the research sample were collected through the administration of the *Audit of Principal Effectiveness*, a survey instrument developed by Dr. Jerry Valentine through the Middle Level Leadership Center at the University of Missouri-Columbia (Valentine & Bowman, 1984, 1988a). The instrument consists of 79 statements regarding principal leadership characteristics divided into three domains (organizational development, organizational environment, and educational program). Teachers were

asked to rate their principal on a 9-point Likert-type scale (1 = not effective, 5 = moderately effective, 9 = very effective) on the extent they perceived the principal to be effective in that leadership skill.

For the purposes of this inquiry in order to make the survey instrument more manageable in terms of administration and meaningful analysis, the domain of organizational development was omitted from the study. Questions under this domain relate primarily to how the principal relates to stakeholders outside the immediate school campus. It was felt that this area was most likely the one in which teachers would have the least knowledge of their principal's capabilities. Since each individual domain can be used as a separate instrument, statistical analysis should not be affected by this modification.

The survey used for this study contained 52 statements regarding principal leadership and used the same rating scale (9-point Likert-type) as the full version. Respondents were also asked to provide personal and professional data regarding educational background and teaching experience.

Data Analysis

Data analysis for this study was conducted using SPSSTM Graduate Pack 10.0 computer software for Windows and a Microsoft Excel for Windows spreadsheet program supplied specifically for the *Audit of Principal Effectiveness* by the Middle Level Leadership Center. For research questions 1 and 2, an independent samples *t*-test was performed to determine if a statistically significant mean difference existed in scores

between middle and high school principals on the two domains of principal leadership (organizational environment and educational program) under study. A statistically significant mean difference in scores between middle and high school principals, as indicated by either *t*-test analysis, required the two groups be treated separately throughout the remainder of the statistical procedures. No statistically significant mean difference indicated by the *t*-tests required the two groups be treated as one.

For research questions 3 (organizational environment) and 4 (educational program), a Pearson product moment correlation was used to determine if there was a positive correlation between the scores that principals received on the two leadership domains under study and the percentage of students at their respective schools who achieved levels 3 or higher on the reading section of the 2003-2004 FCAT.

For research questions 5 (organizational environment) and 6 (educational program), schools were divided into three groups (top, middle, and bottom) according to the scores obtained for principals on the two domains of the *Audit of Principal Effectiveness* and examined against four variables: (a) average years of teaching experience of the respondents; (b) educational level of the respondents; (c) socio-economic status of the school; and (d) percentage of students achieving levels 3 and above on the FCAT reading section. Data are presented in tabular form and discussed.

Limitations

This study was limited to middle and high schools in five counties (districts) in the Central Florida region. To be included in the study, a teacher must have served with

the principal being evaluated for a period of at least one full academic year. The total number of qualified respondents will influence the strength of data analysis. The assessment measure of student achievement was limited to FCAT reading scores. There was no attempt to generalize the findings to any larger population.

Organization of the Study

The general background of the study, including problem statement, conceptual framework, research questions, and an overview of the design and methodology, is discussed in Chapter 1. A review of the literature germane to the problem statement is presented in Chapter 2. Data collection and analysis methodologies are described in Chapter 3. The collected data are explained and analyzed in Chapter 4. A discussion and interpretation of the data analysis along with implications for current practice and possible future investigations are presented in Chapter 5.

CHAPTER 2

LITERATURE REVIEW

Introduction

The review of literature and research concentrated on the traditional tasks that principals were expected to perform in schools, the perceived effectiveness of principals in carrying out these tasks, and the impact of current accountability and assessment policies on the principalship as a whole.

Principals' Responsibilities and Effectiveness

A review of the literature related to educational leadership/administration revealed nearly unanimous belief that the principal plays a major, if not the most important, role in the success or failure of a school. In his 1969 text on educational administration, Knezevich wrote:

The principal in a public school, whether at the elementary or secondary school level, is a counselor of students, the school disciplinarian, the organizer of the schedule, the supervisor of the instructional program, the pupil-relations representative for the attendance area, the liaison between teachers and the superintendent, the director and evaluator of teaching efforts, the manager of the school facilities, the supervisor of custodial and food-service employees within the building, and a professional leader. Little wonder that this is a demanding position as well as one of considerable significance determining the direction of public education. (p. 283)

Daniel Duke (1987) studied school leadership in the context of instructional improvement and detailed the ambiguities of principals' job descriptions as follows:

The job descriptions reflect the expectation that principals interact routinely with central office supervisors, teachers, classified personnel, students, parents, and

members of the community. Principals may be called upon to develop rules, enforce rules, determine if rules have been broken, mete out punishment, and provide expert testimony. They are expected to evaluate their staff and, at the same time, assist individuals in growing professionally. They should create a supportive environment for student learning and also handle serious discipline problems. (p. 39)

Dukes' description of the principalship contains essentially the exact elements as those expressed by Knezevich almost 20 years earlier.

Boyer (1983) in his report on secondary education in America for the Carnegie Foundation for the Advancement of Teaching stated:

In schools where achievement was high and where there was a clear sense of community, we found, invariably, that the principal made the difference. Like a symphony orchestra, the high school must be more than the sum of its parts. If the goals we set forth in this report are to be accomplished, strong leadership will be needed to pull together the separate elements in the school and make them work. (p. 219)

Boyer recommended that the role of the principal be strengthened by giving them more authority and control over all facets of school operations from budgeting and procurement to final teacher selection. His report placed principals in the forefront of American secondary education and, thereby, made them key players in the success or failure of any reform movements or changes in policies.

Calabrese, Short, and Zepeda (1996) devoted entire chapters to the topics of instructional supervision, school culture, curricular leadership, school organization, and parents in their work on principal leadership. Cunningham and Cordeiro's (2000) text on educational administration included similar chapter content with the addition of sections dedicated to cultural diversity and community relations, organizational structure, program development, personnel services, and resource allocation and management. The role that

is most closely aligned with student achievement was identified as instructional, curricular, or program leader. This role is considered to be important, but not significantly more so than any of the others.

The concept of strategic leadership in educational settings was the focus of the work done by Guthrie and Reed (1991). The authors defined effective organizational leadership as “a dynamic blend of action and analysis” (p. 1). Various traditional leadership, organizational, and motivation theories were discussed along with their implications to developing an effective educational leadership model. The role of the educational administrator (principal) was defined by the acronym “BOLDSPEC: budgeting, organizing, leading, decision making, staffing, planning, evaluating, communicating, and coordination” (p. 251). Strategic leadership was viewed, not as an extra or peripheral set of tasks, but rather as a continuing cycle of appraising changes in both external and internal conditions, assessing the institution’s mission relative to these changes, and consistently evaluating existing procedures and policies.

Blase and Anderson (1995) examined educational leadership from the micropolitical frame. The authors contended that power is at the center of micropolitical analysis and that it should be considered in any examination of educational leadership. They presented a micropolitical leadership matrix (p. 18) that depicted a continuum on two dimensions, one representing leadership styles (closed-open) and the other leadership theory (transactional-transformative). The interactions of these dimensions produce four distinctive leadership styles and the accompanying use of power associated with each: adversarial leadership (power over and through), authoritarian leadership (power over),

democratic, facilitative leadership (power through and over), and empowering leadership (power with). The authors concluded that as long as our educational system is based on bureaucratic models and the accompanying hierarchical power struggles, the process of changing educational leadership from the “domination/subordination dynamic” (p. 147) to the democratic/empowering dimension will only be accomplished by leaders who have a thorough understanding of the micropolitical forces at work in schools.

Another view of educational leadership expressed as a matrix was discussed by Reeves (2002). In his version, entitled the “Leadership and Learning (L^2) Matrix,” (p. 50), leadership effectiveness was displayed as the interactions between organizational results and antecedents of excellence. These interactions produced four quadrants which were identified as (a) losing [low-low, poor results with no understanding], (b) lucky [high-low, good results with no understanding], (c) learning [low-high, poor results with clear understanding], and (d) leading [high-high, good results with clear understanding]. Reeves described four continuums (victim, random-acts-of-failure, illusion, and resilience) on which many educational leaders operate. The less effective leaders move between losing and lucky on the victim continuum. They sometimes show positive results, but are unable to replicate or sustain them. The most effective educational leaders operate on the resilience continuum operating between learning and leading. These educational leaders often show very positive results, but when some outcomes are less than desirable, such leaders are able to learn from their mistakes and turn failure into success.

Many of the ideas and theories surrounding educational leadership are grounded in organizational and leadership studies that focused primarily on the business world. In their work originally published in 1985, Bennis and Nanus (1997) identified four areas of competency shared by successful leaders: (a) attention to vision, (b) meaning through communication, (c) trust through positioning, and (d) the deployment of self through positive self-regard and the “Wallenda-factor” (p. 25). Effective leaders were those who articulated clear goals and objectives, positioned the company for success, believed and trusted in their own abilities, and strived for success rather than avoiding failure.

In a follow-up book, Nanus (1992) described the process of, and the necessity for, leaders developing vision. Effective leaders were those who developed, communicated, and implemented a strong vision for their organization. The best leaders were those who transformed their vision into a shared vision among the various stakeholders of an organization. As for education, Nanus stated that schools placed too much emphasis on the past and should provide for opportunities for problem-finding, not just problem-solving skills.

The idea of the necessity of leaders developing and implementing a shared vision was echoed by Senge (1990). The author discussed the concept of a fifth discipline in organizational leadership that consisted of systems thinking integrated with personal mastery, mental models, shared vision, and team learning. This combination, when understood and used correctly, produced a “learning organization” in which members at all levels of an organization shared in the strategic processes rather than a few individuals at the top of the bureaucratic hierarchy. Learning organizations were contrasted with

more traditional controlling organizations that relied on authoritarian models of organizational management.

The concept of a fifth discipline was applied specifically to educational institutions in a follow-up work (Senge, Cambron-McCabe, Lucas, Dutton, & Kleiner, 2000). The author discussed ways that the five disciplines (personal mastery, mental models, shared vision, team learning, and systems thinking) could be used to turn traditional school organizational models into schools that learn in the same manner that business institutions could be turned into learning organizations. An emphasis was placed on all stakeholders of a school (students, teachers, administrators, parents, and the larger community) taking leadership roles in defining and developing strategies for implementing a strong school vision.

Traditional leadership at the building level (principals) was viewed as the “Principal Do-Right” model (p. 412). Under this leadership style, principals acted according to four basic values: (a) unilateral control, (b) maximize winning and minimize losing, (c) suppress negative feelings, and (d) define clear objectives and evaluate based on degree of achievement. Leadership for a “school that learns” needs to be based on a new system of competencies: (a) engagement – ability to mobilize individuals to solve tough problems, (b) systems thinking – ability to recognize hidden dynamics and find leverage, (c) leading learning – learner-centered as opposed to authority-centered model, and (d) self-awareness – leaders must understand the influence they have on people and the system and how that may change over time.

Kouzes and Posner (2002) examined the field of leadership and identified “Five Practices of Exemplary Leadership:” (a) model the way, (b) inspire a shared vision, (c) challenge the process, (d) enable others to act, and (e) encourage the heart (p. 13). Each of the five practices has specific behaviors (commitments) embedded within them that guide leaders in the process of learning to lead. These practices are closely allied with Senge’s five disciplines. The authors paid particular attention to the interpersonal relationships that they felt were at the heart of effective leadership. They acknowledged that most effective leaders possessed a sense of self-worth and morality, and they recognized the value of celebrating the accomplishments of others.

Sergiovanni (1996) used terminology borrowed from sociology to explain how leaders could build a learning community in schools. He used the term *gesellschaft* to identify the process whereby members of society chose to relate to each other to reach some common goal or objective with rational will as the motivating force. This was contrasted to *gemeinschaft* whereby members of a society sought to relate to each other for the intrinsic value of the relationship itself without a specified goal or benefit. Sergiovanni stated that the works of Nanus and others who promoted leadership through the development and implementation of a shared vision fell into a “follow me” system of leadership, and as such were categorized as *gesellschaft*. He advocated a system of moral leadership based on involving the entire school community in the leadership process. Community leadership was concerned with building a shared fellowship based “not on *who* to follow, but on *what* to follow” (p. 83).

Speck (1999) developed a principalship model for building a learning community based to a significant degree on the works of Senge (1990) and Sergiovanni (1996). The author defined four key roles in the principalship model: (a) educator, (b) leader, (c) manager, and (d) inner person. Speck emphasized the importance of building a collegial culture among all school stakeholders and establishing a vision or compact that turned the principal's personal vision ("my" vision) into a collective vision ("our" vision) for the school (p.120).

A detailed analysis of the duties and responsibilities of educational administrators was presented in Sergiovanni, Burlingame, Coombs, and Thurston (1999). Three critical administrative skills were identified: (a) technical [finance, scheduling, purchasing, etc.], (b) human [working with others as individuals or in groups], and (c) conceptual [mapping of the interdependence of educational components]. Also identified were four critical areas of responsibility: (a) goal attainment, (b) maintaining cultural pattern, (c) internal maintenance, and (d) external adaptation. These were plotted against four administrative processes: (a) planning, (b) organizing, (c) leading, and (d) controlling that formed a three-dimensional grid displaying the interactions of these factors in the educational administration process (p. 71). Although this work went into considerable detail in examining specific managerial and administrative practices and procedures, it maintained the emphasis of school as a community, the idea of shared vision, and the moral aspects of leadership expressed by Sergiovanni in earlier works.

Schmoker (1999) discussed key elements necessary for continuous school improvement. Primary among these were the actions taken by school principals to

(a) establish clear and attainable goals, (b) collect the necessary data, and (c) cultivate a goal-oriented school culture. The author detailed how school leaders must celebrate, recognize, reinforce, and reward successful improvement efforts by students and teachers. “Schools improve when purpose and effort unite” (p.111).

Marzano (2003) discussed educational change and how to translate available research into actions that improved school and student achievement. The author considered principal leadership to be the single most important factor in bringing about these changes. Three principles of leadership for change were presented: (a) leadership is most effective when carried out by small groups, (b) the leadership team must provide strong guidance while demonstrating respect for those not on the team, and (c) effective leadership is characterized by specific behaviors that enhance interpersonal relationships (optimism, honesty, and consideration). The author contended that the effective use of the leadership principles should be considered as important as any technical aspect of school reform.

The current emphasis placed on testing and assessment is forcing principals to re-prioritize their leadership strategies and methodologies putting a great deal of importance on their role as instructional leader. A study conducted by University of Washington researchers identified seven core functions of leadership in schools: instructional, cultural, managerial, human resources, strategic, external development, and micropolitical (Portin, 2004). These functions can be correlated with traditional leadership roles as defined in texts devoted to the examination of educational leadership.

Most early research into the nature of the effectiveness of the leadership of principals on school outcomes or achievement measures was more anecdotal and observational than statistically driven. A 1978 study by Gilbert Austin of high-achieving and low-achieving schools reported that one difference between the schools was the leadership style of the principals. The principals in the higher-achieving schools exhibited stronger leadership tendencies in instructional matters, had higher expectations for success, and were more oriented toward academic goals than their counterparts in the low-achieving schools. From this information, the study concluded that the leadership characteristics of principals had an effect on school/student achievement.

A study of high school leaders classified principals according to their score on a National Association of Secondary School Principals (NASSP) questionnaire on leadership style. The report found that principals of schools that scored at the expected level of achievement were better in how they handled student behavior and physical plant issues, ensured adequate support for teachers, and expended fewer resources on public relations. Principals of schools that scored below expected achievement levels were not as adept in how they handled behavior, physical plant, and teacher support issues. These principals also spent much more time, effort, and money on public relations than did their colleagues. The study implied that the leadership style of the principal had an effect on student achievement (Pellicer et al., 1990).

Valentine and Bowman (1990) used the *Audit of Principal Effectiveness* as the research instrument to compare teacher perceptions of principal leadership effectiveness between schools selected for the United States Department of Education's School

Recognition Program and a random sample of schools across the nation. Analysis of the research findings showed consistency in some areas coupled with some paradoxical results in others. In general, elementary school principals scored higher as a group than did middle school or high school principals. However, analysis of scores for the nine different factors comprising the instrument showed statistically significant differences between grade levels. Elementary and middle school principals were scored higher on organizational direction, organizational linkage, and interactive processes than on organizational procedures, teacher relations, and affective processes. At the high school level, teachers rated principals significantly higher on organizational direction and interactive processes than each of the other factors. Principals in both the “recognized” schools and the “random” schools were rated higher or lower on the same factors with one exception. There was a statistically significant difference in the teacher ratings between the recognized schools and the random schools on all but one factor, student relations. The researchers concluded that the pattern of differences between the teacher perceptions of principal effectiveness supported the belief that more effective schools are administered by more effective principals.

Williams (2001) used the *Audit of Principal Effectiveness* in his investigation of teacher perceptions of effective principal leadership in secondary schools in Tennessee. Williams replicated Valentine and Bowman’s 1990 study using nationally recognized and randomly selected schools within the Tennessee state school system. He reported that school principals of the recognized schools had significantly higher APE scores than principals of the randomly selected schools in 6 of the 9 factors comprising the APE.

Leech, Smith, Green, and Fulton (2003) examined teacher perceptions of principal leadership behavior using the Kouzes and Posner Leadership Practices Inventory. In a sample of middle and high school principals taken from a large urban district, they found no statistically significant differences between the mean scores of middle and high school respondents.

Springer (1996) investigated the relationships between teacher perceptions of principal behavior and student achievement. Ten desirable principal behaviors were identified under three general constructs: school management, school environment, and instructional leadership. Teachers “rated” their principals on a questionnaire reflecting these behaviors. The survey results from each principal were compared with his or her school’s scores on the Test of Cognitive Skills (TCS) and the Comprehensive Test of Basic Skills (CTBS). Significant relationships in 9 out of 10 behaviors were found between the principal’s rating on the survey and high or low achieving scores on the tests. Those principals receiving “high” scores on the survey tended to be those with high-performing schools on the skills tests.

Morrissey (2000) reported on a project conducted by the Southwest Educational Development Laboratory (SEDL) to build school capacity to make changes that improve student achievement. They found that the most critical factor in developing a school’s capacity to change was the leadership capabilities of the principal and the principal’s ability to develop and communicate a clear vision that had improved student achievement as its focus.

In contrast to those studies that reported positive relationships between certain principal leadership characteristics and student achievement, other studies have found no significant relationship between the two. Ayres (1985) investigated the relationship between perceived principal effectiveness and student achievement. He used the *Audit of Principal Effectiveness* to measure teacher perceptions of middle school principal leadership effectiveness. When overall and individual factor mean scores on the APE were compared to student scores on standardized achievement tests, no significant correlations were found.

Zigarelli (1996) synthesized six school variables: (a) employment of quality teachers, (b) teacher participation and satisfaction, (c) principal leadership and involvement, (d) a culture of academic achievement, (e) positive relations with the central school administration, and (f) high parental involvement from several literature reviews. Each school variable was independently tested against student achievement data obtained from the National Educational Longitudinal Study (NELS) for the years 1988, 1990, and 1992. A regression analysis indicated that the most effective school characteristics with regard to improved student performance were an achievement-oriented school culture, principal autonomy in hiring and firing teachers, and high teacher morale. Contrary to what had been expressed in educational literature, he found no evidence that most principal influences had an effect on student performance.

In the final analysis, achievement seems to be much more a function of student and family variables than of schooling variables. School effects exist, as demonstrated by this and many other studies, but they are dwarfed by effects that have little or nothing to do with the schooling environment. (Zigarelli, Conclusions, ¶ 3)

Suskavcevic and Blake (2004) investigated the relationship between student scores on the math and science test sections of the Third International Mathematics and Science Study (TIMSS 1999) and principal leadership characteristics as measured by the School Background Questionnaire. The research sample consisted of 240 randomly selected middle schools. Data analysis indicated no statistically significant differences in the strength of relationship between instructional and non-instructional leadership and student test scores. Study findings supported previously conducted research that indicated that the leadership style of principals accounted for a small percentage of student achievement.

Sergiovanni (2001) discussed the relationship between schooling and the quality of student learning. Regarding the principal's role in this process he stated:

The belief that schooling does make a difference became once more the accepted stand. Quality schooling indeed leads to quality learning, and an important key to quality schooling is the amount and kind of leadership that school principals provide directly and promote among teachers and supporting staff. (p. 162)

He also discussed the idea of *leadership density* as the total amount of leadership provided by all school stakeholders (teachers, parents, staff, etc.). Sergiovanni regarded the principal as crucial in developing this pool of leaders, and as such, defined an important role of the principal as that of "a leader of leaders" (p. 163).

Cooley and Shen (2003) examined professional job responsibilities and student achievement from the principal's point of view. They reported three major concerns shared by principals:

Although several measures are used to assess a school's programs, testing remains

the most important; the principal's working environment is highly politicized (political nature of test standards); principals are called on to engage in leadership initiatives such as instructional leadership, but they are still mired down in managerial tasks (p. 25).

A meta-analysis of research into principal leadership and student achievement conducted by Mid-continent Research for Education and Learning (McREL) reported findings in support of Sergiovanni and in direct opposition to Zigarelli. This organization analyzed 70 published studies that examined the effect of principal leadership on student achievement. The study reached three main conclusions:

1. The average effect size (expressed as a correlation) between leadership and student achievement was .25, which indicates that as leadership improves, so does student achievement.
2. Twenty-one key areas of leadership responsibility were identified that had significant correlation with student achievement: culture, order, discipline, resources, curriculum & instruction, focus, knowledge of curriculum, visibility, contingent rewards, communication, outreach, input, affirmation, relationship, change agent, optimizer, ideals/beliefs, monitors/evaluates, flexibility, situational awareness, and intellectual stimulation.
3. Effective leaders understood which school changes were most likely to improve student achievement, what these changes implied for both staff and community, and how to tailor their leadership practices accordingly (Waters et al., 2004, p. 49).

This study found that not only did a correlation exist between leadership and

achievement, but a leader could identify areas in which to improve and could expect a measurable improvement in achievement scores corresponding to the improvement in the leadership behavior. According to the findings of the McREL study, a definite link between principal leadership characteristics and student achievement had been established.

The results of these studies indicated that a principal's effectiveness in influencing student achievement was accomplished more by indirect than direct means. Exceptions to this may be the potential direct impact a principal exercises in the hiring and firing of teachers as indicated in Zigarelli's (1996) study, or the contingent rewards and resources areas of principal responsibility shown to have a positive correlation to student achievement in the McREL meta analysis (Waters et al., 2004).

Cotton's (2003) analysis of research on principals and student achievement identified 26 principal behaviors that contributed to student achievement. These behaviors fall into five categories: (a) establishing a clear focus on student learning, (b) interactions and relationships, (c) school culture, (d) instruction, and (e) accountability. Taken at face value, these behaviors show a more indirect methodology to indicate how the actions and beliefs of principals influence student achievement. Cotton indicated that early principal effectiveness research attempted to show a more direct path between principal behaviors and student achievement, but that most could only show modest direct effects. More recent research examined how a principal's leadership behaviors are mediated through teachers and the entire school community, thereby having an impact on student achievement.

The principal does not affect student performance single-handedly, of course, or even directly. Yet the evidence clearly shows that, working with others in the ways outlined in this report, principals do have a profound and positive influence on student learning (p. 74).

Hannah (2004) investigated teacher and principal perceptions of effective leadership in schools that had shown gains in student achievement over a period of five years. The investigation showed that both principals and teachers identified such behaviors as shared decision-making, soliciting teachers' opinions, and developing a collective sense of mission as those qualities most often exhibited by principals in those schools that had shown marked improvement in student achievement scores.

An investigation conducted by Hernandez (2004) found a positive relationship between certain principal achieving styles and student achievement. Middle school principals who used a collaborative achievement style had a positive effect on student achievement. Similarly, principals of elementary and middle schools organized into self-contained classrooms and who used a competitive achievement style showed greater student achievement growth.

One area of indirect principal influence that has attracted the attention of education writers and researchers is school climate or culture. A study conducted by the University of Texas at Austin examined how seven high-performing middle schools, classified as high-poverty, improved student performance. Researchers identified three cultural behaviors, epitomized in the actions of the principals, which were common to all seven schools in the study: (a) clear and purposeful communication, (b) consensus building, and (c) having time to improve. "Equity and high achievement were

emblematic of these schools. In every case, effective leaders were essential and instrumental in establishing, shaping, and maintaining positive school environments that enabled these schools to dramatically increase their student performance” (Picucci, Brownson, Kahlert, & Sobel, 2002, p. 41).

Derpak and Yarema (2002) identified three core values proven to be beneficial in developing positive school cultures: (a) be thoughtful, (b) get people involved, and (c) recognize and reward positive behavior. “Culture is the foundation on which the daily practices, traditions, and expectations of the school are built, and it has an immeasurable influence on the success of programs and people” (p. 42). Chirichello (2004) discussed the need to reinvent the principalship through the implementation of collective leadership strategies. “The principalship needs to shift its emphasis from managerial duties to leadership” (p. 120). His methodology for accomplishing this change was for principals to establish a culture within the entire school community that valued self-empowerment over power.

In a study of the relationship between school culture and student achievement, Cunningham (2003) found that schools scoring higher on a school culture survey instrument had higher scores on the Florida (FCAT) reading assessment test. Conversely, those schools scoring low on the survey had lower scores on the FCAT reading test. The study also found a relationship between higher levels of collegiality, collaboration, and self-determination/efficacy among faculty of a school and higher FCAT reading scores.

Another factor that has been investigated in the study of principal effectiveness and student achievement is the perceived difference between the leadership demands of

middle school and high school principals and how this relates to instructional improvement. Duke (1987) discussed the varying perceptions of principals at different school levels regarding how they actually spent their time on leadership activities versus the ideal amount of time they desired to spend on the same activities. He reported that the perception of most middle school principals was that they spent the majority of their time on managerial duties and discipline, which took time away from more desirable duties such as program development and instructional leadership. The perception of high school principals was that they spent a majority of their time on brief interactions with a wide variety of individuals coupled with time spent on organizational maintenance issues (scheduling, transportation, and attendance). High school principals spent the least amount of time observing teachers, and felt they had little time for reflective practices involving curriculum development and teaching strategies.

In their study of the conditions and concerns of principals in Virginia, DiPaola and Tschannen-Moran (2003) found differences in both demographics and leadership perceptions between middle school and high school principals. Of the 1,543 respondents to the study survey, 49% were women and 51% men; however, this gender proportion was not reflected in the different school levels. The middle school proportions were 38% women and 62% men. This difference increased at the high school level with 29% women and 71% men. Additionally, 26% of middle school principals and 44% of high school principals had been coaches of athletic teams. Middle school principals also reported working fewer hours per week than did high school principals. With regard to decision-making authority, 58% of middle school principals reported having a high

degree of authority and 7.4% reported their authority as low or none. At the high school level, 64.6% reported a high degree of authority and only 3.9% reported a low or no degree of authority.

Valentine and Bowman (1990) used the *Audit of Principal Effectiveness* as their research instrument in an investigation of the perceived leadership capabilities of principals in schools recognized as outstanding by the United States Department of Education and a random sample of national schools. They reported no statistically significant differences in the mean scores of perceived principal effectiveness between middle school and high school principals. Middle school and high school principals did differ, however, on how their teachers perceived their leadership under separate factors comprising the research survey. Middle school principals scored higher than their high school counterparts on five factors: organizational direction, organizational linkage, interactive processes, instructional improvement, and curriculum improvement. High school principals scored higher on three factors: organizational procedures, teacher relations, and student relations.

Leech, Smith, Green, and Fulton (2003) used Kouzes and Posner's *Leadership Practices Inventory* (LPI) to investigate possible differences in the perceptions of leadership effectiveness between middle and high school principals. They reported no statistically significant differences in the perceived leadership capabilities between middle school and high school principals.

A study conducted by the Public Policy Institute of California (School, 2004) reported that middle and high school principals chose different budgeting strategies when

asked how they would allocate resources to improve student achievement. Most high school principals chose to fund staff development programs while most middle school principals chose to reduce class size.

Another factor that comes into play when discussing similarities and differences between effective leadership and student achievement in middle schools and high schools is the apparent achievement drop experienced by many students in the transition between middle school and high school. Alspaugh (1998), Mizelle (1999), and Caldwell and Leslie (2003) all reported a drop in achievement scores in a variety of subject areas for many students in making the transition from middle school to high school.

High-stakes Testing and Assessment

"Through the individual commitment of all, our students will graduate with the knowledge, skills, and values necessary to be successful contributors to our democratic society" (Volusia County Schools, 2002, ¶ 1). This educational vision statement of Volusia County Florida Schools is typical of those found in most school districts in the United States. It makes no mention of current accountability measures, much less more traditional outcomes associated with successful schools. During a panel discussion conducted by the Annenberg Institute for School Reform (Neuman & Pelchat, 2001), Pedro Bermudez, an educational specialist with the Miami-Dade County Public Schools, stated, "The tricky thing here is that I can think of no district on the entire planet that would not say, 'Children are the future, and we're about student achievement.' Not a single one. The problem is, what are they doing to get student achievement?" (p. 736).

The Volusia County Schools' vision statement and Mr. Bermudez's remarks are reflective of the dilemma facing today's education leaders: how to incorporate traditional educational values and expectations with current trends in student assessment and achievement regulations. "At one time, principals and teachers could satisfy the demands of accountability simply by working hard and following accepted professional standards. By contrast, the current accountability movement emphasizes results" (Lashway, 2001, Features section, ¶ 1). At present, Florida principals are held accountable for ensuring that students receive traditional academic and socialization skills in addition to very specific assessment measurements such as those found in the *Florida A+ Accountability Plan* (Florida, 2000) and the *No Child Left Behind Act of 2001* (PL 107-110). Both of these pieces of legislation contain very specific benchmarks, which schools must meet in order to be judged compliant or passing.

The major impetus for the implementation of standardized student achievement assessment measures was the passage of Public Law 107-110 entitled the *No Child Left Behind Act of 2001* (NCLB). This legislation is a re-affirmation, with certain amendments, of the *Elementary and Secondary Education Act of 1965*. In their description and analysis of NCLB, Simpson, LaCava, and Graner (2004) provided both a detailed examination of the major components of the legislation accompanied by implications and recommendations for educators charged with implementing its requirements. The authors identified five major components of NCLB: (a) accountability for positive academic outcomes – measured by adequate yearly progress [AYP],

(b) accountability through highly qualified teachers [HQT], (c) effective educational practices predicated on scientifically based research [SBR], (d) expanded options for parents, and (e) increased school district control and flexibility. Of these elements, the requirement for the employment of highly qualified teachers and the use of scientifically based research were seen as the most problematic for successful implementation. In conclusion, the authors acknowledged, that while some educators applauded the lofty goals and expectations of NCLB, others saw the act as misguided and based on unverified methodologies.

Many educators expressed great concern over the use of the narrowly defined accountability measures of NCLB, particularly since student assessment scores have traditionally been combined with other quantitative and qualitative measures of educational success. In a newspaper editorial, Volusia County Schools' administrator Dr. Chris Colwell (Assistant Superintendent for Curriculum and School Improvement Services) pointed out several flaws in the language and administration of the assessment criteria set forth in *No Child Left Behind* (NCLB). One major issue noted was that each state is allowed to set its own testing and evaluating mechanisms. This makes inter-state comparisons nearly impossible. Another is that NCLB requires that a school pass all sections of the assessment criteria. A school could pass 21 out of 22 criteria, but receive an overall failing grade due to poor performance in one area (Colwell, 2004).

This critical view of NCLB was both echoed and amplified in articles written for *Phi Delta Kappan* by David Marshak (2003) and Monty Neill (2003). Marshak stated, "... Despite all the hype emanating from Washington, nothing else in schools has really

changed, except for a lot more testing to come, a list of prospective penalties, and a sparse handful of dollars per student” (p. 229). He viewed NCLB as a return to the industrial model of schools of the early 20th century that sought to “weed” out children rather than give every child equal educational opportunities. Further, Marshak predicted a middle and upper-middle class parent rebellion against schools they perceived as excellent being forced to concentrate almost solely on test preparation and scores.

Neill believed that NCLB will have a particularly damaging effect on low-income and minority students, the very individuals the act seeks to protect. He stated, “Under NCLB, education will be seriously damaged, especially in schools with large shares of low-income and minority children, as students are coached to pass tests rather than to learn a rich curriculum that prepares them for life in the 21st century” (p. 225). Like Marshak, Neill envisioned a significant backlash against NCLB from a significant number of educational stakeholders (students, teachers, parent, etc.) that could ultimately cause the “implosion” of the law.

This emphasis on accountability has forced principals to refocus their leadership talents into what many consider a return to more managerial functions. “The role of the principal has been expanded to include significant responsibilities for the instructional leadership of schools, ensuring that all children achieve to meet high standards, and that the needs of children with special learning challenges are met” (DiPaola, & Tschannen-Moran, 2003, p. 59). This shift in leadership emphasis has been particularly acute in Florida.

Many principals speak candidly about their need to balance the state's insistence on academic achievement at any cost with their own beliefs about education and what is developmentally appropriate for students. As a consequence, they are more concerned than ever with leadership for the achievement-related side of curriculum and instruction: training and motivating teachers and support for teachers' efforts to meet new expectations (George, 2001, p. 32).

A more recent study of Florida assessment practices by Goldhaber and Hannaway (2004) echoed the same sentiments. They found four major areas of concern: (a) a shift to targeted instruction for FCAT tests, (b) the "voucher effect" [losing students and consequently funding], (c) the social stigma attached to a failing grade, and (d) different responses to shifting resources toward high-rated schools. There was no indication that any of these concerns had anything to do with providing a better quality of education for students. Parents, teachers, students, administrators, and state officials are becoming infatuated with test scores and school "grades." All stakeholders want to say that their schools are "measuring up" to state and national standards, but no one is sure if these standards are a true indication of educational success. Researchers have tried in vain to find a causal relationship between standards-based testing reform and student achievement. What is generally found is that high-stakes testing produces a lowering of standards to achieve proficiency, a narrow focus of instruction, teaching to the test practices, and the abandonment of high-level learning strategies and advanced curricular programs (Fritzberg, 2003).

Florida is not alone in its emphasis on standards and accountability. In a more general analysis of the role of principals, researchers found that "Principals must also be attentive to the requirements of teachers and others exploring strategies to reach all

students. Such leadership approaches are no small task in the face of standards-based assessments, school reforms, and the myriad ongoing issues around school accountability” (Nunneley, Wahaely, Mull, & Hott, 2003, p. 48). Several writers found this new trend in the use of accountability measures to be in opposition to more traditional educational assessments and leadership responsibilities. Elias (2001) stated that schools and principals should not be focused “on preparing students for a life of tests, but rather preparing young people for the tests of life” (p. 40). “Visionary school leaders in the 21st century will see that high stakes in schools are not about test scores but about the souls and character of students and what they will do with what they have learned” (Bencivenga & Elias, 2003, p. 70).

Despite numerous studies and articles that portrayed NCLB and other assessment legislation as being detrimental to the overall goals of education, there are those who found substantial benefits to such programs and policies. An examination of Maryland’s statewide assessment program over a five-year period (1993-1998) and any relationships to student test score gains found some correlational evidence indicating a positive impact. Changes in test scores were associated with school, classroom, and student factors. The one negative factor was the “learning effect” that repeated activities resembling the test format had on changes over time on some content areas (Stone & Lane, 2003).

John Katzman, founder and CEO of the *Princeton Review*, gave a mixed but overall optimistic appraisal of NCLB and the assessment movement. In an interview with *Scholastic Administr@tor*, Katzman detailed his belief that some accountability measures were long overdue in the education field. He felt that prior to NCLB there were

far too many differences rather than similarities with regard to what was being taught in the classrooms of most school systems. Katzman expressed his concerns that current accountability measures were much too focused on a one-size-fits-all approach, but he believed that future methodologies would be more responsive to different curricula and metrics. “We are in the Stone Age of accountability. And that doesn’t make it bad – it just means that we’re going from here to there, and this is a necessary stopping-off point.” (Beyond, 2004, ¶ 3)

In an interview in *The School Administrator*, Peter Senge discussed his views on educational leadership and current accountability measures. His analysis was that standardized tests should be used as one component of a much broader evaluation system. Standardized tests were useful in telling us what students were doing, but they could not tell us how students were doing things. Such testing instruments were not useful in measuring critical-thinking skills, imagination, or collaboration, all of which are critically important in today’s business world. Senge favored the use of student portfolio assessments as a method of determining a student’s ability to learn. Students, teachers, administrators, and parents would assist in mapping out educational goals for individual students. At various points in the year, these same people would get together and evaluate each student’s progress toward those stated goals (Newcomb, 2003).

Another area of major concern to educators that has undergone considerable investigation is the relationship between socioeconomic status and student achievement. This issue was again highlighted with the passage of the *No Child Left Behind* legislation. Conclusions reached by investigators led by James S. Coleman in a 1966 report, *Equity of*

Educational Opportunity, indicated that academic achievement might have more to do with the social composition of a school, the verbal skills of teachers, and the overall socioeconomic status of a student than with the quality of the educational program in a given school. One aspect of the report drew the most public attention and that was the assertion that black children would have higher test scores if they attended integrated schools where the majority of their classmates were white. These conclusions led directly to school integration by busing students from low-SES schools to high-SES schools, which often meant busing students from the inner city to the suburbs. This process caused much social unrest and was responsible for the social phenomenon labeled “white flight” where families moved to avoid school integration. This process caused Coleman to declare busing a failure in a later report (Kiviat, 2000).

Although the remedy (busing) for helping bridge the achievement gap between low-SES and high-SES students was not deemed a complete success, the acknowledgement of this gap and research into methodologies to ameliorate this issue continued. While he recognized that schools are limited in their influence over many students due to time constraints, Gustafson (2002) suggested that schools serving low-SES communities must take dramatic steps to provide students with an integrated curriculum to overcome powerful social and personal influences. Such a curriculum would include the teaching of a basic understanding of the social, political, economic, and legal systems under which the students must live and work. These are the areas where high-SES students receive considerably more information from parents, friends, and their general higher socioeconomic situation. Gustafson found that low-SES students

were not performing as well on achievement tests as high-SES students because they lacked the contextual basis to connect test questions to their personal experiences.

For low-SES students, facts digested in the name of standards become fragments rather than knowledge. Students lack a context in which they can place specific standards-based facts. The current emphasis on standardized testing offers an environment that is far too rigid and fundamental to allow low-SES students to excel (p. 60).

DiMartino and Miles (2005) suggested that in order for schools to achieve educational equity, they must abandon traditional curriculum strategies and class grouping methodologies. Schools need to present alternatives to tracking and ability grouping in order to create high expectations for all students. The authors propose that schools adopt heterogeneous grouping and differentiated instruction in order to cultivate a culture of equality and caring in the classroom.

Studies conducted by Butler (1997), Evans and Teddlie (1995), and Scheurich (1998) all concluded that the leadership of the principal, particularly in the area of instructional leadership, was the key element for the success shown in low-SES schools that were performing above expected levels. Principals in these schools showed great vision and vigorously engaged the entire school community in the fulfillment of that vision.

Robert Schwartz, president of Achieve Inc., and Monty Neill, executive director of the National Center for Fair and Open Testing, commented in an interview for the North Central Regional Educational Laboratory (NCREL) on the use of high stakes testing and the growing achievement gap between poor and minority students and students in other socioeconomic categories (Detrich, 2004). Both individuals indicated

that applying the higher academic standards required of NCLB, through the use of high stakes testing procedures, would only serve to widen the achievement gap, and not close it as the legislation purports to do.

Reynolds (2002) expressed the idea that several achievement gaps existed rather than just one, and that these gaps changed and fluctuated over time. He identified in-school (funding, teachers, and institutional bias) and out-of-school (family, socioeconomic status, and neighborhood) factors that lead to these achievement gaps. His contention was that the use of high stakes achievement testing methodologies for broad-based applications was inappropriate and hindered the process of closing achievement gaps.

Even with the present emphasis on student assessment and achievement measures, principals in a 2001 National Association of Secondary School Principals (NASSP) survey listed student standardized test scores and gains in standardized test scores near the bottom of their measures of school success. Only (60.8%) of the principals surveyed rated gains in standardized test scores as important or very important. Even fewer, (51.2%) rated student standardized test scores as important or very important. The top choices for measuring the success of their schools were teacher skills and performance (94.3%) and climate among teachers and administrators (91.2%). These results indicate the current dichotomy in educational leadership in which state and national initiatives do not appear to be in line with local or school-level beliefs and practices (Priorities, 2001).

What the literature suggests is that, as the education field begins to find some level of consensus in delineating the specific leadership characteristics required of

principals and how these may directly or indirectly impact student achievement, most educational leaders, including principals, are not fully committed to, or supportive of, the movement toward standardized testing and other measures of student and school success. Principals are being evaluated by a system in which most seem to have little faith.

CHAPTER 3

METHODOLOGY

Introduction

This chapter describes the methodology and procedures used to determine the perceived effectiveness of certain leadership characteristics of middle and high school principals in the selected schools of Central Florida and any relationships these perceptions have to a measure of student achievement. Relevant FCAT Reading scores from the 2003-2004 academic year were collected and analyzed to identify student achievement. Scores from 8th grade students were used to represent middle schools and scores from 10th grade students represented high schools. Descriptive, comparative, and inferential data analyses were used to identify any relationships between perceived principal effectiveness and student achievement.

This study was conducted during the Fall, 2004 Semester at the University of Central Florida with final data analysis and presentation completed during the Spring, 2005 Semester.

Chapter 3 is divided into seven sections. The first is a statement of the purpose of the investigation. The second section includes the study population and sampling procedures. Instrumentation is detailed in the third section, and instrument reliability and validity comprise the fourth section. Data collection procedures are discussed in the fifth section. Six research questions are presented in the sixth section. The seventh section

incorporates data analysis methodologies and procedures for each of the research questions.

Purpose Statement

A review of the research and literature presents a strong case for the supposition that the leadership role of the principal is critical to the success or “failure” of most schools. This seems to be particularly true in the context of current trends in which school success is largely determined by student test scores on large-scale assessment instruments. The difficult part is identifying specific principal leadership traits and the degree to which these traits might impact student achievement. Studies conducted by Austin (1978), Pellicer, et al. (1990), Springer (1996), Waters, et al. (2003) provide support to the precept that schools with principals who exhibit certain leadership qualities tend to have higher scores on various measures of student achievement. The purpose of this inquiry is to examine the possible extent to which specific identifiable leadership characteristics (styles) of select Central Florida school principals differ between middle and high school administrators, and to examine if these leadership characteristics display a relationship, either positively or negatively, with the obtainment of student scores on state measures of education accountability.

Population and Sample

The population for this inquiry included the middle and high schools in five Central Florida school districts (Brevard, Lake, Orange, Seminole, and Volusia

Counties). Certain charter, adult education, and alternative education schools or sites, listed on district school rolls as middle or high schools, were excluded from consideration due to their narrow academic focus, specialized student population, and/or limited faculty representation. District superintendents were contacted requesting permission to conduct the survey within their school systems. Once permission letters were obtained from the superintendents, each middle and high school principal was contacted requesting permission to conduct the investigation in their respective schools. Twenty-one schools declined to participate, did not respond to repeated contact attempts, or had no available faculty list. A total of 104 schools (59 middle schools and 45 high schools) agreed to participate in the survey.

The research sample was obtained by distributing the survey instrument to 10 randomly selected teachers at 59 middle schools and 45 high schools in the five school districts listed. The random sampling methodology consisted of obtaining a list of the faculty members at each school from either the school's web site or published school district employee lists. Whenever noted, the names of administrative and support staff individuals were removed from the school listing. Individual names were consecutively numbered, and this total was entered into a random number generator computer program. A total of 15 numbers (names) were randomly generated. This provided a primary list of 10 teacher names and a list of 5 alternate teacher names. Instructions provided to each school asked that names on the alternate list be used should any of the names on the primary list fail to meet study qualification requirements. The sample was limited to

active teachers (no administrative or support personnel) with at least one academic year of teaching experience at their present (2004-2005) location.

Instrumentation

The *Audit of Principal Effectiveness Survey* developed through the Middle Level Leadership Center (MLLC) at the University of Missouri-Columbia was used as the survey instrument. The instrument consists of a body of 80 questions, divided into three domains, whereby teachers are asked to rate the perceived leadership effectiveness of their principal on a 9-pt. Likert-type scale (1 = not effective, 5 = moderately effective, 9 = very effective). The three domains of the instrument are organizational development, organizational environment, and educational program. Each domain is further divided into separate factors. The organizational development domain provides insight into the principal's ability to work with stakeholders both inside and outside the school setting to establish process and relationships that effectively promote positive growth and change within the school as a whole. This domain contains three factors: organizational direction, organizational linkage, and organizational procedures.

The second domain, organizational environment, establishes the ability of the principal to nurture the on-going climate of the school through development of positive interpersonal relations among the staff members and effective daily operational procedures for the school. This domain contains four factors: teacher relations, student relations, interactive processes, and affective processes.

The third domain, educational program, ascertains the principal's ability to serve as the educational leader of the school through active involvement in instructional leadership and curriculum development. This domain consists of two factors: instructional improvement and curriculum improvement (Valentine & Bowman, 1984).

The two domains chosen for this study (with consultation of the MLLC) were organizational environment and educational program. In order to make the survey instrument more manageable in terms of administration and meaningful analysis, the domain of organizational development was not used in this study. Questions under this domain are concerned with how the principal relates to stakeholders outside the immediate school campus. It was felt that this area was most likely the one in which teachers would have the least knowledge of their principal's capabilities.

The survey instrument used in this study consisted of 52 questions relating to teacher perceptions of principal leadership effectiveness under the organizational environment and educational program domains of the APE. Respondents were also asked to complete demographic questions regarding teaching experience and education level (Appendix A, p. 130).

Instrument Reliability and Validity

Valentine and Bowman (1984), through extensive review of the literature and research relative to the role of the principal, initially identified 164 items under 12 constructs that were divided into two instruments. These were mailed to a national sample of 3,660 teachers (equally divided into elementary, middle, and high school

levels). Teachers were asked to rank order the importance of each item as it related to the effectiveness of principals. The 926 responses were factor analyzed producing 9 factors of 110 items. Teacher perceptions of principal leadership effectiveness formed the perceptive base for validation of the instrument and the data base for item and factor analysis.

To further refine the instrument, and provide for construct validity, a national random sample of 3,300 teachers (equally divided into elementary, middle, and high school levels) was sent the refined 110-item survey and asked to rank order the items as they pertained to principal effectiveness. Factor analysis of the 587 usable returned instruments yielded 6 factors; however, the first 2 factors contained 26 and 16 items and lacked the desired clarity of description of the roles of principals. The six factors and related items were combined along a conceptual framework into three “domains.” These domains were factor analyzed using varimax orthogonal rotation with iteration and produced nine concise factors describing the roles and necessary skills required of effective principals.

Reliability was indicated by the following: organizational development had a coefficient alpha of .9253, organizational environment had a coefficient alpha of .9443, and educational program had a coefficient alpha of .8894. Total instrument reliability showed a coefficient alpha of .9698. The three “Domains” described above represent the major focus used in the development of the survey instrument. However, each domain can be used as a separate instrument for depicting a major area of responsibility of the principalship (Valentine & Bowman, 1984).

The *Audit of Principal Effectiveness* was used as the data collection instrument in two large studies investigating teacher's perceptions of principal effectiveness. Valentine and Bowman (1990) used the instrument to compare principal effectiveness between schools designated by the United States Department of Education as having outstanding educational programs and a random sample of schools across the nation used as a control group. A similar study conducted in Tennessee by Williams (2001) looked at principal effectiveness between a randomly selected group of secondary schools and a group of schools identified as having outstanding educational programs within the state. Both studies controlled for validity threats by using a control group and random sampling methodologies. Each of the studies produced comparable factor mean scores and both found that teachers in the schools recognized as outstanding rated their principals significantly higher on sections of the APE than did teachers in the control groups.

Data Collection

A letter requesting permission to survey schools, copies of the survey instrument, and research methodology were sent to the superintendent of each school district in the study. Upon receipt of the superintendent's permission, contact was made with the principal of each school to determine the most appropriate methodology for distribution and collection of the survey instrument. The preferred method requested was to have the principal designate an individual in his/her school to administer the survey (an assistant principal or other staff member). The 10 surveys were mailed to the principal or the specified individual at each school along with instructions for administering the survey, a

computer-generated list of randomly selected teachers, and a pre-addressed, postage paid return envelope. The names of 15 randomly selected teachers were sent to schools to allow for selection of 10 qualified individuals (target number) to complete the survey. A minimum of seven qualifying surveys were required from a school in order to be included in data analysis.

In order to assure that teachers were evaluating a principal with whom they had at least one academic year of experience, the survey population was divided into two groups through respondents answering yes or no to the following question, “Have you been in a teaching position at your current school for a minimum of one academic year (not counting the current year 2004-2005)?” If respondents answered no, they were dropped from the study. To further insure that teachers were evaluating principals with whom they had at least one academic year of experience, the survey instrument instructed them to evaluate the principal with whom they worked during the 2003-2004 academic year. Using this methodology, a new principal was not evaluated by teachers with whom he or she had little working experience, and the entire teaching staff of a school did not have to be eliminated from the study because a new principal was assigned to that school for the 2004-2005 academic year. If the random sample of 15 teachers per school, derived from school and district staff lists, produced a school sample that included less than seven qualified teachers, or if less than seven usable surveys were returned, a second survey mailing was sent to that school with a new random sample list. Initial responses affirming participation were received from 12 schools, and six schools declined to participate. Contact was made via phone or e-mails with non-responding school

principals to encourage participation. Following this, a total of 104 surveys were mailed to 59 middle schools and 45 high schools in the five school districts comprising the study.

The first follow-up was via a phone call or e-mail to the individual administering the survey at non-responding schools. The second follow-up consisted of a request to the contact person in each district office to send a communication to non-responding schools asking for their participation in the study. Three districts responded positively and sent e-mails to their middle and high school principals. The third follow-up was a phone call or e-mail to the school principal or contact person at non-responding schools requesting their participation. These actions produced positive responses from a total of 60 schools (35 middle schools and 25 high schools). Five schools failed to return the minimum seven qualifying surveys. This total reflected a return rate of 57.7% of the 104 schools that were mailed surveys, and represented 48% of the middle and high schools in the five county school systems. .

Data pertaining to the scores individual schools received on the 2003-2004 reading section of the *Florida Comprehensive Assessment Test* (FCAT) and information regarding school demographic information were obtained from the official web site of each school district and the Florida Department of Education web site (<http://www.firn.edu/doe/schoolgrades/>). This information is presented in Appendix C (p. 141).

For the purposes of this study, student achievement was measured by the percentage of students in a given school (8th grade – middle schools and 10th grade – high schools) who scored at levels 3 and above on the 2003-2004 administration of the *Florida*

Comprehensive Assessment Test (FCAT) reading portion. Student scores are classified into five achievement levels, with 1 being the lowest and 5 being the highest. The reading score is often used to stand for student achievement as it counts for one-half of a school's grade assigned by the state. The FCAT is administered yearly in the second semester to students in 3rd through 10th grades in the public schools in Florida. The tests contain both norm and criterion referenced material based on academic standards contained in the *Sunshine State Standards*, which identify basic required learning outcomes for all subjects and grade levels.

Scores from the administration of the FCAT are the primary measurement by which Florida's public schools are evaluated and given a yearly grade by the Department of Education. They are also used to determine school, district, and state *Adequate Yearly Progress* (AYP) under the federal *No Child Left Behind Act*. Schools that have a high percentage of students with scores at levels 3 and above on the FCAT are eligible to receive additional funding to be used at the discretion of the larger school community for educational purposes that may include direct payments of "bonus" money to staff members. Schools with low FCAT scores are subject to sanctions, reduced funding, staffing changes, and possible loss of students through the state's voucher program. Obtaining high FCAT scores has become the overriding concern of students, principals, parents, district administrators, community leaders, and state officials.

Research Questions

This study was guided by six research questions:

1. What mean differences, if any, exist between the teacher ratings of principals in middle and high schools in Central Florida on the organizational environment domain of the *Audit of Principal Effectiveness Survey* (APE)?
2. What mean differences, if any, exist between the teacher ratings of principals in middle and high schools in Central Florida on the educational program domain of the APE?
3. Is there a positive correlation between the teacher ratings of middle and high school principals in Central Florida on the organizational environment domain of the APE and student achievement as measured by the percentage of students at their respective schools scoring at levels 3 and above on the 2003-2004 FCAT Reading Test (8th grade – middle school; 10th grade – high school)?
4. Is there a positive correlation between the teacher ratings of middle and high school principals in Central Florida on the educational program domain of the APE and student achievement as measured by the percentage of students at their respective schools scoring at levels 3 and above on the 2003-2004 FCAT Reading Test (8th grade – middle school; 10th grade – high school)?
5. To what extent do the schools with principals whose teachers rated them in the top third, the middle third, and the bottom third on the organizational environment domain of the APE differ on: (a) average years of teaching experience of the surveyed faculty; (b) educational level of the surveyed faculty; (c) overall school

socio-economic status (SES) as measured by the percentage of students listed as economically disadvantaged; and (d) percentage of students achieving levels 3 and above on the FCAT reading section?

6. To what extent do the schools with principals whose teachers rated them in the top third, the middle third, and the bottom third on the educational program domain of the APE differ on: (a) average years of teaching experience of the surveyed faculty; (b) educational level of the surveyed faculty; (c) overall school socio-economic status (SES) as measured by the percentage of students listed as economically disadvantaged; and (d) percentage of students achieving levels 3 and above on the FCAT reading section?

Data Analysis

Research question (1): An independent samples t -test was used to determine any statistically significant mean difference in scores on the organizational environment domain portion of the *Audit of Principal Effectiveness Survey* (APE) between principals in middle and high schools.

Research question (2): An independent samples t -test was used to determine any statistically significant mean difference in scores on the educational program domain portion of the APE between principals in middle and high schools.

Research question (3): t -tests performed in questions (1) and (2) that indicated a significant mean difference between the scores of middle school and high school principals required separate treatment of the two groups. No significant mean difference

between the two groups, as indicated by the *t*-tests, required that the two groups be combined into one sample group. A Pearson product moment correlation (one-tailed) was used to determine if there was a positive correlation between the ratings that principals were given on the organizational environment domain of the APE and the percentage of students achieving levels 3 or higher on the reading section of the 2003-2004 FCAT.

Research question (4): A Pearson product moment correlation (one-tailed) was used to determine if there was a positive correlation between the ratings that principals were given on the educational program domain of the APE and the percentage of students achieving levels 3 or higher on the reading section of the 2003-2004 FCAT.

Research question (5): Schools were divided into three groups (top, middle, and bottom) according to the mean scores obtained for principals on the organizational environment domain of the APE and four variables examined: (a) average years of teaching experience of the respondents; (b) educational level; (c) socio-economic status of the school; and (d) percentage of students achieving levels 3 and above on the FCAT reading section. Data are presented in tabular form and discussed in Chapter 4.

Research question (6): Schools were divided into three groups (top, middle, and bottom) according to the scores obtained for principals on the educational program domain of the APE and four variables examined: (a) average years of teaching experience of the respondents; (b) educational level; (c) socio-economic status of the school; and (d) percentage of students achieving levels 3 and above on the FCAT reading section. Data are presented in tabular form and discussed in Chapter 4.

Summary

Chapter 3 included a restatement of the purpose for this inquiry and a discussion of the research instrument chosen to collect data to determine teachers' perceptions of effective principal leadership characteristics in the selected middle and high schools of Central Florida. Instrument reliability data along with the rationale for modifying the original survey was presented. The survey population and sampling methodology was examined. The data collection process was presented in detail. The chapter concluded with listings of the research questions and data analysis methodologies for each question.

CHAPTER 4
ANALYSIS OF THE DATA

Introduction

This quantitative study was undertaken to examine teachers' perceptions of the leadership characteristics of school principals and any possible relationship between teacher ratings of these characteristics and student achievement. The purpose of the study was to contribute to the existing knowledge base regarding principal leadership and student achievement. Six research questions were the focus of this study:

1. What mean differences, if any, exist between the teacher ratings of principals in middle and high schools in Central Florida on the organizational environment domain of the *Audit of Principal Effectiveness Survey (APE)*?
2. What mean differences, if any, exist between the teacher ratings of principals in middle and high schools in Central Florida on the educational program domain of the APE?
3. Is there a positive correlation between the teacher ratings of middle and high school principals in Central Florida on the organizational environment domain of the APE and student achievement as measured by the percentage of students at their respective schools scoring at levels 3 and above on the 2003-2004 FCAT Reading Test (8th grade – middle school; 10th grade – high school)?
4. Is there a positive correlation between the teacher ratings of middle and high school principals in Central Florida on the educational program domain of the

APE and student achievement as measured by the percentage of students at their respective schools scoring at levels 3 and above on the 2003-2004 FCAT Reading Test (8th grade – middle school; 10th grade – high school)?

5. To what extent do the schools with principals whose teachers rated them in the top third, the middle third, and the bottom third on the organizational environment domain of the APE differ on: (a) average years of teaching experience of the surveyed faculty; (b) educational level of the surveyed faculty; (c) overall school socio-economic status (SES) as measured by the percentage of students listed as economically disadvantaged; and (d) percentage of students achieving levels 3 and above on the FCAT reading section?
6. To what extent do the schools with principals whose teachers rated them in the top third, the middle third, and the bottom third on the educational program domain of the APE differ on: (a) average years of teaching experience of the surveyed faculty; (b) educational level of the surveyed faculty; (c) overall school socio-economic status (SES) as measured by the percentage of students listed as economically disadvantaged; and (d) percentage of students achieving levels 3 and above on the FCAT reading section?

Population and Demographic Characteristics

The population for this inquiry included the middle and high schools in five Central Florida school districts (Brevard, Lake, Orange, Seminole, and Volusia Counties) during the 2004–2005 academic year. Certain charter, adult education, and alternative

education schools or sites, listed on district school rolls as middle or high schools, were excluded from the population due to their narrow academic focus, specialized student population, and/or limited faculty representation. The survey population consisted of 125 middle and high schools in the five county school districts. The survey instrument was distributed to 10 randomly selected teachers at 104 participating schools (59 middle schools and 45 high schools) in the five school districts. A sufficient number of surveys (minimum of 7) were returned from teachers at 60 schools (35 middle schools and 25 high schools) out of a possible 104 for a response rate of 57.7%. The research sample ($N = 60$) represented 48% of the 125 middle and high schools in the five schools districts comprising the study.

Research data were obtained from 535 usable surveys (316 middle school teachers and 219 high school teachers), out of a possible total of 600 (60 schools x 10 teachers), for a survey return rate from participating schools of 89.2%. Appendix C (p. 141) shows respondent and non-respondent middle school and high school information by county.

Research Question 1

What mean differences, if any, exist between the teacher ratings of principals in middle and high schools in Central Florida on the organizational environment domain of the *Audit of Principal Effectiveness Survey* (APE)?

For research question 1, survey respondents were divided into two categories: middle schools ($n = 35$) and high schools ($n = 25$). A teacher rating mean score for each

school principal on the organizational environment domain of the APE was calculated by summing the mean scores from questions 1-37 and dividing by the number of questions. The range of possible mean scores for each principal was based on the 9-point Likert-type scale of the survey instrument (*Range* = 1.0-9.0). An independent samples *t*-test was conducted to determine any statistically significant mean difference between the responses of middle school and high school teachers on the organizational environment domain of the APE. To reduce the possibility of a Type I error when conducting multiple *t*-tests, a Bonferroni correction (α/n) was employed. The alpha level for this test was set at .025 (.05/2).

Teacher ratings for middle school principals ($n = 35$) on the organizational environment domain of the APE were slightly higher ($M = 7.09$, $SD = .926$) than teacher ratings for high school principals ($n = 25$, $M = 6.97$, $SD = 1.295$). An independent samples *t*-test (equal variances assumed, $F = 3.349$, $p = .072$) was not statistically significant, $t(58) = .427$, $p = .671$ (two-tailed). The results provide evidence to suggest that teacher ratings of middle and high school principals do not differ, on average, on the organizational environment domain of the APE. Figure 1 displays a box plot of the teacher rating mean scores for middle school and high school principals on the organizational environment domain (questions 1-37) of the APE.

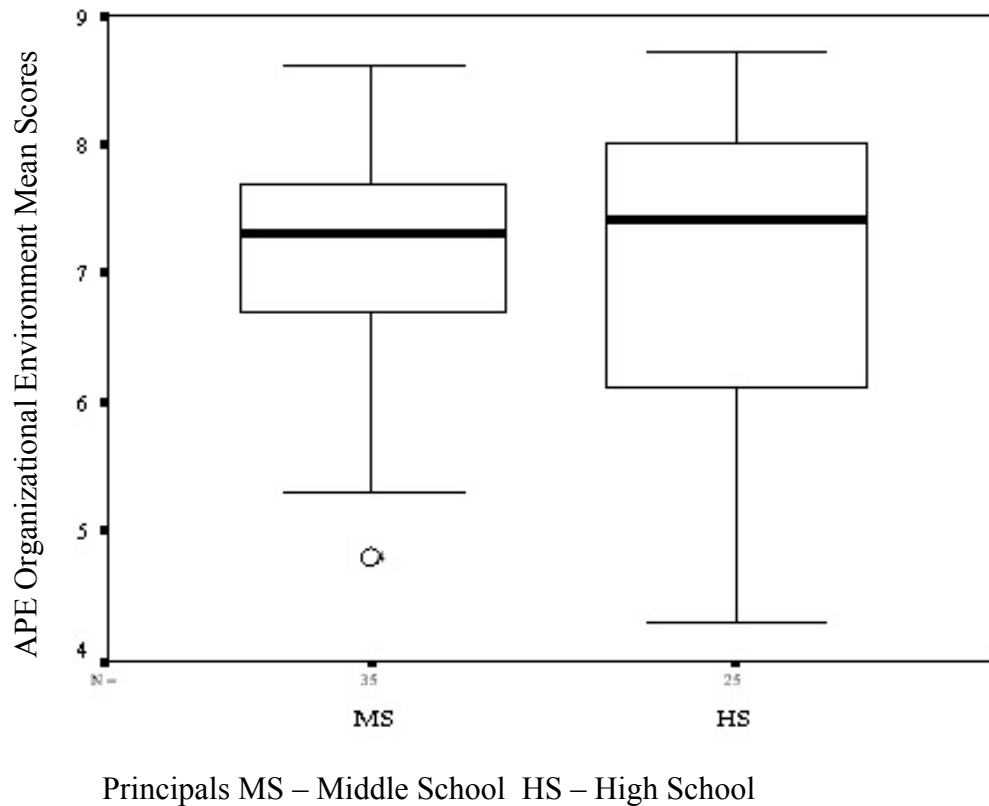


Figure 1: Box plot – APE Organizational Environment Mean Scores for Middle School and High School Principals

Figure 1 indicates one outlier score (value more than 1.5 box-lengths from the 25th percentile) for a middle school (MS) principal at the lower end of the APE organizational environment scale that impacts the mean score. An independent samples *t*-test (equal variances not assumed, $F = 4.977$, $p = .030$) that ignored the outlier score was conducted and also gave evidence to suggest that teacher ratings of middle and high school principals do not differ, on average, on the organizational environment domain of

the APE, $t(38.7) = .639, p = .525$ (two-tailed), indicating that the outlier score did not affect significance. The hspread (interquartile range) for teacher ratings of middle school principals shows a much smaller range of mean scores than the hspread (interquartile range) for the teacher rating mean scores for high school principals.

A statistically significant difference was not found between the mean scores of teacher ratings of middle school and high school principals on the organizational environment domain of the APE.

Research Question 2

What mean differences, if any, exist between the teacher ratings of principals in middle and high schools in Central Florida on the educational program domain of the APE?

For research question 2, survey respondents were divided into two categories: middle schools ($n = 35$) and high schools ($n = 25$). A teacher rating mean score for each school principal on the educational program domain of the APE was calculated by summing the mean scores from questions 38-52 and dividing by the number of questions. The range of possible teacher rating mean scores for each principal was based on the 9-point Likert-type scale of the survey instrument ($Range = 1.0-9.0$). An independent samples t -test was conducted to determine any statistically significant mean difference between the responses of middle school and high school teachers on the educational program domain of the APE. To reduce the possibility of a Type I error when conducting

multiple *t*-tests, a Bonferroni correction (α / n) was employed. The alpha level for this test was set at .025 (.05/2).

Teacher ratings for middle school principals ($n = 35$) on the educational program domain of the APE were slightly higher ($M = 7.44$, $SD = .807$) than teacher ratings for high school principals ($n = 25$, $M = 7.22$, $SD = 1.058$). An independent samples *t*-test (equal variances assumed, $F = 2.165$, $p = .147$) was not statistically significant, $t(58) = .918$, $p = .364$ (two-tailed). The results provide evidence to suggest that teacher ratings of middle and high school principals do not differ, on average, on the educational program domain of the APE. Figure 2 displays a box plot of the teacher rating mean scores for middle school and high school principals on the educational program domain (questions 38-52) of the APE.

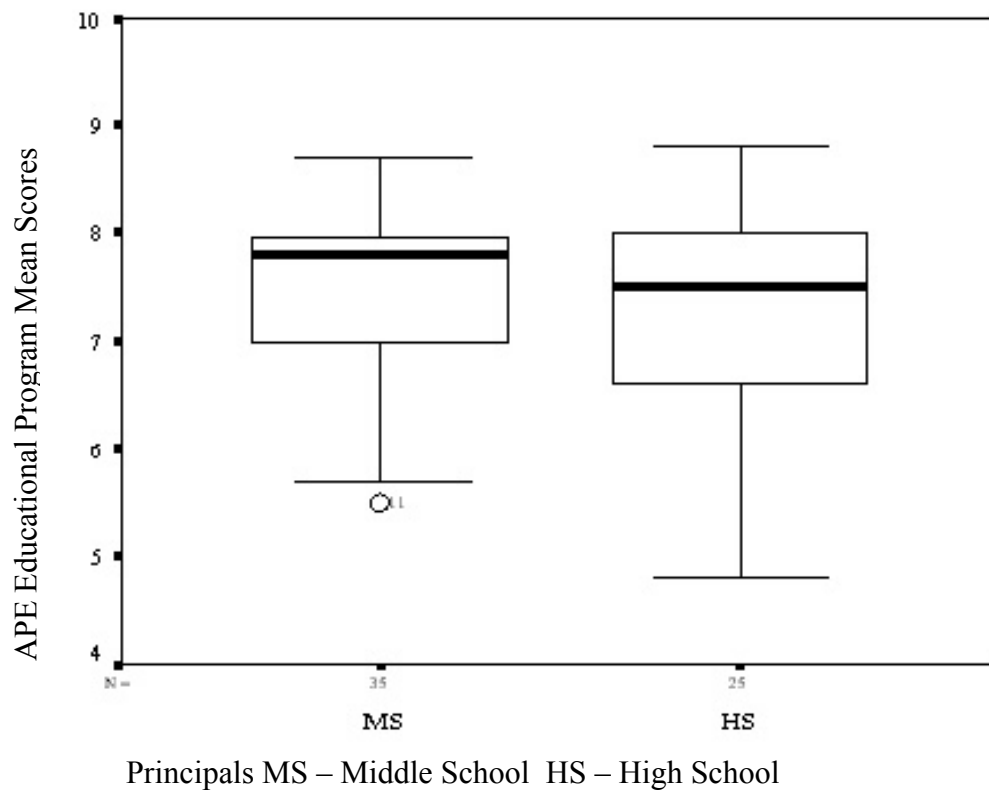


Figure 2: Box Plot - APE Educational Program Mean Scores for Middle School and High School Principals

Figure 2 indicates one outlier score (value more than 1.5 box-lengths from the 25th percentile) for a middle school (MS) principal at the lower end of the APE educational program scale that impacts the mean score. The mean score for teacher ratings of middle school principals ($M = 7.44$) is higher, including the outlier, than the mean score for teacher ratings of high school principals ($M = 7.22$). An independent samples t -test (equal variances assumed, $F = 3.421$, $p = .070$) that ignored the outlier

score was conducted and gave evidence to suggest that teacher ratings of middle and high school principals do not differ, on average, on the educational program domain of the APE, $t(57) = 1.182, p = .241$ (two-tailed), indicating that the outlier score did not affect significance. The overall range of teacher rating mean scores (*Range* = 3.2, 5.5 to 8.7) and hspread (interquartile range = .9, 7.0 to 7.9) for middle school principals was less than the overall range of teacher rating mean scores (*Range* = 4.0, 4.8 to 8.8) and hspread (interquartile range = 1.4, 6.6 to 8.0) for high school principals. A statistically significant difference was not found between the mean scores of teacher ratings of middle school and high school principals on the educational program domain of the APE.

Since no statistically significant difference was shown between the mean scores of teacher ratings of middle school and high school teachers on their perceptions of principal leadership on either the organizational environment domain or the educational program domain of the APE, these two groups (middle schools and high schools) were combined into one group (schools) for further statistical analysis.

Research Question 3

Is there a positive correlation between the teacher ratings of middle and high school principals in Central Florida on the organizational environment domain of the APE and student achievement as measured by the percentage of students at their respective schools scoring at levels 3 and above on the 2003-2004 FCAT Reading Test (8th grade – middle school; 10th grade – high school)?

For research question 3, all survey respondents were placed into one category (schools) reflecting the results of independent samples *t*-tests conducted under research questions 1 and 2. These tests indicated the difference in mean scores of teacher ratings of middle school and high school principals on both the organizational environment and educational program domain of the APE was not statistically significant.

A mean teacher rating score for each school principal on the organizational environment domain of the APE was calculated by summing the mean scores from questions 1-37 and dividing by the number of questions. The range of possible mean teacher rating scores for each principal was based on the 9-point Likert-type scale of the survey instrument (*Range* = 1.0-9.0). FCAT reading scores were listed as the percentage of students in a given school (8th grade - middle school and 10th grade - high school) who scored at levels 3 and above. To reduce the possibility of a Type I error when conducting multiple *t*-tests, a Bonferroni correction (α/n) was employed. The alpha level for this test was set at .025 (.05/2).

A Pearson product moment correlation revealed that FCAT reading scores ($M = 44.73$, $SD = 14.11$) did not show a statistically significant positive correlation to APE organizational environment teacher rating mean scores ($M = 7.04$, $SD = 1.09$), ($r = .094$, $p = .237$), one-tailed. The coefficient of determination ($r^2 = .009$) indicated that the two variables (FCAT reading scores and organizational environment mean scores) shared less than 1% common variance.

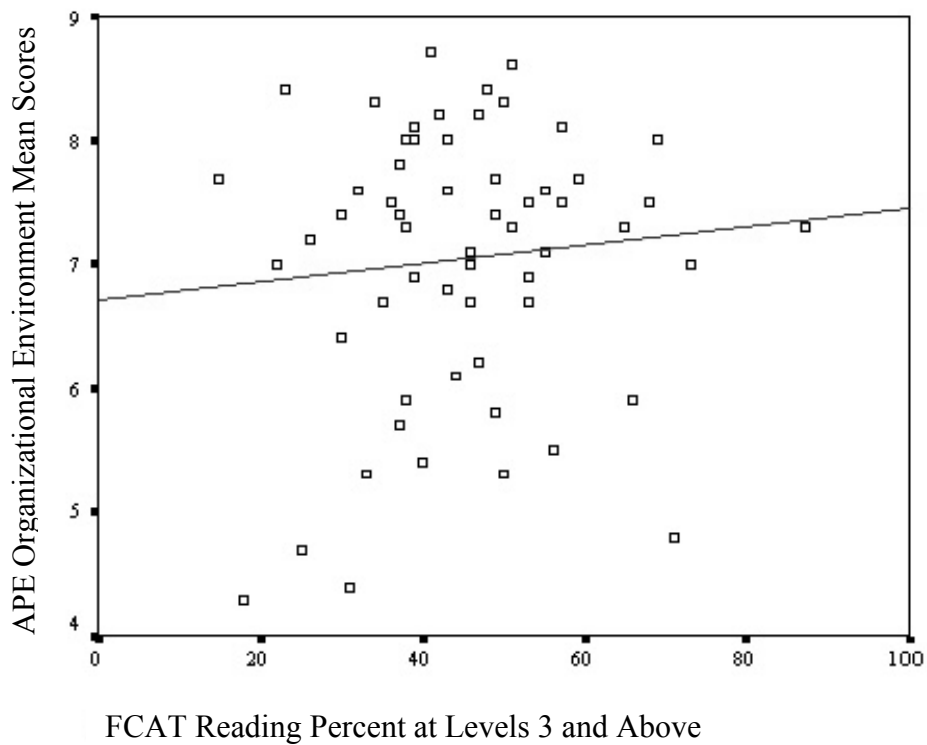


Figure 3: Scatterplot - Organizational Environment (APE) and FCAT Reading Scores

Figure 3 shows the relationship between FCAT reading scores and APE organizational environment mean scores. The regression line (line of best fit) is almost horizontal with a slightly positive slope reflecting the calculated Pearson correlation ($r = .094$).

Research Question 4

Is there a positive correlation between the teacher ratings of middle and high school principals in Central Florida on the educational program domain of the APE and student achievement as measured by the percentage of students at their respective schools

scoring at levels 3 and above on the 2003-2004 FCAT Reading Test (8th grade – middle school; 10th grade – high school)?

For research question 4, all survey respondents were placed into one category (schools) reflecting the results of independent samples *t*-tests conducted under research questions 1 and 2. These tests indicated the difference in mean teacher rating scores between middle school and high school principals on both the organizational environment and educational program domain of the APE was not significant.

A mean teacher rating score for each school principal on the educational program domain of the APE was calculated by summing the teacher rating mean scores from questions 38-52 and dividing by the number of questions. The range of possible teacher rating mean scores for each principal was based on the 9-point Likert-type scale of the survey instrument (*Range* = 1.0-9.0). FCAT reading scores were listed as the percentage of students in a given school (8th grade - middle school and 10th grade - high school) who scored at levels 3 and above. To reduce the possibility of a Type I error when conducting multiple *t*-tests, a Bonferroni correction (α / n) was employed. The alpha level for this test was set at .025 (.05/2).

Descriptive statistics for all schools showed the average FCAT reading score was approximately 45 ($M = 44.73$, $SD = 14.11$), and the APE educational program mean scores was approximately 7 ($M = 7.35$, $SD = .918$). A Pearson product moment correlation revealed that FCAT reading scores and APE educational program mean scores were not significantly positively correlated, ($r = .013$, $p = .461$), one-tailed. The

coefficient of determination ($r^2 = .0002$) indicated that the two variables (FCAT reading scores and educational program mean scores) shared less than 1% common variance.

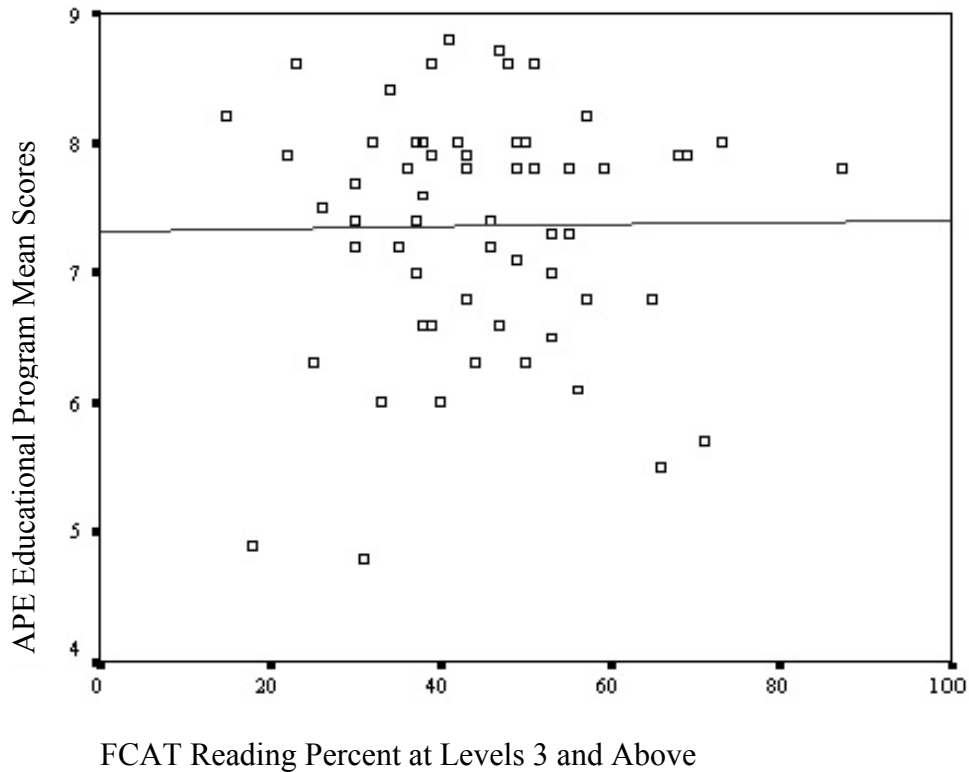


Figure 4: Scatterplot - Educational Program (APE) and FCAT Reading Scores

Figure 4 shows the relationship between FCAT reading scores and APE educational program mean scores. The regression line (line of best fit) is almost horizontal with a slightly positive slope reflecting the calculated Pearson correlation ($r = .013$).

Research Question 5

To what extent do the schools with principals whose teachers rated them in the top third, the middle third, and the bottom third on the organizational environment domain of the APE differ on: (a) average years of teaching experience of the surveyed faculty; (b) educational level of the surveyed faculty; (c) overall school socio-economic status (SES) as measured by the percentage of students listed as economically disadvantaged; and (d) percentage of students achieving levels 3 and above on the FCAT reading section? The socio-economic status of schools for this study was recorded as a percentage under the heading (Low-SES). The Low-SES percentage for each school in the study was calculated by dividing the number of economically disadvantaged students (those qualifying for the Federal free or reduced lunch program) in a school by the total student enrollment of that school (Appendix C, p. 141).

The mean score for principals whose teachers rated them in the top third on the organizational environment domain of the APE was 8.0, [*Range* = 1.1 (7.6 to 8.7), *SD* = .33, *n* = 21]. The mean FCAT reading percentage at levels 3 and above for principals whose teachers rated them in the top third was 43.4, [*Range* = 54 (15 to 69), *SD* = 12.13]. The mean percentage of low-SES students for principals whose teacher ratings placed them in the top third was 29.8, [*Range* = 57 (8 to 65), *SD* = 15.47]. Teaching experience in this group showed a mean of 15.2 years, [*Range* = 11.5 (9.6 to 21.1)]. Teacher education level showed 58% with a bachelor's degree, 27% had a master's degree, 13% had a master's plus additional hours, and 1% held a doctoral degree.

The mean score for principals whose teachers rated them in the middle third on the organizational environment domain of the APE was 7.3, [*Range* = 0.6 (6.9 to 7.5), *SD* = 0.6, *n* = 20]. The mean FCAT reading percentage at levels 3 and above for principals whose teachers rated them in the middle third was 48.1, [*Range* = 51 (22 to 73), *SD* = 16.68]. The mean percentage of low-SES students for principals whose teachers rated them in the middle third was 29.7, [*Range* = 82 (5 to 87), *SD* = 20.31]. Teaching experience in this group showed a mean of 16.5 years, [*Range* = 18 (8.8 to 26.8)]. Teacher education level showed 56% with a bachelor's degree, 29% had a master's degree, 14% had a master's plus additional hours, and 2% held a doctoral degree.

The mean score for principals whose teachers rated them in the bottom third on the organizational environment domain of the APE was 5.7, [*Range* = 2.5 (4.3 to 6.8), *SD* = 0.79, *n* = 19]. The mean FCAT reading percentage at levels 3 and above for principals whose teachers rated them in the bottom third was 42.7, [*Range* = 53 (18 to 71), *SD* = 13.318]. The mean percentage of low-SES students for principals whose teachers rated them in the bottom third was 32.8, [*Range* = 61 (7 to 68), *SD* = 17.14]. Teaching experience in this group showed a mean of 13.7 years, [*Range* = 15.1 (8 to 23.1)]. Teacher education level showed 48% with a bachelor's degree, 34% had a master's degree, 13% had a master's plus additional hours, and 4% held a doctoral degree. These data are listed in Table 1.

Table 1

APE Organizational Environment:

B = Bachelors
M = Masters
M+ = Masters +
D = Doctorate

FCAT Reading - Low-SES - Teaching Experience - Education Level

School Scoring Range	Organizational Environment Score (APE)	FCAT Reading Level 3+	Low-SES Percentage	Teaching Experience (years)	Education Level
Top Third <i>n</i> = 21	<i>M</i> = 8.0 <i>Range</i> = 1.1 (7.6 to 8.7) <i>SD</i> = 0.33	<i>M</i> = 43.4% <i>Range</i> = 54 (15 to 69%) <i>SD</i> = 12.13	<i>M</i> = 29.8% <i>Range</i> = 57 (8 to 65%) <i>SD</i> = 15.47	<i>M</i> = 15.2 <i>Range</i> = 11.5 (9.6 to 21.1)	B = 58% M = 27% M+ = 13% D = 01%
Middle Third <i>n</i> = 20	<i>M</i> = 7.3 <i>Range</i> = 0.6 (6.9 to 7.5) <i>SD</i> = 0.21	<i>M</i> = 48.1% <i>Range</i> = 51 (22 to 73%) <i>SD</i> = 16.68	<i>M</i> = 29.7% <i>Range</i> = 82 (5 to 87%) <i>SD</i> = 20.31	<i>M</i> = 16.5 <i>Range</i> = 18 (8.8 to 26.8)	B = 56% M = 29% M+ = 14% D = 02%
Bottom Third <i>n</i> = 19	<i>M</i> = 5.7 <i>Range</i> = 2.5 (4.3 to 6.8) <i>SD</i> = 0.79	<i>M</i> = 42.7% <i>Range</i> = 53 (18 to 61%) <i>SD</i> = 13.31	<i>M</i> = 32.8% <i>Range</i> = 61 (7 to 68%) <i>SD</i> = 17.14	<i>M</i> = 13.7 <i>Range</i> = 15.1 (8 to 23.1)	B = 48% M = 34% M+ = 13% D = 04%

Note: 98% of respondents listed demographic information

Table 1 displays data for school principals according to the rating given them by teachers on the organizational environment domain of the APE. Only 4 out of 60 principals were rated below the mid-point (5.0) on the organizational environment domain. The greatest range in mean APE scores (4.3 – 6.8) was shown in the bottom third. The mean APE scores in the middle third (*n* = 20) were tightly packed around the mean (*M* = 7.3) with a very small range (*Range* = 0.6) and standard deviation (*SD* = 0.21).

The percentage of students achieving levels 3 and above on the FCAT reading test was slightly higher in the middle third ($M = 48.1\%$), along with the lower and upper percentages in the range (22% to 73%); however, the range of percentages were remarkably similar at each level. A pattern of large standard deviations in mean FCAT percentages and wide range of mean FCAT percentage scores was evident at each level and indicated that FCAT performance was fairly uniform throughout regardless of how principals were rated on the organizational environment domain of the APE.

Noteworthy was the average number of years teaching experience by school at each level. The average number of years teaching experience by school for all levels combined was 15.1 years. The range and average number of years teaching experience by school was somewhat greater in the middle third ($M = 16.5$, *Range* 8.8 to 26.8 = 18). Principals were rated on the organizational environment domain by teachers with considerable teaching experience ($M = 15.1$, *Range* 8 to 26.8 = 18.8). The data for education level were also fairly uniform across the three levels. The percentage of teachers holding a masters or doctoral degree was somewhat greater in the bottom third than either the top or middle thirds.

The difference in data for FCAT reading percentage, teaching experience, and educational level was remarkably similar for each of the three scoring ranges (top, middle, and bottom) and indicated no observable trends. The mean low-SES percentage was relatively unchanged from the top third ($M = 29.8\%$) to the middle third ($M = 29.7\%$) but increased in the bottom third ($M = 32.8\%$). This observation was investigated by data analysis. A Pearson product moment correlation was conducted between low-SES

percentages and FCAT reading percentages for all three levels. An alpha level of .05 was chosen for this analysis.

There was a statistically significant correlation between low-SES percentage and FCAT reading percentage ($r = -.407$, $N = 60$, $p = .001$) one-tailed. The correlation was negative (inverse) and was statistically significant beyond an alpha of .01. The coefficient of determination ($r^2 = 0.166$) indicated that the two variables (FCAT reading percentage and low-SES percentage) shared a common variance greater than 16%.

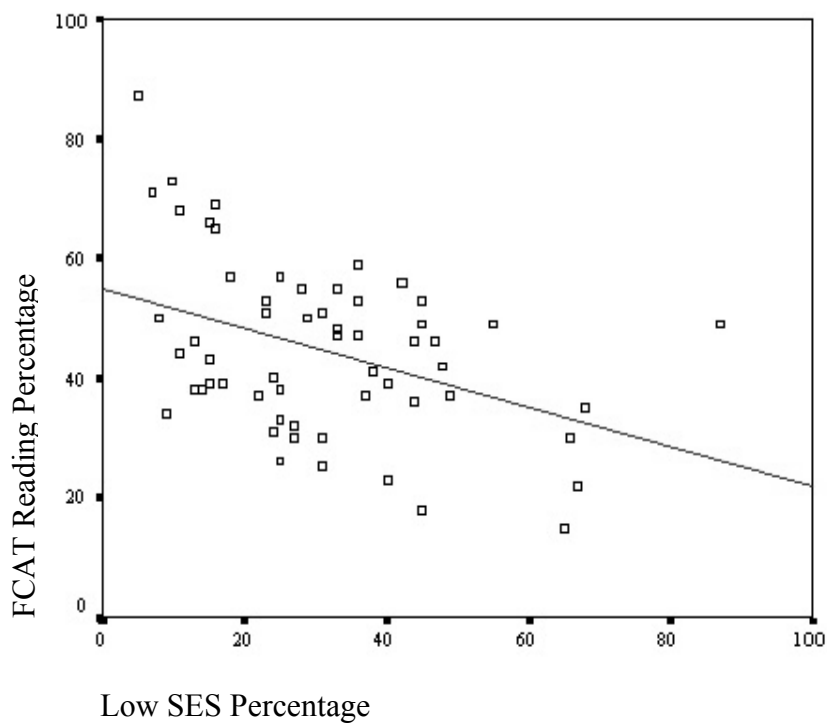


Figure 5: Scatterplot - FCAT Reading Percentage and Low-SES Percentage-APE Organizational Environment

Figure 5 displays the negative (inverse) correlation between FCAT reading percentage and low-SES percentage under the organizational environment domain of the APE. The regression line (line of best fit) is negatively sloped reflecting the calculated Pearson correlation ($r = -.407$).

Data Analysis by APE Score Levels

In order to determine if the negative (inverse) correlation between FCAT percentage and low-SES percentage was also present when APE scores were segregated into thirds (top, middle, and bottom by APE mean score), correlations were conducted for FCAT reading percentage and low-SES percentage for all three levels of the organizational environment domain of the APE. To reduce the possibility of a Type I error when conducting multiple t -tests, a Bonferroni correction (α / n) was employed. The alpha level for these tests was set at .017 (.05/3).

Top Third

FCAT reading percentage did not show a statistically significant correlation with low-SES percentage in the top third of APE organizational environment mean scores ($r = -.345$, $n = 21$, $p = .063$). Data indicated a negative (inverse) correlation, but it was not statistically significant at an alpha of (.017). The coefficient of determination ($r^2 = 0.1190$) indicated that the two variables (FCAT reading scores and educational program mean scores) shared almost 12% of common variance.

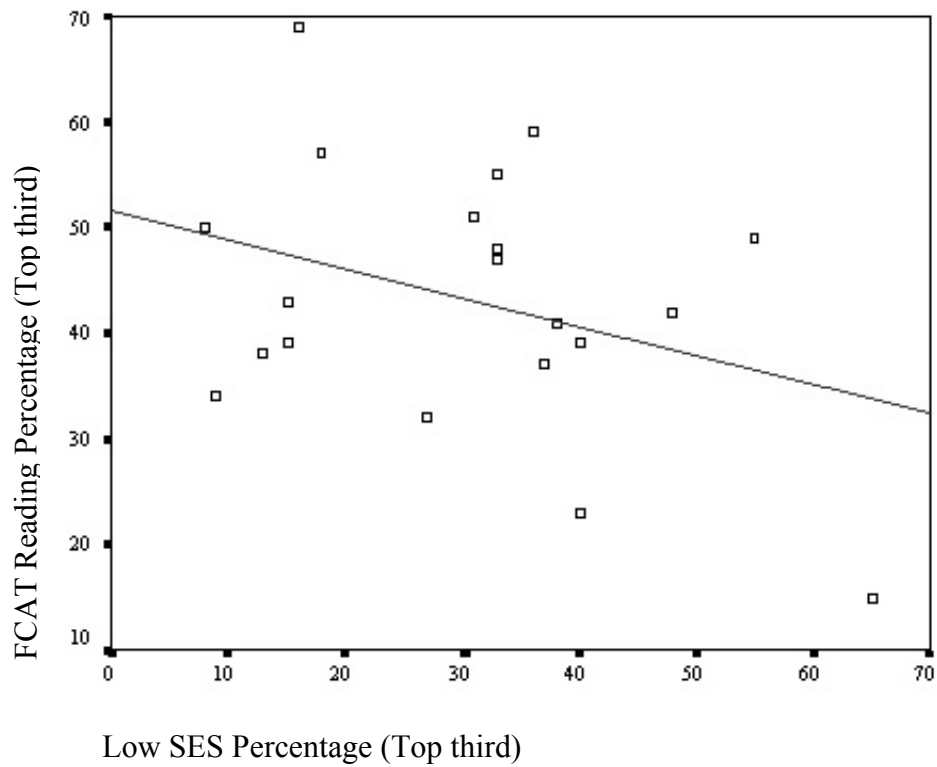


Figure 6: Scatterplot - FCAT Reading Percentage and Low-SES Percentage-Top Third of APE Organizational Environment

Figure 6 displays the correlation between FCAT reading percentage and low-SES percentage for the top third of the organizational environment domain of the APE. The regression line (line of best fit) is negatively sloped reflecting the calculated Pearson correlation ($r = -.345$).

Middle Third

FCAT reading percentage did not show a statistically significant correlation with low-SES percentage in the middle third of APE organizational environment mean scores ($r = -.409, n = 20, p = .037$). Data indicated a negative (inverse) correlation at an alpha of (.017). The coefficient of determination ($r^2 = 0.1673$) indicated that the two variables (FCAT reading scores and educational program mean scores) shared almost 17% of common variance.

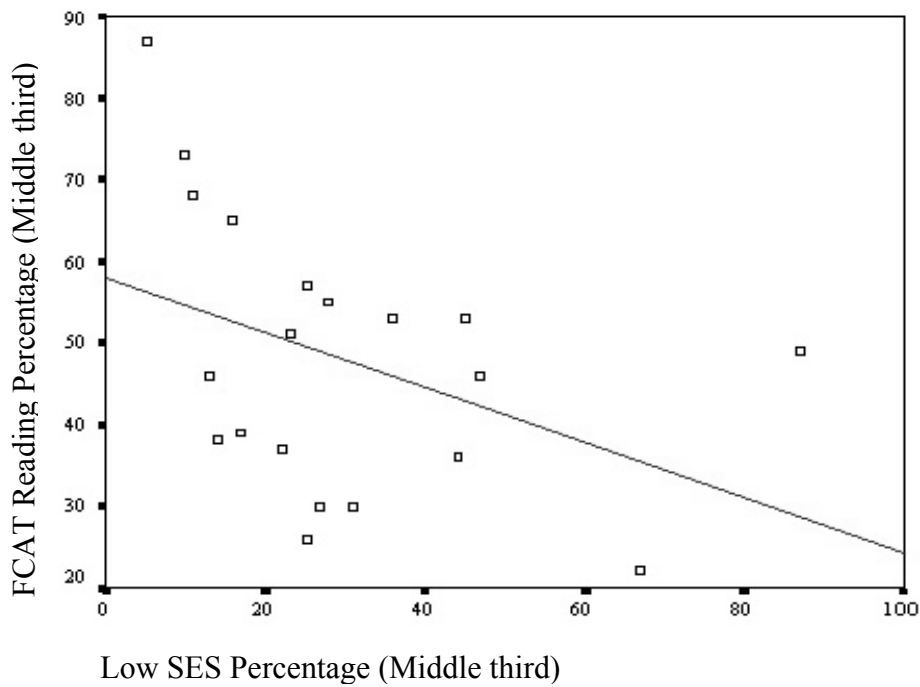


Figure 7: Scatterplot - FCAT Reading Percentage and Low-SES Percentage-Middle Third of APE Organizational Environment

Figure 7 displays the correlation between FCAT reading percentage and low-SES percentage for the middle third of the organizational environment domain of the APE. The regression line (line of best fit) is negatively sloped reflecting the calculated Pearson correlation ($r = -.409$).

Bottom Third

FCAT reading percentage did not show a statistically significant correlation with low-SES percentage in the bottom third of APE organizational environment mean scores ($r = -.456, n = 19, p = .025$). Data indicated a negative (inverse) correlation at an alpha of (.017). The coefficient of determination ($r^2 = 0.2079$) indicated that the two variables (FCAT reading scores and educational program mean scores) shared almost 21% of common variance.

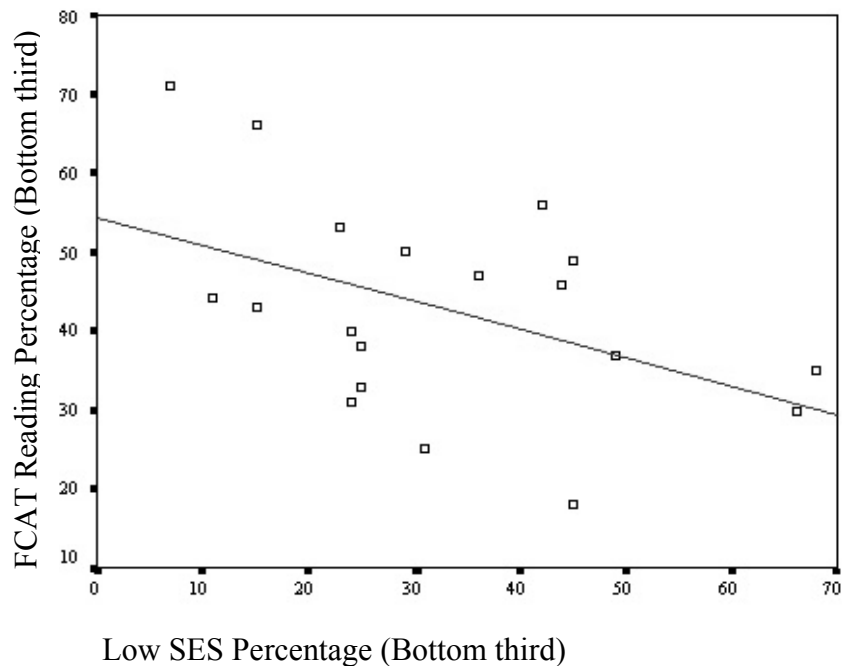


Figure 8: Scatterplot - FCAT Reading Percentage and Low-SES Percentage-Bottom Third of APE Organizational Environment

Figure 8 displays the correlation between FCAT reading percentages and low-SES percentages for the bottom third of the organizational environment domain of the APE. The regression line (line of best fit) is negatively sloped reflecting the calculated Pearson correlation ($r = -.456$).

All three groupings of APE organizational environment scores (top, middle, and bottom thirds) showed a negative (inverse) relationship between FCAT reading percentage and low-SES percentage. Although FCAT percentage and low-SES percentage showed no statistically significant correlation at any of the three levels when the Bonferroni correction was used, there was an observable change in both the Pearson

product moment correlation (r) and the observed probability (p) values from the bottom third ($r = -.456, p = .025$), to the middle third ($r = -.409, p = .037$), and from the middle third to the top third ($r = -.345, p = .063$). The coefficient of determination (r^2) decreased from a high in the bottom third ($r^2 = 0.2079$), to the middle third ($r^2 = 0.1673$), and to a low in the top third ($r^2 = 0.1190$). As teacher rating mean scores on the APE organizational environment domain increased, the negative (inverse) correlation and common shared variance between FCAT reading percentage and low-SES percentage decreased but not at statistically significant levels.

Research Question 6

To what extent do the schools with principals whose teachers rated them in the top third, the middle third, and the bottom third on the educational program domain of the APE differ on: (a) average years of teaching experience of the surveyed faculty; (b) educational level of the surveyed faculty; (c) overall school socio-economic status (SES) as measured by the percentage of students listed as economically disadvantaged; and (d) percentage of students achieving levels 3 and above on the FCAT reading section? The socio-economic status of schools for this study was recorded as a percentage under the heading (Low-SES). The Low-SES percentage for each school in the study was calculated by dividing the number of economically disadvantaged students (those qualifying for the Federal free or reduced lunch program) in a school by the total student enrollment of that school (Appendix C, p. 141).

The mean score for principals whose teachers rated them in the top third on the educational program domain of the APE was 8.2, [*Range* = 0.8 (7.9 to 8.7), *SD* = 0.32, *n* = 21]. The mean FCAT reading percentage at levels 3 and above for principals whose teachers rated them in the top third was 43.7, [*Range* = 51 (22 to 73), *SD* = 15.0]. The mean percentage of low-SES students for principals whose teachers rated them in the top third was 30.8, [*Range* = 79 (8 to 87), *SD* = 21.54]. Teaching experience in this group showed a mean of 15.4 years, [*Range* = 13.7 (9.6 to 23.3)]. Teacher education level showed 59% with a bachelor's degree, 27% had a master's degree, 12% had a master's plus additional hours, and 2% held a doctoral degree.

The mean score for principals whose teachers rated them in the middle third on the educational program domain of the APE was 7.5, [*Range* = 0.7 (7.1 to 7.8), *SD* = 0.26, *n* = 20]. The mean FCAT reading percentage at levels 3 and above for principals whose teachers rated them in the middle third was 45.1, [*Range* = 33 (26 to 59), *SD* = 13.82]. The mean percentage of low-SES students for principals whose teachers rated them in the middle third was 35.17, [*Range* = 55 (13 to 68), *SD* = 17.11]. Teaching experience in this group showed a mean of 15.0 years, [*Range* = 18.8 (8.0 to 26.8)]. Teacher education level showed 54% with a bachelor's degree, 31% had a master's degree, 12% had a master's plus additional hours, and 3% held a doctoral degree.

The mean score for principals whose teachers rated them in the bottom third on the educational program domain of the APE was 6.2, [*Range* = 2.2 (4.8 to 7.0), *SD* = 0.64, *n* = 19]. The mean FCAT reading percentage at levels 3 and above for principals whose teachers rated them in the bottom third was 45.6, [*Range* = 53 (18 to

71), $SD = 14.1$]. The mean percentage of low-SES students for principals whose teachers rated them in the bottom third was 26.1, [$Range = 42$ (7 to 49), $SD = 11.57$]. Teaching experience in this group showed a mean of 15.0 years, [$Range = 14.1$ (9 to 23.1)]. Teacher education level showed 48% with a bachelor's degree, 32% had a master's degree, 18% had a master's plus additional hours, and 2% held a doctoral degree. These data are listed in Table 2.

Table 2

APE Educational Program:

B = Bachelors
M = Masters
M+ = Masters +
D = Doctorate

FCAT Reading - Low-SES - Teaching Experience – Education Level

School Scoring Range	Educational Program Score (APE)	FCAT Reading Levels 3+	Low-SES Percentage	Teaching Experience (years)	Education Level
Top Third $n = 21$	$M = 8.2$ $Range = 0.8$ (7.9 to 8.7) $SD = 0.32$	$M = 43.7\%$ $Range = 51$ (22 to 73%) $SD = 15.0$	$M = 30.8\%$ $Range = 79$ (8 to 87%) $SD = 21.45$	$M = 15.4$ $Range = 13.7$ (9.6 to 23.3)	B = 58% M = 29% M+ = 11% D = 03%
Middle Third $n = 20$	$M = 7.5$ $Range = 0.7$ (7.1 to 7.8) $SD = 0.26$	$M = 45.1\%$ $Range = 51$ (26 to 87%) $SD = 13.82$	$M = 35.1\%$ $Range = 63$ (5 to 68%) $SD = 17.11$	$M = 15.0$ $Range = 18.8$ (8 to 26.8)	B = 56% M = 29% M+ = 12% D = 03%
Bottom Third $n = 19$	$M = 6.2$ $Range = 2.2$ (4.8 to 7.0) $SD = 0.64$	$M = 45.6\%$ $Range = 53$ (18 to 71%) $SD = 14.1$	$M = 26.1\%$ $Range = 42$ (7 to 49%) $SD = 11.57$	$M = 15.0$ $Range = 14.1$ (9 to 23.1)	B = 48% M = 33% M+ = 17% D = 02%

Note: 98% of respondents listed demographic information

Table 2 displays data for school principals according to the rating given them by teachers on the educational program domain of the APE. Only 2 out of 60 principals were rated below the mid-point (5.0) on the organizational environment domain. The greatest range in mean APE scores (4.8 to 7.0) was shown in the bottom third. The mean APE scores in the middle third ($n = 20$) were tightly packed around the mean ($M = 7.5$) with a very small range ($Range = 0.76$) and standard deviation ($SD = 0.26$).

The percentage of students achieving at levels 3 and above on the FCAT reading test was somewhat lower in the top third ($M = 43.7\%$) than either the middle ($M = 45.1\%$) or bottom third ($M = 45.6\%$); however, the range and mean were remarkably similar at each level. A pattern of large standard deviations in mean FCAT percentage and wide range of mean FCAT percentage scores was evident at each level and indicated that FCAT performance was fairly uniform throughout, regardless of how principals were rated by teachers on the educational program domain of the APE.

Noteworthy was the average number of years teaching experience by school at each level. The average number of years teaching experience by school for all levels combined was 15.1 years. The range and average number of years teaching experience by school was fairly consistent across all three levels. Principals were rated on the educational program domain by teachers with considerable teaching experience ($M = 15.1$, $Range$ 8 to 26.8 = 18.8). The data for education level were also fairly uniform across the three levels. The percentage of teachers holding a masters degree was somewhat greater in the bottom third than either the top or middle thirds.

The differences in data for FCAT reading percentage, teaching experience, and educational level were remarkably similar for each of the three scoring ranges (top, middle, and bottom) and indicated no observable trends. The mean low-SES percentage showed markedly different values in each of the three levels, but no consistent pattern was evident. This observation was investigated by data analysis. The results of the correlational analysis that indicated a statistically significant correlation between mean FCAT reading percentages and mean low-SES percentages ($r = -.407, N = 60, p = .001$) in research question 5 were used since the same data sets were involved. Figure 5 (p. 76) displays the results.

The data presented in Table 1 (p. 74) representing the top, middle, and bottom thirds of teacher rating mean scores on the organizational environment domain of the APE and data in Table 2 (p. 84) representing the top, middle, and bottom thirds of teacher rating mean scores on the educational program domain show a remarkable similarity. None of the values in any of categories (APE score, FCAT reading percentage, low-SES percentage, and teaching experience) vary by as much as one standard deviation from each other. The slight variations observed are not statistically significant.

Data Analysis by APE Score Levels

In order to determine if the negative (inverse) correlation between FCAT reading percentage and low-SES percentage found when comparing schools not segregated by APE educational program mean score (p. 76), correlations were also conducted for FCAT reading percentage and low-SES percentage for the top third, middle third, and bottom

third levels of the educational program domain of the APE. Since multiple correlations were performed, the Bonferroni correction (α/n) was used. The alpha level for these tests was set at .017 (.05/3).

Top Third

There was a statistically significant negative (inverse) correlation between FCAT reading percentage and low-SES percentage for principals whose teacher ratings placed them in the top third on the educational program domain of the APE ($r = -.466$, $n = 21$, $p = .017$). The coefficient of determination ($r^2 = 0.217$) indicated that the two variables, FCAT reading percentage and low-SES percentage, shared a common variance of over 21%.

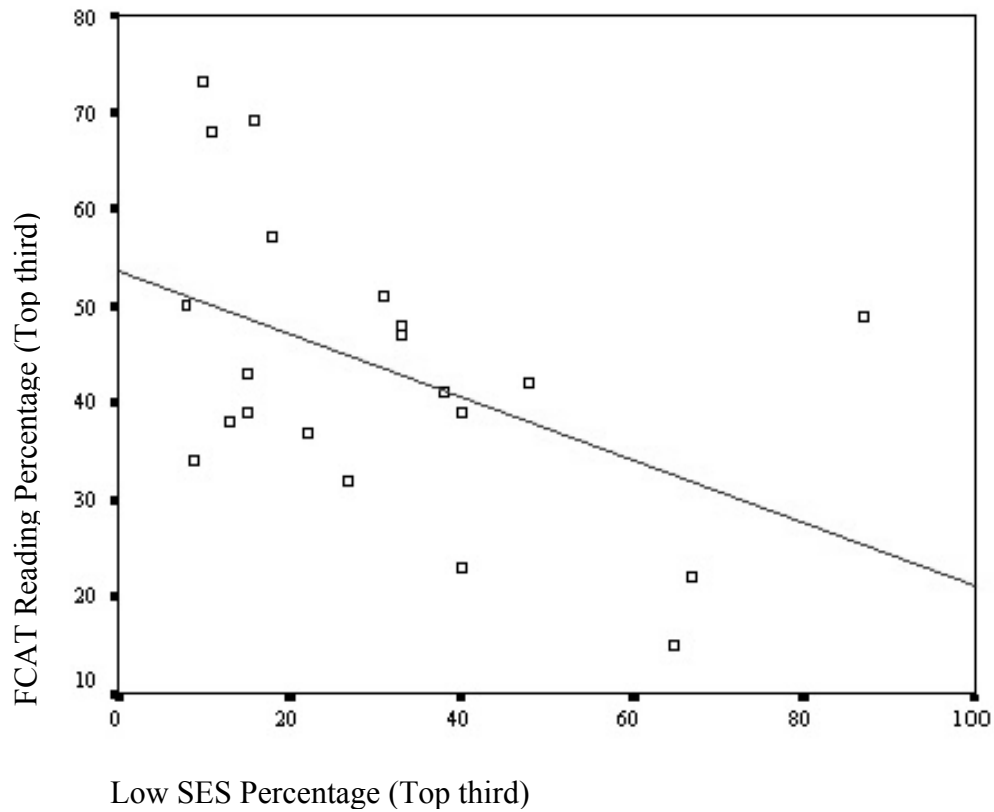


Figure 9: Scatterplot - FCAT Reading Percentage and Low-SES Percentage-Top Third of APE Educational Program

Figure 9 displays the negative (inverse) correlation between FCAT reading percentage and low-SES percentage for principals whose teacher ratings placed them in the top third on the educational program domain of the APE. The regression line (line of best fit) is negatively sloped reflecting the calculated Pearson correlation ($r = -.466$).

Middle Third

FCAT reading percentage did not show a statistically significant correlation with low-SES percentage for principals whose teacher ratings placed them in the middle third on the educational program domain of the APE ($r = -.344$, $n = 20$, $p = .069$). The coefficient of determination ($r^2 = 0.1183$) indicated that the two variables, FCAT reading percentage and low-SES percentage, shared a common variance of almost 12%.

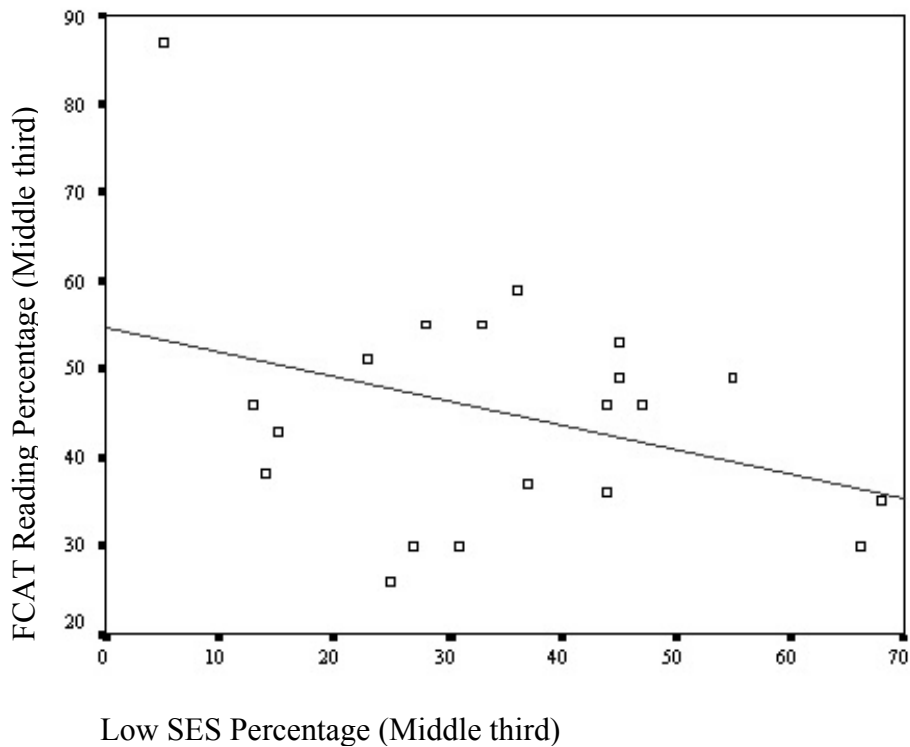


Figure 10: Scatterplot - FCAT Reading Percentage and Low-SES Percentage-Middle Third of APE Educational Program

Figure 10 displays the correlation between FCAT reading percentage and low-SES percentage for principals whose teacher ratings placed them in the middle third of the educational program domain of the APE. The regression line (line of best fit) is negatively sloped reflecting the calculated Pearson correlation ($r = -.344$).

Bottom Third

FCAT reading percentage did not show a statistically significant correlation to low-SES percentage for principals whose teacher ratings placed them in the bottom third on the educational program domain of the APE ($r = -.449$, $n = 19$, $p = .027$). The coefficient of determination ($r^2 = 0.2016$) indicated that the two variables, FCAT reading percentage and low-SES percentage, shared a common variance of slightly over 20 %.

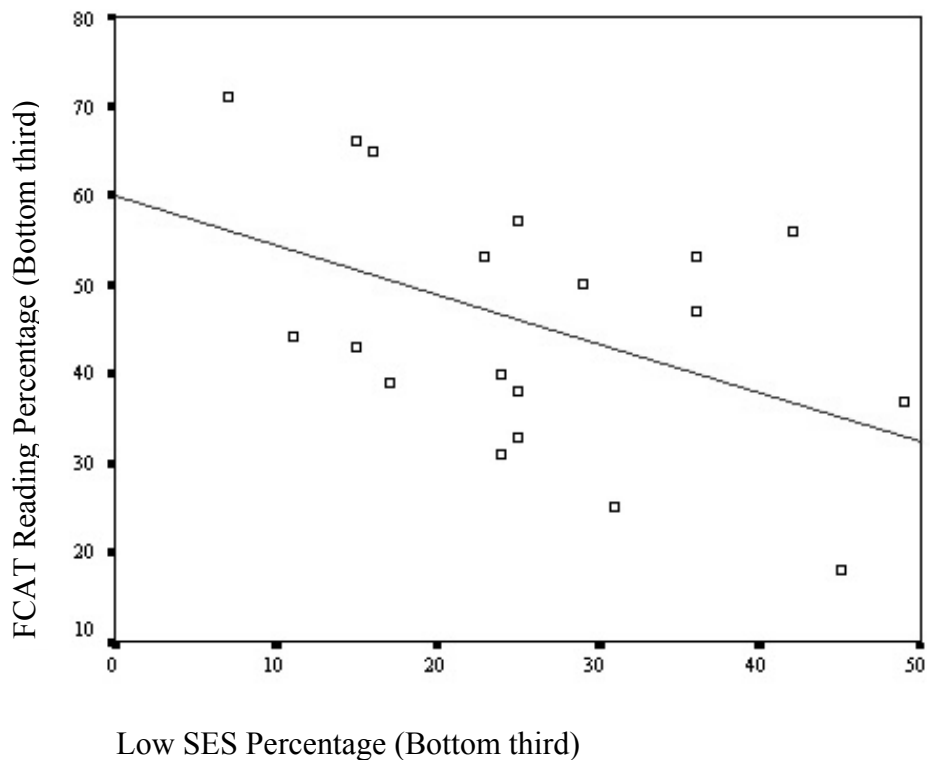


Figure 11: Scatterplot - FCAT Reading Percentage and Low-SES Percentage-Bottom Third APE Educational Program

Figure 11 displays the correlation between FCAT reading percentage and low-SES percentage for principals whose teacher ratings placed them in the bottom third of the educational program domain of the APE. The regression line (line of best fit) is negatively sloped reflecting the calculated Pearson correlation ($r = -.449$).

Additional Analyses

Independent samples *t*-tests conducted under research questions 1 and 2 indicated no statistically significant difference in the mean scores between middle and high school principals on either the organizational environment domain or the educational program domain of the APE. Following the stated research procedure, since no statistically significant difference was found between the mean scores of middle school and high school principals, the two groups were combined into one group (school principals) for further analyses. Several investigations examining the relationship between principal leadership characteristics and student achievement treated the various school levels (elementary, middle, and high schools) as separate groups for data analyses (Hernandez, 2004; Valentine & Bowman, 1990; Williams, 2001). To further investigate the nature of the relationships found in the current study, correlational analyses were performed keeping middle school and high school principals as separate groups.

Middle School Principals

A Pearson product moment correlation, with a Bonferroni corrected alpha of (.025), indicated that middle school FCAT reading percentage did not show a statistically significant correlation with middle school teacher rating mean scores on the organizational environment domain of the APE ($r = -.069$, $n = 35$, $p = .347$). A negative (inverse) correlation was indicated.

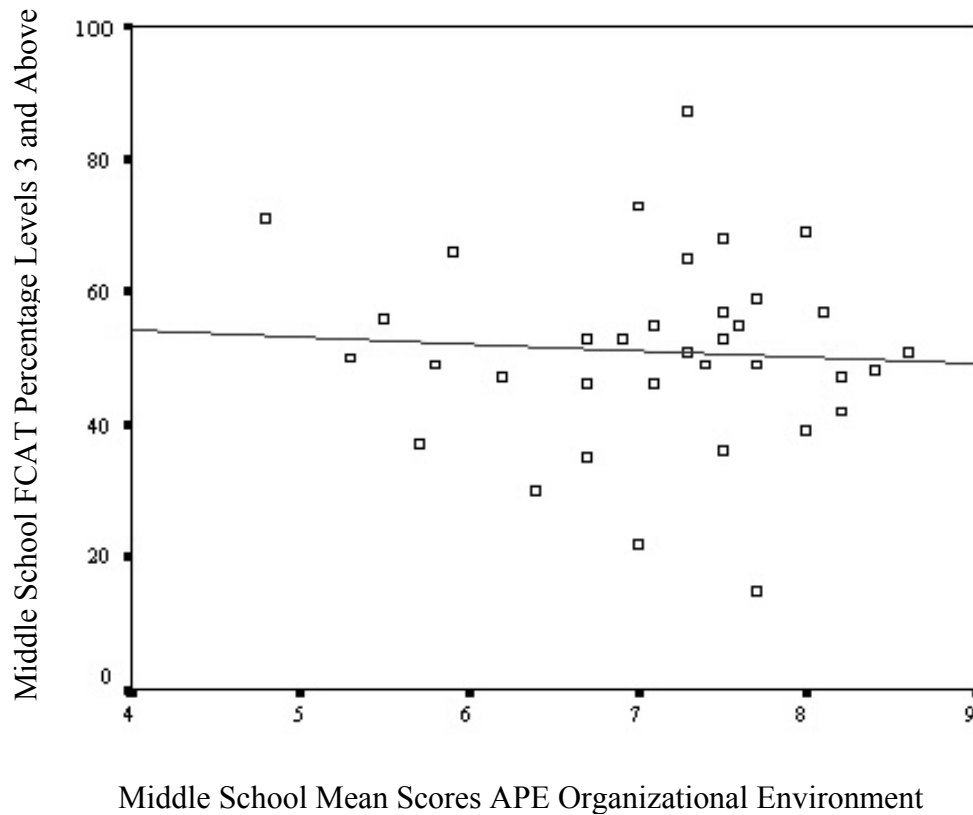


Figure 12: Scatterplot - Middle School FCAT Reading Percentage and Mean Scores-APE Organizational Environment.

Figure 12 displays the correlation between middle school FCAT reading percentage and middle school principal mean teacher rating scores on the organizational environment domain of the APE. The regression line (line of best fit) is slightly negatively sloped reflecting the calculated Pearson correlation ($r = -.069$).

Middle school FCAT reading percentages did not show a statistically significant correlation with middle school teacher rating mean scores on the educational program

domain of the APE ($r = -.230, n = 35, p = .092$). A negative (inverse) correlation was indicated, but it was not statistically significant at the chosen alpha (.025).

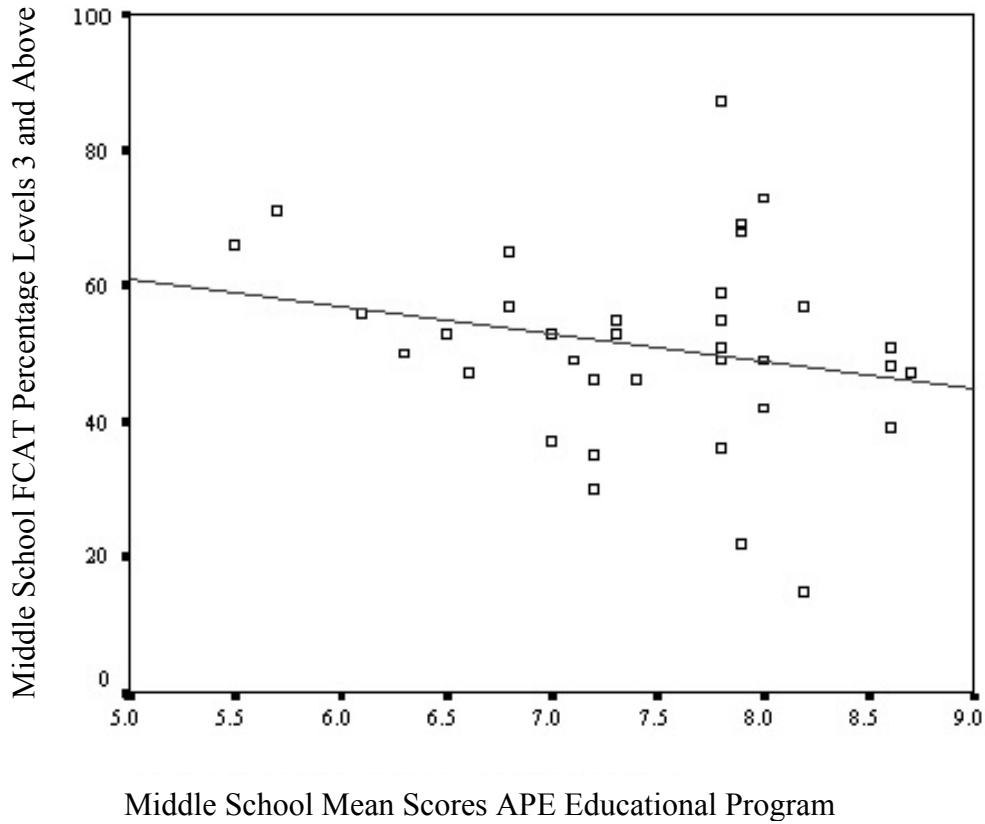


Figure 13: Scatterplot - Middle School FCAT Reading Percentage and Middle School Mean Scores-APE Educational Program

Figure 13 displays the negative (inverse) correlation between middle school FCAT reading percentage and middle school principal teacher rating mean scores on the

educational program domain of the APE. The regression line (line of best fit) is negatively sloped reflecting the calculated Pearson correlation ($r = -.230$).

High Schools Principals

A Pearson product moment correlation, with a Bonferroni corrected alpha of (.025), indicated that high school FCAT reading percentage did not show a statistically significant correlation with high school principal teacher rating mean scores on the organizational environment domain of the APE ($r = .374$, $n = 25$, $p = .033$). A positive correlation was indicated.

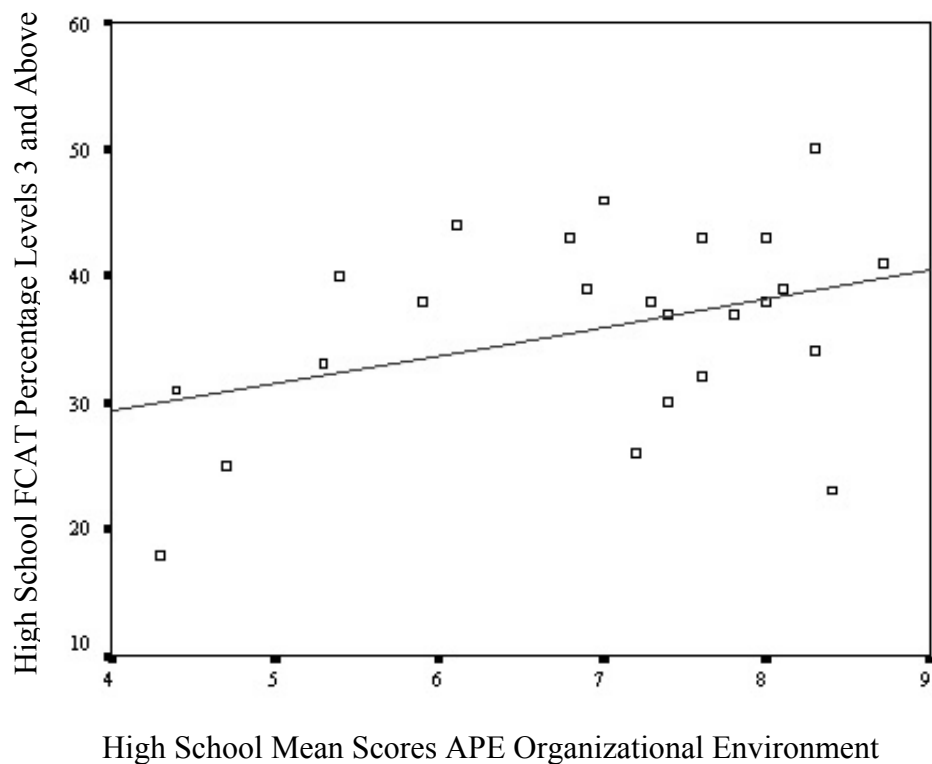


Figure 14: Scatterplot - High School FCAT Reading Percentage and High School Mean Scores-APE Organizational Environment

Figure 14 displays the correlation between high school FCAT reading percentage and high school principal teacher rating mean scores on the organizational environment domain of the APE. The regression line (line of best fit) is positively sloped reflecting the calculated Pearson correlation ($r = .374$).

A Pearson product moment correlation, with a Bonferroni corrected alpha of (.025), indicated that high school FCAT reading percentage did not show a statistically significant correlation with high school principal teacher rating mean scores on the

educational program domain of the APE ($r = .266, n = 25, p = .099$). A positive correlation was indicated.

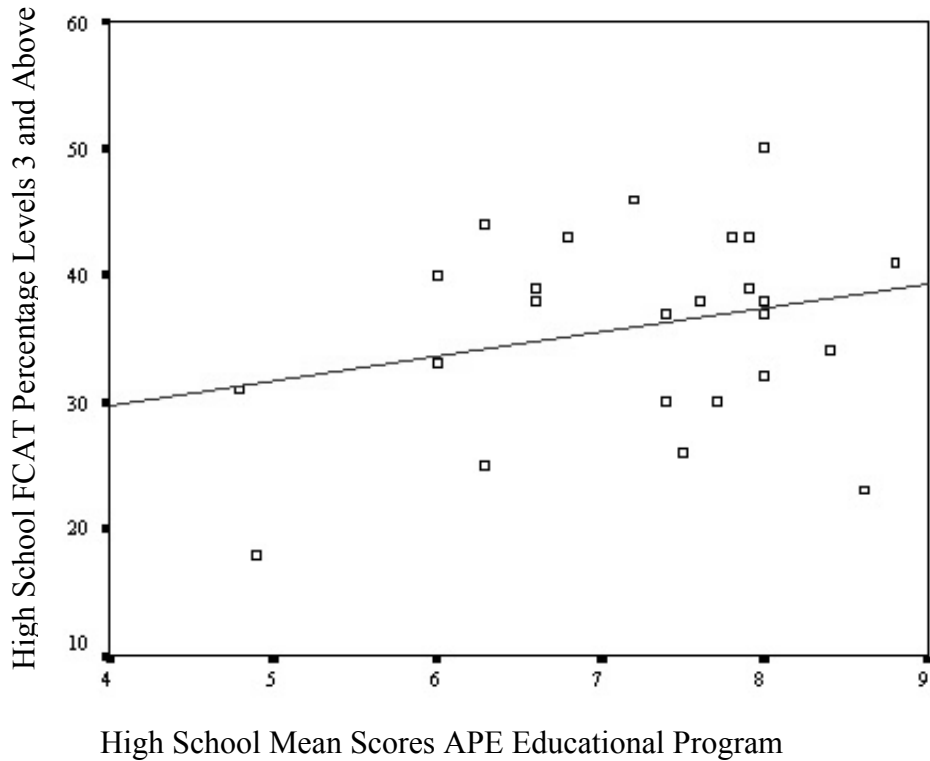


Figure 15: Scatterplot - High School FCAT Reading Percentage and High School Mean Scores-APE Educational Program

Figure 15 displays the correlation between high school FCAT reading percentage and high school principal teacher rating mean scores on the educational program domain of the APE. The regression line (line of best fit) is positively sloped reflecting the calculated Pearson correlation ($r = .266$).

Middle School and High School Achievement Differences

When the survey data were separated into separate categories for analysis, a noticeable difference was observed between the FCAT reading percentages for middle schools and those for high schools. Data analysis was undertaken to examine any statistically significant difference between the two sets of scores. An independent samples *t*-test was used with an alpha level set at (.05).

Middle school FCAT reading percentages were significantly greater ($M = 51.03$, $SD = 14.35$) than high school FCAT reading percentages ($M = 35.92$, $SD = 7.69$), $t(58) = 4.79$, $p < .01$, two-tailed. This difference indicated that, as a group, middle school students (8th graders in this study) had statistically significant higher scores on their FCAT reading test than their high school counterparts (10th graders in this study) did on their FCAT reading test.

Summary

Data obtained from respondents to the administration of a modified version of the *Audit of Principal Effectiveness Survey* during the 2004-2005 academic year, and from posted results of the 2003-2004 Florida FCAT Reading test were presented in Chapter 4. Data analyses for each of six research questions plus additional investigations were the focus of the chapter. Results of statistical tests, with accompanying figures and tables, were detailed along with supporting narratives.

Research Question 1 - Teacher ratings of Central Florida middle school principals ($M = 7.09$, $SD = .926$) did not indicate a statistically significant difference from teacher

ratings of high school principals ($M = 6.97$, $SD = 1.295$) on the organizational environment domain of the APE, $t(58) = .427$, $p = .671$, two-tailed.

Research Question 2 - Teacher ratings of Central Florida middle school principals ($M = 7.44$, $SD = .807$) did not indicate a statistically significant difference from teacher ratings of high school principals ($M = 7.22$, $SD = 1.058$) on the educational program domain of the APE, $t(58) = .918$, $p = .364$, two-tailed.

Research Question 3 - FCAT reading scores showed no statistically significant correlation to teacher rating mean scores on the organizational environment domain of the APE ($r = .094$, $p = .237$), one-tailed.

Research Question 4 - FCAT reading scores showed no statistically significant correlation to teacher rating mean scores on the educational program domain of the APE ($r = .013$, $p = .461$), one-tailed.

Research Question 5 - When separated into top, middle, and bottom thirds by teacher rating mean scores on the organizational environment domain of the APE, category values for FCAT reading percentage, low-SES percentage, teaching experience, and education level were similar for each level. FCAT reading percentage showed a statistically significant negative (inverse) correlation with low-SES percentage ($r = -.407$, $p = .001$), one-tailed.

Research Question 6 - When separated into top, middle, and bottom thirds by teacher rating mean scores on the educational program domain of the APE, category values for FCAT reading percentage, low-SES percentage, teaching experience, and education level were similar for each level. FCAT reading percentage showed a

statistically significant negative (inverse) correlation with low-SES percentage ($r = -.407$, $p = .001$), one-tailed.

Additional Research - When middle school principals were treated as a separate group, analyses of the correlation between FCAT reading percentage and teacher rating mean scores on both the organizational environment and educational program domains of the APE showed a slightly negative (inverse) relationship. Results for the organizational environment domain showed ($r = -.069$, $n = 35$, $p = .347$), and the educational program domain showed ($r = -.230$, $n = 35$, $p = .092$). Neither result was significant at the chosen alpha (.025).

The same correlational analysis was undertaken treating high school principals as a separate group. The results indicated a positive relationship between FCAT reading percentage and high school teacher mean scores on both the organizational environment and educational program domains of the APE. Results for the organizational environment domain showed ($r = .374$, $n = 25$, $p = .033$), and the educational program domain showed ($r = .266$, $n = 25$, $p = .099$). Neither result was significant at the chosen alpha (.025).

Additional Research - Middle school FCAT reading percentages were significantly greater ($M = 51.03$, $SD = 14.35$) than high school FCAT reading percentages ($M = 35.92$, $SD = 7.69$), $t(58) = 4.79$, $p < .01$, two-tailed.

A summary and discussion of the findings described in this chapter are presented in Chapter 5. Additionally, conclusions drawn from the data analyses, recommendations for school administrators, and suggestions for future research are discussed.

CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Purpose Statement

This inquiry examined the possible extent to which specific identifiable leadership characteristics of Central Florida school principals differ on average between middle and high school administrators. It sought to determine if these leadership characteristics displayed a relationship, either positively or negatively, with the obtainment of student achievement scores on state measures of education accountability. The study also looked at certain demographic information on teachers and schools in an attempt to identify any relationships between this data and teachers' perceptions of the leadership characteristics of middle and high school principals.

Methodology

Population and Sample

The initial population for this inquiry included 125 public middle and high schools in the following Central Florida school districts: Brevard, Lake, Orange, Seminole, and Volusia Counties. District superintendents were contacted requesting permission to conduct the survey within their school system. Once permission letters were obtained from the superintendents, each middle and high school principal was contacted requesting permission to conduct the investigation in their respective schools. Surveys were sent to a total of 104 schools (59 middle schools and 45 high schools). The

research sample was obtained by distributing the survey instrument to 10 randomly selected teachers at the middle and high schools in the five school districts listed. The sample was limited to active teachers (no administrative or support personnel) with at least one academic year of teaching experience at their present (2004-2005) location.

Initial responses were received from 12 schools. The first follow-up was via a phone call or e-mail to the individual administering the survey at any non-responding schools. This produced additional responses from eight schools. The second follow-up consisted of a request to the contact person in each district office to send a communication to non-responding schools asking for their participation in the study. Three districts responded positively and sent e-mails to their middle and high school principals. This action produced the greatest return (25 schools). The third follow-up was a phone call or e-mail to the school principal or contact person at non-responding schools or to schools that returned less than the required seven qualified surveys. A second survey mailing was sent to schools returning less than seven surveys. These actions produced responses from 15 schools for a total of 60. This total reflected a return rate of 57.7% of the 104 schools that were mailed surveys, and represented 48% of the middle and high schools in the five county school systems.

Data pertaining to the scores individual schools received on the 2003-2004 reading section of the Florida Comprehensive Assessment Tests (FCAT) and information regarding school demographic information were obtained from the official web site of each school district and the Florida Department of Education.

Instrumentation

The *Audit of Principal Effectiveness Survey* (modified with permission) developed by the Middle Level Leadership Center (MLLC) at the University of Missouri-Columbia was used as the survey instrument. The survey instrument consisted of 52 questions concerning leadership behaviors exhibited by principals. The questions were divided into two domains of leadership (organizational environment and educational program) identified by the researchers in their original study (Valentine & Bowman, 1988b). Survey questions 1-37 identified principal leadership characteristics under the organizational environment domain, and questions 38-52 pertained to leadership functions under the educational program domain. Questions under the organizational environment domain were concerned with the principal as overall school leader and his or her organizational capabilities. The educational program domain questions applied to the more traditional tasks the principal performs as instructional leader. For each question, teachers rated how effective they perceived their principal to be on a Likert-type scale from 1-not effective to 9-very effective.

The survey also provided for teachers to list personal information regarding educational level and years of teaching experience. A space was provided for individual comments regarding the survey and methodology.

Data Analysis

Data from returned surveys were entered into a statistical spreadsheet package (Microsoft Excel) supplied by the Middle Level Leadership Center that was specifically

designed for use with the *Audit of Principal Effectiveness*. Responses from teachers (grouped by school code) for each of the survey's 52 questions were entered into the spreadsheet and listed by school. The program generated a school (principal) average score for each survey question in addition to an average score for each of the two domains under study (organizational environment and educational program). These two average scores, one from the organizational environment domain and one from the educational program domain, were used as representative of principal effectiveness throughout further statistical analysis. SPSS[®] Graduate Pack 10.0 was used for the computation of *t*-tests and Pearson product moment correlations.

Data for the 2003-2004 administration of the Florida Comprehensive Assessment Test (FCAT) Reading section were obtained from the Florida Department of Education website (<http://www.firn.edu/doe/schoolgrades/>) for each responding school. The percentages of students scoring at levels 3 and above on the 2003-2004 FCAT Reading section (8th grade – middle schools, 10th grade – high schools) were used to represent student achievement.

Discussion of the Findings

The collected data were analyzed and discussed based on six research questions that were the focus of this study.

Research Question 1

What differences, if any, exist between the teacher ratings of principals in middle and high schools in Central Florida on the organizational environment domain of the *Audit of Principal Effectiveness Survey (APE)*?

Teacher ratings for middle school principals ($n = 35$) on the organizational environment domain of the APE were slightly higher ($M = 7.09$, $SD = .926$) than teacher ratings for high school principals ($n = 25$, $M = 6.97$, $SD = 1.295$). An independent samples t -test (equal variances assumed, $F = 3.349$, $p = .072$) was not statistically significant at the chosen alpha (.025), $t(58) = .427$, $p = .671$ (two-tailed), indicating no statistically significant difference in the mean scores calculated for middle school principals and high school principals on the organizational environment domain of the APE.

Data analysis indicated that there was no statistically significant difference between the responses of middle school teachers and high school teachers in their perceptions of how effective their principals were on the organizational environment domain (questions 1-37) of the APE. In a 1987-88 national study using the APE as the survey instrument, Valentine and Bowman (1990) reported no statistically significant differences in APE teacher rating mean scores between middle school principals ($M = 7.0$, $SD = .3715$) and high school principals ($M = 7.1$, $SD = .3863$) on the organizational environment domain. The current investigation found similar results, which reinforced the earlier study.

Overall, the teacher ratings of both middle school and high school principals indicated that teachers perceived their principals as effective leaders under the organizational environment domain of the APE. This domain is comprised of statements regarding principal effectiveness in the areas of teacher relations, student relations, interactive processes (day-by-day management skills), and affective processes (interpersonal relationship skills). Only four principals (1 middle school and 3 high school) were rated below the midpoint (5.0) of the survey instrument's 9-point rating scale. Thirty-nine principals (65%) had mean rating scores which placed them in the top third (6-9) on the APE rating scale. From the teachers' perspectives, the leadership qualities of principals encompassing teacher relations, student relations, day-to-day management, and interpersonal skills were perceived as being effective or ineffective based on the capabilities of individual principals and did not vary significantly by whether the school was a middle school or a high school.

Research Question 2

What differences, if any, exist between the teacher ratings of principals in middle and high schools in Central Florida on the educational program domain of the APE? Teacher ratings for middle school principals ($n = 35$) on the educational program domain of the APE were slightly higher ($M = 7.44$, $SD = .807$) than teacher ratings for high school principals ($n = 25$, $M = 7.22$, $SD = 1.058$). An independent samples t -test (equal variances assumed, $F = 2.165$, $p = .147$) was not statistically significant at the chosen alpha (.025), $t(58) = .918$, $p = .364$ (two-tailed), indicating no statistically significant

difference in the mean scores calculated for middle school principals and high school principals on the educational program domain of the APE.

Data analysis indicated that there was no statistically significant difference between the responses of middle school teachers and high school teachers in their perceptions of how effective their principals were on the educational program domain (questions 38-52) on the APE. In a 1987-88 national study using the APE as the survey instrument, Valentine and Bowman (1990) reported no statistically significant differences in APE teacher rating mean scores between middle school principals ($M = 7.0$, $SD = .333$) and high school principals ($M = 7.0$, $SD = .351$) on the educational program domain. Data analysis in the current investigation tends to confirm the results found in the earlier study.

Overall, the teacher ratings of both middle school and high school principals indicated that teachers perceived their principals as effective leaders under the educational program domain of the APE. This domain is comprised of statements regarding principal effectiveness in the areas of instructional improvement (clinical supervision, and commitment to quality instruction), and curriculum improvement (outcome-based curriculum, and systemic review and change). Only two principals (high school) were rated below the midpoint (5.0) of the survey instrument's 9-point rating scale. Fifty-six out of 60 principals (93.3%) had mean rating scores which placed them in the top third (6-9) on the APE rating scale. From the teachers' perspectives, the leadership qualities of principals encompassing clinical supervision, effective schooling, outcome-based curriculum, and systemic review and change

were perceived as being effective or ineffective based on the capabilities of individual principals and did not vary significantly by whether the school was a middle school or a high school.

In a 1987-88 study examining principal effectiveness between schools recognized for their excellence by the United States Department of Education and a randomly selected group of schools across the country, Valentine and Bowman (1990), using the APE, found that teachers consistently rated elementary principals higher on all three domains (organizational development, organizational environment, and educational program) of the APE than either middle school or high school principals. The current study differed from the Valentine and Bowman study in two significant ways: it did not include the organizational development domain of the APE, and it did not include elementary schools. The 1990 study found the greatest difference between elementary and middle school teacher rating mean scores and high school teacher rating mean scores, regarding principal effectiveness, to be in the domain of organizational development. This domain encompasses three factors: organizational direction (goals, expectations, and change), organizational linkage (relationships between school and community), and organizational procedures (problem solving and decision-making). This domain was not investigated in the current study.

Researchers using Kouzes and Posner's Leadership Practices Inventory-Observer (LPI) surveyed both middle and high school teachers to determine their perceptions of principal leadership behaviors. The research sample came from a large urban school district. Their findings showed no statistically significant differences in the mean scores

reported on the five elements of the LPI between middle and high school teachers. The researchers concluded that teacher perceptions of principal leadership behavior did not indicate a statistically significant difference between middle and high school respondents (Leech, Smith, Green, & Fulton, 2003).

Results of the current study that showed no statistically significant difference in the scores between middle school and high school principals on either the organizational environment or educational program domain of the APE confirms the findings found in previous studies that found no statistically significant difference when they compared middle and high school principal effectiveness against measures of student achievement.

Research Question 3

Is there a positive correlation between the teacher ratings of middle and high school principals in Central Florida on the organizational environment domain of the APE and student achievement as measured by the percentage of students at their respective schools scoring at levels 3 and above on the 2003-2004 FCAT Reading Test (8th grade – middle school; 10th grade – high school)?

A Pearson product moment correlation revealed that FCAT reading scores ($M = 44.73$, $SD = 14.11$) did not show a statistically significant positive correlation to APE organizational environment mean scores ($M = 7.04$, $SD = 1.09$) at an alpha of (.025), ($r = .094$, $p = .237$), one-tailed. The coefficient of determination ($r^2 = .009$) indicated that the two variables (FCAT reading scores and organizational environment mean scores) shared less than 1% common variance.

Data analysis for research question 3 showed that there was no statistically significant positive correlation between mean scores on the organizational environment domain of the APE and student achievement scores as measured by the percentage of students scoring at levels 3 and above on the 2003-2004 FCAT reading section. Results showed that teacher perceptions of principal effectiveness in the areas of teacher relations, student relations, day-to-day management, and interpersonal skills had no statistically significant correlation to student achievement scores.

Research Question 4

Is there a positive correlation between the teacher ratings of middle and high school principals in Central Florida on the educational program domain of the APE and student achievement as measured by the percentage of students at their respective schools scoring at levels 3 and above on the 2003-2004 FCAT Reading Test (8th grade – middle school; 10th grade – high school)?

A Pearson product moment correlation revealed that FCAT reading scores ($M = 44.73$, $SD = 14.11$) did not show a statistically significant positive correlation to APE educational program mean scores ($M = 7.35$, $SD = .918$) at an alpha of (.025), ($r = .013$, $p = .461$), one-tailed. The coefficient of determination (.0002) indicated that the two variables (FCAT reading scores and educational program mean scores) shared less than 1% common variance.

Data analysis for research question 4 showed that there was no statistically significant positive correlation between mean scores on the educational program domain

of the APE and student achievement scores as measured by the percentage of students scoring at levels 3 and above on the 2003-2004 FCAT reading section. Results showed that teacher perceptions of principal effectiveness in the areas of instructional and curriculum improvement had no statistically significant correlation to student achievement scores.

A review of the literature on the importance and effectiveness of the leadership characteristics of principals produced several studies and articles describing a positive relationship between the leadership capabilities of principals and measures of school and student achievement (Austin, 1978; Hallinger & Heck, 1998; Morrissey, 2000; Pellicer et al., 1990; Picucci et al., 2002). Dissertation studies (Hannah, 2004; Hernandez, 2004; Springer, 1996) also indicated a connection between specific leadership characteristics of school principals and measures of school and student achievement. Of particular note was the meta-analysis conducted by the McREL organization (Waters et al., 2004), which not only identified 21 specific leadership characteristics of principals that could be correlated to student achievement, but the study also calculated the degree of improvement in student achievement that could be expected from an improvement in any 1 of the 21 identified leadership areas.

Other investigations have found little or no relationship between specific principal leadership characteristics and measures of school and/or student achievement (Ayres, 1984; Gordon, 2003; Suskavcevic & Blake, 2004; Zigarelli, 1996). The findings of the current investigation that indicated no statistically significant positive correlation between principal leadership characteristics, as measured by the modified version of the

APE, and student achievement, as measured by 2003-2004 FCAT reading scores, was predicated on the premise that middle school and high school principals should be treated as one group. When treated as separate groups, data analyses showed that there was a positive correlation between high school FCAT reading percentages and teacher rating mean scores on the educational program domain of the APE. The correlation approached significance, but was shown to be not statistically significant at the alpha level required for multiple correlation tests.

Research Question 5

To what extent do the schools with principals whose teachers rated them in the top third, the middle third, and the bottom third on the organizational environment domain of the APE differ on: (a) average years of teaching experience of the surveyed faculty; (b) educational level of the surveyed faculty; (c) overall school socio-economic status (SES) as measured by the percentage of students listed as economically disadvantaged; and (d) percentage of students achieving levels 3 and above on the FCAT reading section?

Data analyses for research question 5 produced remarkably uniform results across all three scoring levels of the organizational environment domain of the APE.

Descriptive statistics calculated for the four research categories (FCAT reading levels, low-SES percentages, teaching experience, and education level) showed few observable differences or trends between the three scoring levels (top, middle, and bottom thirds), Table 1 (p. 74). Statistical analysis showed no significant relationships between the mean

teacher rating scores in the top, middle, and bottom thirds of the organizational environment domain and descriptive data in the four research categories.

There was, however, a statistically significant correlation between low-SES percentage and FCAT reading percentage ($r = -.407$, $N = 60$, $p = .001$) one-tailed. The correlation was negative (inverse) and was statistically significant beyond an alpha of (.01). The coefficient of determination ($r^2 = .166$) indicated that the two variables (FCAT reading percentage and low-SES percentage) shared a common variance greater than 16%. Additional data analyses were undertaken to examine this inverse correlation between FCAT reading percentage and low-SES percentage in each of the three APE rating levels (top, middle, and bottom thirds).

All three groupings of APE organizational environment mean scores (top, middle, and bottom thirds) showed a negative (inverse) relationship between FCAT reading percentage and low-SES percentage. Although FCAT percentage and low-SES percentage showed no statistically significant correlation at any of the three levels, when the Bonferroni correction was used, there was an observable change in both the Pearson product moment correlation (r) and the observed probability (p) values from the bottom third ($r = -.456$, $p = .025$), to the middle third ($r = -.409$, $p = .037$), and from the middle third to the top third ($r = -.345$, $p = .063$). As teacher rating mean scores on the APE organizational environment domain increased, the negative correlation between FCAT reading percentage and low-SES percentage decreased but not at statistically significant levels.

These results indicated that principals whose teachers rated them progressively higher on the organizational environment domain of the APE tended to work in schools where the negative (inverse) correlation between FCAT reading percentage and low-SES percentage was less pronounced than those principals whose teachers rated them lower on the organizational environment domain of the APE.

Research Question 6

To what extent do the schools with principals whose teachers rated them in the top third, the middle third, and the bottom third on the educational program domain of the APE differ on: (a) average years of teaching experience of the surveyed faculty; (b) educational level of the surveyed faculty; (c) overall school socio-economic status (SES) as measured by the percentage of students listed as economically disadvantaged; and (d) percentage of students achieving levels 3 and above on the FCAT reading section? The socio-economic status of schools for this study was recorded as a percentage under the heading (Low-SES).

Data analyses for research question 6 showed essentially the same uniform results across all three scoring levels of the educational program domain of the APE (Table 2, p. 84) as did the data in research question 5. Statistical analysis showed no significant relationships between the mean teacher rating scores in the top, middle, and bottom thirds of the educational program domain and descriptive data in the four research categories. Additional data analyses were undertaken to examine the inverse correlation between

FCAT reading percentage and low-SES percentage in each of the three APE rating levels (top, middle, and bottom thirds).

For the educational program domain, FCAT reading percentage and low-SES percentage showed a statistically significant correlation in the top third ($r = -.466$, $n = 21$, $p = .017$), one-tailed. Analysis for the middle and bottom thirds showed no statistically significant correlation between FCAT reading percentage and low-SES percentage. This relationship was least pronounced in the middle level ($r = -.344$, $n = 20$, $p = .069$), one-tailed. No observable pattern in the correlations between FCAT reading percentage and low-SES percentage were observed among the three APE rating levels. These results indicated that principals whose teachers rated them in the middle third on the educational program domain of the APE tended to work in schools where the negative (inverse) correlation between FCAT reading percentage and low-SES percentage was less pronounced than those principals whose teachers rated them in the bottom third and top third.

The negative (inverse) correlation shown in this study between high stakes testing assessments (FCAT reading scores) and economically disadvantaged students (low-SES) was not surprising as it has been a topic of much discussion in the education field. A study commissioned by the United States Department of Education in 1964, more commonly called the “Coleman Report,” investigated equal educational opportunities for students from a wide range of ethnic and socioeconomic backgrounds. The study included both demographic and academic achievement data, and was one of the first large-scale investigations to report an “achievement gap” between students from different

ethnic and socioeconomic groups. The most controversial aspect of the report was the recommendation that students from schools with a large ethnic (predominately African-American) or low-socioeconomic population would do better academically if they attended class with mostly white students from a higher socioeconomic background. In order to rectify this inequality of educational opportunity, the policy of “busing” students from low socioeconomic schools to more affluent schools was started. It caused considerable unrest and many people moved in order to avoid having their children attend the schools into which the low-SES students were transferred (Kiviat, 2000).

When busing failed to provide the means to eliminate the achievement gap between low and higher socioeconomic groups, many educators began to look at ways in which changes in educational curriculum and program structure could be implemented to narrow or eliminate this phenomenon. Gustafson (2002) and DiMartino and Miles (2005) proposed that schools with a high percentage of students from low-SES backgrounds needed to make drastic changes in curriculum and overall school organization in order to close the achievement gap. Studies conducted by Butler (1997), Evans and Teddlie (1995), and Scheurich (1998) concluded that the key element for the success shown in low-SES schools that were performing above expectations was the leadership of the principal, particularly in the area of instructional leadership.

Writing for the North Central Regional Educational Laboratory (NCREL), Detrich (2004) interviewed Robert Schwartz, president of Achieve Inc., and Monty Neill, executive director of the National Center for Fair and Open Testing. Schwartz commented, “Students who have historically been served least well by the education

system -- poor and minority students -- have endured a system that set low expectations and provided minimal support for attaining academic success” (¶ 2). Neill echoed this same thought:

Students who are most affected are those who were already underserved: the poor and minority students. These students often have not had the same opportunities to learn, yet are being held to high standards and then are punished when they are not able to achieve. As a result, we can expect to see the achievement gap widen due to the reliance on high-stakes testing. (¶ 9)

Reynolds (2002) presented the idea that there are several achievement gaps rather than one gap, and that these gaps change over time. The author pointed to both in-school and out-of-school factors that lead to achievement gaps. The in-school factors include the following: funding inequalities, teacher quality, low expectations, and institutional bias against minorities. The out-of-school factors, those over which school leaders have little control, include parental and neighborhood influences, poor pre-school preparation, and poverty. Reynolds contends that many educators use high stakes achievement tests for broad-based applications for which they were not designed and that this practice actually hinders the process of closing achievement gaps.

Data analyses conducted in the current study showing a negative (inverse) correlation between the percentage of 10th grade students in a given school passing the reading portion of the FCAT at levels 3 and above and the percentage of low-SES students within that school, tends to confirm that there still exists an achievement gap between students coming from low-socioeconomic backgrounds and those from higher socioeconomic situations.

Additional Research

Middle School and High School Differences

Data analyses for this study showed no statistically significant difference between middle school teachers and high school teachers with regard to their perceptions of their principals on various leadership tasks as measured by the APE. Therefore, middle school principals and high school principals were placed into one group for data analyses. However, a review of the literature suggests that there are distinct differences between the academic environments and leadership requirements in middle schools and high schools.

Duke (1987) discussed research that indicated that principals at different levels (elementary, middle, and high school) had differing perceptions of their leadership demands and how these related to instructional improvement. Hernandez (2004) found that middle school and high school principals differed on their achieving styles and their corresponding effects on student achievement. Middle school principals using a competitive achieving style had a positive effect on student achievement while high school principals using the same competitive style had a negative effect on student achievement. A study by the Public Policy Institute of California (School, 2004) indicated that middle school and high school principals chose markedly different budgeting strategies when asked to determine how best to allocate resources to enhance student achievement. On average, middle school principals chose to spend money to reduce class size while high school principals chose to put resources into staff development.

Mizelle (1999) discussed the difficulties students experience in transitioning from middle schools to high schools. She emphasized the necessity of incorporating teachers, students, parents, and administrators in the development of successful transitions programs. Alspaugh (1998) found significant achievement differences in all subject areas except mathematics in students transitioning from middle school to high school. Caldwell and Leslie (2003) found that reading comprehension level dropped for some students when transitioning to the high school level material.

An independent samples *t*-test showed that middle school FCAT reading percentage was greater ($M = 51.03$, $SD = 14.35$) than high school FCAT reading percentage ($M = 35.92$, $SD = 7.69$). This difference was statistically significant, $t(58) = 4.79$, $p = .000$ (two-tailed). The percentage of students scoring at levels 3 and above on the FCAT reading test is significantly higher for middle schools (8th grade) than the percentage of high school students (10th grade) scoring at levels 3 and above. The questions this posed were whether this was a result of the 10th grade FCAT reading test being much more difficult than the 8th grade FCAT reading test, when adjusted for grade level, or was there an overall decrease in achievement level between middle school and high school students? This finding is consistent with previous research that does indicate some achievement loss in the transition from middle school to high school.

Noting the distinct differences between middle schools and high schools found in previous research and in FCAT reading percentages in this study, further analyses were undertaken to examine any relationships between FCAT reading percentages and APE mean scores by treating middle school and high school principals as separate groups.

Middle school FCAT reading percentages did not correlate significantly with middle school teacher rating mean scores on the organizational environment domain of the APE ($r = -.069, n = 35, p = .694$). A negative (inverse) correlation was indicated, but it was not statistically significant at the chosen alpha (.025).

Middle school FCAT reading percentages did not correlate significantly with middle school teacher rating mean scores on the educational program domain of the APE ($r = -.230, n = 35, p = .092$). A negative (inverse) correlation was indicated, but it was not statistically significant at the chosen alpha (.025).

The results for the analyses of middle school principal data were interesting in that correlation tests showed a slightly negative (inverse) relationship between teacher rating mean scores of perceived principal effectiveness and FCAT reading percentage for both the organizational environment and educational program domains of the APE. The correlations were not statistically significant, but such results need further investigation.

Data analyses for high school principals produced some promising results. A positive correlation between teacher rating mean scores and FCAT reading percentage was indicated for both the organizational environment ($r = .374, n = 25, p = .033$) and educational program ($r = .266, n = 25, p = .099$) domains of the APE. These correlations were not statistically significant at the higher alpha required for multiple correlation tests, but they were positive and the correlation for the organizational environment domain approached significance.

In the current study, when middle school and high school principals were treated as separate groups, the correlational analysis between FCAT reading percentages and

teacher rating mean scores on the organizational environment domain of the APE produced ($r = .374$). The same correlational analysis conducted for the educational program domain of the APE produced ($r = .266$). These correlation values are greater than the overall average correlation ($r = .25$) reported in the McREL meta-analysis for the 21 identified principal leadership responsibilities. The organizational environment and educational program domain of the APE encompass most of the principal leadership responsibilities identified in the McREL study.

Conclusions

This investigation sought (a) to determine if the perceived leadership characteristics of principals, as rated by teachers, differed between middle schools and high schools; (b) to determine what relationships existed, if any, between teachers' perceptions of effective principal leadership characteristics and student achievement; and (c) to determine the extent that participating grouped schools differed on school and teacher demographics. Based on the review of literature and findings of the research, the following conclusions were drawn:

1. It was found that there was no statistically significant difference between the mean scores representing teacher perceptions of principal leadership on the organizational environment domain of the *Audit of Principal Effectiveness* between middle schools and high schools.
2. It was found that there was no statistically significant difference between the mean scores representing teacher perceptions of principal leadership on the

educational program domain of the *Audit of Principal Effectiveness* between middle schools and high schools.

3. When middle school and high school principals were treated as one group, it was found that there was no statistically significant correlation between the mean scores representing teacher perceptions of principal leadership on the organizational environment domain of the *Audit of Principal Effectiveness* and student achievement as measured by the percentage of students (8th grade – middle school and 10th grade – high school) scoring at levels 3 and above on the reading portion of the 2003-2004 FCAT.
4. When middle school and high school principals were treated as one group, it was found that there was no statistically significant correlation between the mean scores representing teacher perceptions of principal leadership on the educational program domain of the *Audit of Principal Effectiveness* and student achievement as measured by the percentage of students (8th grade – middle school and 10th grade – high school) scoring at levels 3 and above on the reading portion of the 2003-2004 FCAT.
5. When middle school principals were treated as a separate group, it was found that there was no statistically significant correlation between the mean scores representing teacher perceptions of principal leadership on either the organizational environment or educational program domains of the *Audit of Principal Effectiveness* and student achievement as measured by the

percentage of middle school students (8th grade) scoring at levels 3 and above on the reading portion of the 2003-2004 FCAT.

6. When high school principals were treated as a separate group, it was found that there was no statistically significant correlation between the mean scores representing teacher perceptions of principal leadership on either the organizational environment or educational program domains of the *Audit of Principal Effectiveness* and student achievement as measured by the percentage of students (10th grade) scoring at levels 3 and above on the reading portion of the 2003-2004 FCAT.
7. It was found that schools with principals whose teachers rated them in the top third, middle third, and bottom third on the organizational environment domain of the *Audit of Principal Effectiveness* showed little or no difference on average years of teaching experience and educational level of the surveyed faculty. Variations between levels in FCAT reading percentage and low-SES percentage were investigated. The top third and middle third had an almost identical percentage of low-SES students, and the bottom third had the highest percentage of low-SES students. No statistically significant correlations were found between FCAT reading percentages and APE mean scores at any of the three (top, middle, bottom) levels.
8. It was found that schools with principals whose teachers rated them in the top third, middle third, and bottom third on the educational program domain of the *Audit of Principal Effectiveness* showed little or no difference on (a) average

years of teaching experience of the surveyed faculty; (b) educational level of the surveyed faculty; (c) FCAT reading scores, and (d) percentage of low-SES students.

9. It was found that there was not a statistically significant correlation between FCAT reading percentage and low-SES percentage for schools with principals whose teachers' ratings placed them in any of the three levels on the organizational environment domain of the *Audit of Principal Effectiveness*. Although FCAT percentage and low-SES percentage showed no significant correlation at any of the three levels, there was an observable progressive change in both the Pearson product moment correlation (r) and the observed probability (p) values from the bottom third ($r = -.456, p = .025$), to the middle third ($r = -.409, p = .037$), and from the middle third to the top third ($r = -.345, p = .063$). As teacher rating mean scores on the APE organizational environment domain increased, the negative (inverse) correlation between FCAT reading percentage and low-SES percentage decreased but not at statistically significant levels.
10. It was found that there was a statistically significant negative (inverse) correlation between FCAT reading percentage and low-SES percentage for all schools.
11. It was found that there was a statistically significant negative (inverse) correlation between FCAT reading percentage and low-SES percentage with principals whose teacher's ratings placed them in the top third on the

educational program domain of the *Audit of Principal Effectiveness*.

Conversely, no statistically significant correlation was found between FCAT reading percentage and low-SES percentage for schools with principals whose teachers rated them in the bottom or middle thirds on the educational program domain of the *Audit of Principal Effectiveness*.

12. It was found that there was a statistically significant difference between the FCAT reading percentage of middle schools and high schools.

Implications and Recommendations

Data returned from respondents in this study provide evidence to suggest that the majority of teachers perceive their principals as being effective school leaders in the areas of teacher and student relations, interactive and affective processes, and instructional and curriculum improvement. Given this fact, why is it then that the relatively high leadership ratings of both middle school and high school principals on both the organizational environment and educational program domains of the APE showed a positive correlation (not statistically significant) with FCAT reading percentage for high school principals, while middle school principals showed a negative correlation? One reason could be that the survey instrument (*Audit of Principal Effectiveness*) may not be sensitive to factors of principal leadership that contribute to increased student achievement. Another possibility is that the principal effectiveness ratings listed by teachers may be somewhat inflated through a bias in completing the survey. Several teachers commented through e-mail, phone conversations, or comments written on the

survey that they were very uncomfortable with giving an “honest” rating along with demographic information for fear of their identity being discovered by school administrators. Many teachers mailed surveys directly to the researcher rather than return them (in a plain unmarked, sealed envelope) to the school personnel administering the survey.

Most interesting is the negative (inverse) relationship between middle school teacher rating mean scores on both the organizational environment and educational program domain of the APE and FCAT reading percentage. This would seem to indicate that while most middle school teachers perceive their principals as exhibiting a relatively high level of effective leadership behaviors, these perceptions do not have a positive connection to student achievement.

While data analysis in the current study did not find statistically significant correlations between teacher rating scores on the APE and a measure of student achievement (FCAT reading scores), the Pearson product moment (r) values reported were equal to or greater than the (r) values reported in the McREL meta-analysis of studies involving correlations between principal leadership characteristics and student achievement. The correlation found in the current study between high school teacher rating mean scores on the organizational environment domain of the APE and FCAT reading percentages may be important, if not statistically significant. If the McREL analysis is accurate, then small correlations between principal leadership characteristics and student achievement may be enough to provide guidance to educational leaders as to what leadership areas produce the greatest achievement gains. This would allow

principals, superintendents, and other educational administrators to more efficiently focus their attention on specific leadership areas rather than having to apply a “shotgun” approach and hope that something hits the target.

No attempt was made to generalize results from this study to any school population outside the sample population (Brevard, Lake, Orange, Seminole, and Volusia Counties). The schools in the sample population represent large urban schools, large and small suburban schools, and smaller rural schools. They include mixed urban ethnic and socioeconomic areas and homogeneous ethnic and socioeconomic areas. The schools should be fairly representative of those found throughout the State of Florida. The measurement of student achievement (FCAT) is required in every public school in Florida. Information regarding school enrollment, low-SES percentage, school grade, and FCAT reading percentage for both the respondent and non-respondent schools is presented in Appendix C (p. 141). Those wishing to determine if the reported findings of the study might be applicable to other schools or districts should use this information, along with that presented in the study, to make such generalizations. Those outside the State of Florida should consider what instrument would be used in place of the FCAT reading scores as the measure of student achievement.

Recommendations for Future Research

From the data analyses in this study, the following future research possibilities were identified:

1. This study could be repeated using a longitudinal approach looking at FCAT reading percentages over a period of years, or changes in FCAT reading percentages over a given time period. This would provide more than a “snapshot” look at achievement scores and allow for the elimination of one-time effects, which could influence test results.
2. This study could be repeated using additional FCAT subject areas such as mathematics, writing, or science. This would provide for a much broader range of student achievement measurements and would allow for much richer data analysis.
3. This study could be repeated using an alternative survey instrument to the APE. If similar results were found, it would tend to validate the results of the current study. If significant differences in results were found, one or both of the instruments would be suspect.
4. This study could be repeated using different school districts and maintaining middle school and high school principals as separate sample populations. Despite the findings in the current study which found no statistically significant differences between middle school and high school teacher ratings on either domain of the APE, treating the two groups separately showed some interesting, if not statistically significant results, between middle school principals and high

school principals. Broadening the scope of the school base would provide richer and more complete data.

5. A similar study could be conducted examining individually the schools (principals) whose APE ratings were outside the “normal” range of reported scores. The question to be asked is why some principals whose APE ratings were very low have schools with a very high FCAT reading percentage? Conversely, why do some principals whose APE ratings were very high have schools with very low FCAT reading scores?

APPENDIX A: AUDIT OF PRINCIPAL EFFECTIVENESS

Survey for Florida Middle and High School Teachers:
Audit of Principal Effectiveness

School Code:

Aa Bb Cc Dd Ee Ff Gg Hh Ii Jj Kk Ll Mm Nn Oo Pp Qq Rr Ss Tt Uu Vv Ww Xx Yy Zz

Survey for Florida
Middle and
High School Teachers
Audit of Principal Effectiveness©

My completion of this survey acknowledges that I am 18 yrs. old or older and constitutes my informed consent.

Participation in this study is voluntary. Individuals may refuse to answer any or all questions or omit any personal information which they feel uncomfortable in providing. There are no anticipated risks to participants.

No compensation is being provided. No costs will be incurred.

An individual's responses will be kept anonymous and confidential. All responses will be reported as group, not as individual data.

Directions: There are 52 statements in this instrument. The statements describe specific principalship skills.

Because teachers work more closely with principals than any other professional group, teachers' perceptions are particularly important. Please take a few minutes to read each statement and select the response that most appropriately describes your assessment of your principal's ability for each item. **DO NOT** record your name. Please be honest and candid with your responses. Anticipated time: 15—20 min.

Please Note: *You are to evaluate the principal with whom you worked during the 2003-2004 academic year (last year). Rate this person even if he/she is not your current principal.*

? Please Answer?

Have you been in a teaching position at your current school for a minimum of one academic year (not counting the current year 2004-2005)?

_____ Yes _____ No

© 1987 Middle Level Leadership Center/survey edited with permission
Thomas W. Fisher
Doctoral Candidate in Educational Leadership
University of Central Florida 2004—2005

Please indicate for each statement your assessment of your principal's ability based on the nine point scale shown at right. Please be honest and candid with your responses.
Circle your responses.
Remember to evaluate the principal with whom you worked during the 2003-2004 academic year (last year).

1 - Not Effective	2 -	3 -	4 -	5 - Moderately Effective	6 -	7 -	8 -	9 - Very Effective
-------------------	-----	-----	-----	--------------------------	-----	-----	-----	--------------------

START HERE

Select the response that describes how effectively your principal performs each skill.

- | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1. The principal is willing to admit to making an incorrect decision and corrects the decision if feasible. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 2. The principal is perceptive of teacher needs. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 3. The principal gives teachers the support they need to be effective. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 4. The principal diagnoses the causes of conflict and successfully mediates or arbitrates conflict situations. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 5. Teachers feel at ease in the presence of the principal. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 6. When deserving, teachers are complimented by the principal in a sincere and honest manner. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 7. The principal is receptive to suggestions. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 8. The principal is accessible when needed. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 9. The principal takes time to listen. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

1

CONTINUE ➡

Circle your responses.
Remember to evaluate the principal with whom you worked during the 2003-2004 academic year (last year).

1 - Not Effective	2 -	3 -	4 -	5 - Moderately Effective	6 -	7 -	8 -	9 - Very Effective
-------------------	-----	-----	-----	--------------------------	-----	-----	-----	--------------------

CONTINUE

- | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 10. Teachers feel free to share ideas and concerns about school with the principal. | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 11. When teachers discuss a problem with the principal, the principal demonstrates an understanding and appreciation of how teachers feel about the problem. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 12. When talking to the principal, teachers have the feeling the principal is sincerely interested in what they are saying. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 13. Through effective management of the day-by-day operation of the school, the principal promotes among staff, parents, and community a feeling of confidence in the school. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 14. The principal finds the time to interact with students. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 15. Students feel free to initiate communication with the principal. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 16. Students in the school view the principal as a leader of school spirit. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 17. The principal encourages student leadership. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 18. The principal helps develop student responsibility. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

1

CONTINUE ➡

Circle your responses.
Remember to evaluate the principal with whom you worked during the 2003-2004 academic year (last year).

1 - Not Effective	2 -	3 -	4 -	5 - Moderately Effective	6 -	7 -	8 -	9 - Very Effective
-------------------	-----	-----	-----	--------------------------	-----	-----	-----	--------------------

CONTINUE

- 19. The principal is highly visible to the student body. 1 2 3 4 5 6 7 8 9
- 20. The principal positively reinforces students. 1 2 3 4 5 6 7 8 9
- 21. The principal enjoys working with students. 1 2 3 4 5 6 7 8 9
- 22. The principal keeps teachers informed about those aspects of the school program of which they should be aware. 1 2 3 4 5 6 7 8 9
- 23. When the principal provides teachers with the information about school operations, the information is clear and easily understood. 1 2 3 4 5 6 7 8 9
- 24. When teachers are informed of administrative decisions, they are aware of what the principal expects of them as it relates to the decision. 1 2 3 4 5 6 7 8 9
- 25. The principal is able to organize activities, tasks, and people. 1 2 3 4 5 6 7 8 9
- 26. The principal develops appropriate rules and procedures. 1 2 3 4 5 6 7 8 9
- 27. The principal uses systematic procedures for staff appraisal, e.g. retention, dismissal, promotion procedures. 1 2 3 4 5 6 7 8 9

Circle your responses.
 Remember to evaluate the
 principal with whom you
 worked during the 2003-2004
 academic year (last year).

1 - Not Effective	2 -	3 -	4 -	5 - Moderately Effective	6 -	7 -	8 -	9 - Very Effective
-------------------	-----	-----	-----	--------------------------	-----	-----	-----	--------------------

CONTINUE

- | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ | ▼ |
| 28. The principal establishes the overall tone for discipline in the school. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 29. The principal establishes a process by which students are made aware of school rules and policies. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 30. The principal communicates to teachers the reasons for administrative practices used in the school. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 31. The principal works with other leaders of the school in the implementation of a team approach to managing the school. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 32. The principal encourages faculty to be sensitive to the needs and values of other faculty in the school. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 33. The principal helps teachers clarify or explain their thoughts by discussing those thoughts with them. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 34. During meetings, the principal involves persons in the discussion who might otherwise not participate. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 35. The principal shares personal feelings and opinions about school issues with teachers. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 36. Humor used by the principal helps to improve the school environment by creating a more congenial working climate. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

1

CONTINUE ➡

Circle your responses.
Remember to evaluate the principal with whom you worked during the 2003-2004 academic year (last year).

1 - Not Effective	2 -	3 -	4 -	5 - Moderately Effective	6 -	7 -	8 -	9 - Very Effective
-------------------	-----	-----	-----	--------------------------	-----	-----	-----	--------------------

CONTINUE

37. Personal thoughts shared by the principal about school help teachers develop a sense of pride and loyalty as members of the school. 1 2 3 4 5 6 7 8 9

38. The principal is knowledgeable of the general goals and objectives of the curricular areas. 1 2 3 4 5 6 7 8 9

39. The principal is knowledgeable of the varied teaching strategies teachers might appropriately utilize during instruction. 1 2 3 4 5 6 7 8 9

40. The principal possesses instructional observation skills that provide the basis for accurate assessment of the teaching process. 1 2 3 4 5 6 7 8 9

41. The principal actively and regularly participates in the observations and assessment of classroom instruction, including teaching strategies and student learning. 1 2 3 4 5 6 7 8 9

42. The principal has effective techniques for helping ineffective teachers. 1 2 3 4 5 6 7 8 9

43. The principal maintains an awareness and knowledge of recent research about the learning process. 1 2 3 4 5 6 7 8 9

44. When criticizing poor practices, the principal provides suggestions for improvement. 1 2 3 4 5 6 7 8 9

1

CONTINUE ➡

Circle your responses.
Remember to evaluate the principal with whom you worked during the 2003-2004 academic year (last year).

1 - Not Effective									
2 -									
3 -									
4 -									
5 - Moderately Effective									
6 -									
7 -									
8 -									
9 - Very Effective									

CONTINUE

45. The principal is committed to instructional improvement. **▼▼▼▼▼▼▼▼▼**
 1 2 3 4 5 6 7 8 9

46. The principal promotes the development of educational goals and objectives that reflect societal needs and trends.
 1 2 3 4 5 6 7 8 9

47. The principal promotes the diagnosis of individual and group learning needs of students and application of appropriate instruction to meet those needs.
 1 2 3 4 5 6 7 8 9

48. The principal administers a school-wide curricular program based upon identification of content goals and objectives and the monitoring of student achievement toward those goals and objectives.
 1 2 3 4 5 6 7 8 9

49. The principal participates in instructional improvement activities such as program and curriculum planning and monitoring of student learning outcomes.
 1 2 3 4 5 6 7 8 9

50. The principal uses objective data such as test scores to make changes in curriculum and staffing.
 1 2 3 4 5 6 7 8 9

51. The principal has a systematic process for program review and change.
 1 2 3 4 5 6 7 8 9

52. The principal encourages articulation of the curricular program.
 1 2 3 4 5 6 7 8 9

Personal Information - include current year

Total years teaching experience....._____yrs.

Years experience at your current school....._____yrs.

Years with current principal....._____yrs.

Educational level ___ Bachelors ___ Masters
 ___ Masters + ___ Doctorate

I am a ___ Female ___ Male

Thank you for taking the time to complete this questionnaire. Your assistance is greatly appreciated. Responses will be kept confidential; no attempt has been made to identify individual respondents. Please indicate any suggestions or concerns in the space below.

Please place your completed questionnaire in the envelope provided and seal it. DO NOT PUT YOUR NAME ON THE ENVELOPE!! Return the envelope to the individual at your school who gave you the survey. DO NOT MAIL SURVEY

Thank you again for your participation.

Address any concerns to:

Thomas W. Fisher
470 Merrimac Drive
Port Orange, FL 32127
(386) 788-5858
tfisher9@cfl.rr.com

APPENDIX B: DOMAIN AND FACTOR DESCRIPTORS

Domain: Organizational Environment

The Domain of Organizational Environment provides insight about the ability of the principal to nurture the ongoing climate of the school through development of positive interpersonal relationships among members of the organization and effective day-by-day operational procedures for the school. The specific statistical factors for Organizational Environment are defined below. (37 items)

Factor: Teacher Relations. The principal develops effective working relationships with staff through appropriate communication skills, sensitivity to needs, appropriate support, and reinforcement. (13 items)

Factor: Student Relations. The principal develops effective working relationships with students through appropriate communication skills, encouragement, support, and high visibility. (8 items)

Factor: Interactive Processes. The principal organizes tasks and personnel for the effective day-by-day management of the school, including providing appropriate information to staff and students, developing appropriate rules and procedures, and setting the overall tone for discipline in the school. (9 items)

Factor: Affective Processes. The principal encourages the expression of feelings, opinions, pride, and loyalty through team management, sensitivity, humor, and personal example. (7 items)

Domain: Educational Program

The Domain of Educational Program provides insight about the ability of the principal to serve as the educational leader of the school through active involvement in instructional leadership and curriculum development. The specific statistical factors for Educational Program are defined below. (15 items)

Factor: Instructional Improvement. The principal influences positively the instructional skills present in the school through clinical supervision, knowledge of effective schooling, and commitment to quality instruction. (8 items)

Factor: Curriculum Improvement. The principal promotes an articulated, outcome-based curriculum through diagnosis of student needs and systematic program review and change. (7 items)

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APPENDIX C: MIDDLE SCHOOL AND HIGH SCHOOL INFORMATION

Middle School Respondent Information

County	Total Enrollment	Low-SES %	School Grade	FCAT % Level 3 +
Brevard	1,318	45	A	49
Brevard	542	87	A	49
Brevard	867	7	A	71
Brevard	538	11	A	68
Brevard	679	36	A	59
Brevard	606	16	A	69
Brevard	1,076	23	B	51
Brevard	694	18	A	57
Brevard	762	33	A	55
Brevard	369	55	A	49
Brevard	1,389	29	A	50
Brevard	714	42	B	56
Brevard	1,513	23	B	53
Brevard	657	5	A	87
Lake	579	49	B	37
Lake	654	51	B	44
Lake	947	36	B	53
Orange	1,425	33	A	48
Orange	1,488	40	B	39
Orange	1,882	28	A	55
Orange	786	66	C	30
Orange	2,075	36	A	47
Orange	779	65	D	15
Orange	1,274	33	A	47
Orange	1,604	44	B	36
Orange	1,168	67	C	22
Seminole	1,471	15	A	66
Seminole	1,251	16	A	65
Seminole	1,177	10	A	73
Seminole	1,231	45	A	53
Seminole	1,631	25	A	57
Volusia	1,422	44	B	46
Volusia	1,437	47	A	46
Volusia	972	68	C	35
Volusia	1,338	31	A	51
Volusia	627	48	B	42

High School Respondent Information

County	Total Enrollment	Low-SES %	School Grade	FCAT % Level 3 +
Brevard	860	15	B	43
Brevard	1,168	15	B	43
Brevard	1,229	9	B	34
Brevard	1,154	11	A	44
Brevard	898	8	A	50
Brevard	1,282	17	B	39
Brevard	852	13	A	38
Brevard	771	15	B	39
Lake	1,278	27	D	32
Lake	623	25	C	33
Lake	748	25	D	26
Lake	574	25	C	38
Lake	455	31	C	30
Orange	2,058	40	D	23
Orange	1,410	45	F	18
Orange	1,533	15	B	43
Seminole	1,089	24	C	40
Seminole	1,293	37	C	37
Seminole	1,555	38	D	41
Volusia	874	27	C	30
Volusia	1,555	24	C	31
Volusia	1,117	22	B	37
Volusia	1,332	31	C	25
Volusia	970	14	B	38
Volusia	1,455	13	B	46

Middle School Non-Respondent Information

County	Total Enrollment	Low-SES %	School Grade	FCAT % Level 3 +
Brevard	588	8	A	75
Brevard	1,022	14	A	63
Brevard	159	43	A	35
Lake	768	54	C	37
Lake	858	39	C	40
Lake	899	30	B	44
Lake	1,013	42	A	49
Lake	762	49	B	44
Lake	1,228	29	A	52
Orange	1,547	44	C	38
Orange	963	70	C	20
Orange	1,300	36	A	47
Orange	1,268	39	A	60
Orange	1,701	28	A	52
Orange	1,246	34	A	45
Orange	1,143	53	C	32
Orange	1,249	47	B	37
Orange	1,076	54	B	34
Orange	1,146	18	A	59
Orange	1,794	49	B	37
Orange	1,039	74	C	19
Orange	1,515	38	A	44
Orange	1,344	26	A	60
Orange	1,153	77	C	29
Orange	1,340	66	B	35
Orange	1,106	71	C	29
Seminole	1,176	13	A	66
Seminole	1,589	25	A	59
Seminole	1,899	49	B	49
Seminole	1,165	52	B	51
Seminole	1,284	53	B	50
Seminole	1,167	30	A	52
Volusia	992	67	C	34
Volusia	1,261	20	A	64
Volusia	1,531	44	B	41
Volusia	1,772	45	B	43
Volusia	1,548	35	B	47
Volusia	1,680	20	A	62

High School Non-Respondent Information

County	Total Enrollment	Low-SES %	School Grade	FCAT % level 3 +
Brevard	757	23	C	19
Brevard	1068	3	A	59
Lake	477	32	C	33
Lake	959	39	D	26
Orange	2,173	26	C	35
Orange	1,831	26	C	40
Orange	1,579	32	D	38
Orange	1,819	25	C	44
Orange	1,746	29	D	36
Orange	1,652	47	F	11
Orange	1,536	26	C	30
Orange	653	51	F	11
Orange	211	45	B	43
Orange	1,614	24	B	39
Orange	1,750	32	B	33
Orange	2,253	29	D	33
Orange	1,852	21	A	49
Seminole	1,803	14	C	50
Seminole	1,524	19	A	54
Seminole	1,728	12	A	50
Seminole	1,425	18	A	48
Volusia	1,666	24	B	36
Volusia	1,162	31	C	26
Volusia	723	51	C	17

All school information is for the 2003-2004 academic year and is reported on the Florida Department of Education Website (<http://www.firn.edu/doe/>)

Total Enrollment - total reported school student population.

Low-SES% - measure of socioeconomic status determined by dividing the number of students who qualify for the federal “free or reduced price” lunch program by the total student enrollment.

School Grade – letter grade assigned to each public school in the state of Florida. Based primarily on the percentage of students who take and score at various levels on the state FCAT exams - includes several identified sub-groups. See Appendix J (p. 158).

FCAT% level 3 + - percentage of students who score at level three or higher on the reading section of the FCAT exam (8th grade-middle school, 10th grade-high school). See Appendix I (p. 156).

APPENDIX D: SAMPLE - SUPERINTENDENT PERMISSION LETTER

Thomas W. Fisher
470 Merrimac Drive
Port Orange, FL 32127

October 8, 2004

Margaret A. Smith
Superintendent of Schools
Volusia County Public Schools
200 North Clara Ave.
DeLand, FL 32720

Superintendent Smith:

The purpose of this letter is to request your assistance with a research project as part of my Educational Leadership Doctoral requirements through the University of Central Florida. This research will focus on the possible relationships between the leadership “characteristics” of principals, as perceived by their faculties, and current Florida achievement measures (FCAT reading scores).

Research suggests that a principal’s leadership characteristics have a significant relationship to student achievement. This project seeks to determine if such a relationship exists in the middle schools and high schools of Central Florida.

Survey instruments will be sent to a random sample of teachers in selected schools to determine their perceptions of certain leadership characteristics and qualities of their principals. Results of these surveys will be compared to each school’s 8th grade or 10th grade 2003-2004 FCAT reading scores. School identification numbers will be used for the sole purpose of matching schools with teachers and assessment measures. There will be no attempt to identify or report individual schools’, teachers’, or principals’ information in the document.

I am requesting that you, or your designee, grant me permission to conduct this study in your district. The principals of each school selected for the study will be contacted and their permission solicited. A copy of the instrument, methodology, and your permission letter will be sent to the selected schools. Your prompt attention is greatly appreciated to allow for sufficient time to collect data.

Thank you for taking the time from your busy schedule (and hurricane recovery matters) to assist me in this research project. Please contact me by phone (386-788-5858) or e-mail (tfisher9@cfl.rr.com), or my principal advisor Dr. Douglas Magann (407-823-1467, dmagann@mail.ucf.edu) should you have any questions.

Sincerely,

Thomas W. Fisher
Doctoral Candidate, University of Central Florida

APPENDIX E: SAMPLE – SCHOOL DISTRICT PERMISSION LETTER

School Board of Brevard County

2700 Judge Fran Jamieson Way • Viera, FL 32940-6699

Richard A. DiPatri, Ed.D., Superintendent



October 21, 2004

Mr. Thomas W. Fisher
470 Merrimac Drive
Port Orange, FL 32127

Dear Mr. Fisher,

Thank you for requesting our district's assistance with your doctoral research project. I am happy to honor your request to conduct your study in Brevard County. My contact person is Bill Hall, Director of Educational Leadership and Professional Development. Please contact him at your earliest convenience so that the two of you can discuss the logistics of your project and determine what assistance you may need. His number is 321.633.1000 X240.

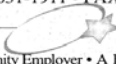
Thank you again for making your request. I wish you much success with your research project.

Sincerely,

Richard A. DiPatri, Ed. D., Superintendent
Brevard Public Schools

C Bill Hall, Director, Educational Leadership and Professional Development

Phone: (321) 631-1911 • FAX: (321) 633-3432


An Equal Opportunity Employer • A Drug-Free Workplace

APPENDIX F: SAMPLE—PERMISSION E-MAIL TO PRINCIPALS

12/01/04

My name is Tom Fisher and I am a doctoral candidate in Educational Leadership at UCF. You should have received notice from the District Office that my dissertation survey was approved for use in the middle and high schools of the district. I am requesting permission to conduct the survey in your school.

I have attached a copy of the instrument and an explanation of the purpose and methodology of the study. As a teacher myself, I simply do not have the time or resources to personally visit the 100+ schools I hope to survey. I am relying on the good graces of educational professionals such as you to assist me in this process.

What I am requesting is that you identify a staff member (assistant principal, media center personnel, office staff, etc.) who would be willing to administer the survey to the selected teachers at your school. Once identified, I will send this individual a "packet" that contains the survey instruments, instructions, and a self-addressed stamped return envelope. The survey will be administered to 10 randomly chosen teachers (selected by computer) at each school. It takes approximately 10-15 minutes to complete. The individual would be asked to give the surveys to the 10 teachers selected, collect completed surveys, and mail them back to me in the envelope provided. This should not take more than an hour in total time. I would suggest that this be done in one day, and that teachers be requested to complete the survey during that day if possible.

UCF requires an official response indicating your approval to conduct the survey in your school. An e-mail granting permission and indicating a contact person would be greatly appreciated.

Please contact me via e-mail (tfisher9@cfl.rr.com) or phone (386-788-5858) if you have any questions or concerns.

Thank you in advance for your assistance.

Thomas W. Fisher
470 Merrimac Drive
Port Orange, FL 32127
(386) 788-5858
tfisher9@cfl.rr.com

APPENDIX G: UCF IRB APPROVAL FORM



THE UNIVERSITY OF CENTRAL FLORIDA
INSTITUTIONAL REVIEW BOARD (IRB)

IRB Committee Approval Form

PRINCIPAL INVESTIGATOR(S): **Thomas Fisher**

IRB #: **04-2187**

PROJECT TITLE: A Comparison of the Perceived Leadership Characteristics of Select Florida School Principals and Measures of School Achievement

Committee Members:

Full Board

Contingent Approval
Dated: _____

Final Approval
Dated: _____

Expiration
Date: _____

- Dr. Theodore Angelopoulos: _____
- Dr. Ratna Chakrabarti: _____
- Dr. Karen Dennis: _____
- Ms. Patricia Kent: _____
- Dr. Robert Kennedy: _____
- Dr. Valerie Sims: _____
- Dr. David Boote: _____
- Dr. Debra Reinhart: _____
- Dr. Tracy Dietz (alt): _____
- Dr. Janet Whiteside (alt): _____
- Dr. Barbara Fritzsche (alt): _____
- Dr. Craig Van Slyke (alt): _____

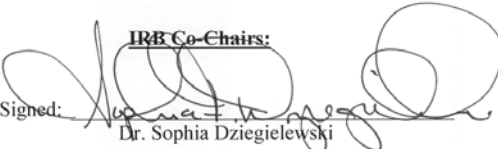
Chair

Expedited Approval
Dated: Nov 7, 2004
Cite how qualifies for expedited review: # 7

Exempt
Dated: _____
Cite how qualifies for exempt status: _____

Expiration
Date: Nov 6, 2005

IRB Co-Chairs:

Signed: 
Dr. Sophia Dziegielewski

Signed: _____
Dr. Jacqueline Byers

NOTES FROM IRB CHAIR (IF APPLICABLE): Since the principals of each school will be distributing the surveys, he or she is aware of what is being done. There is no consent form but consent is adequately addressed on this anonymous survey. Documentation of consent is waived.

APPENDIX H: MLLC PERMISSION LETTER

470 Merrimac Drive
Port Orange, FL 32127

March 15, 2005

MLLC - Middle Level Leadership Center
Dr. Jerry Valentine
University of Missouri-Columbia
#8 London Hall
Columbia, Missouri 65211

Dr. Valentine:

This letter will confirm our previous agreement made through e-mail and phone communication. I am completing a doctoral dissertation at the University of Central Florida entitled "A Comparison of the Perceived Leadership Characteristics of Central Florida Middle and High School Principals and School Achievement Scores." I would like your formal permission to reprint in my dissertation excerpts from the following: Valentine, J. & Bowman, M. (1988). *The Audit of principal effectiveness: instrumentation for principal research*. Columbia, Missouri: University of Missouri-Columbia, Middle Level Leadership Center. The excerpts to be reproduced are: *The Audit of Principal Effectiveness*.

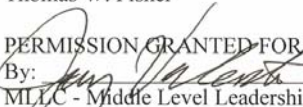
The requested permission extends to any future revisions and editions of my dissertation, including non-exclusive world rights in all languages, and to the publication of my dissertation by UMI. These rights will in no way restrict republication of the material in any other form by you or by others authorized by you. Your signing of this letter will also confirm that you own [or your company owns] the copyright to the above-described material.

If these arrangements meet with your approval, please sign this letter where indicated below and return it to me in the enclosed return envelope. Thank you for your attention in this matter.

Sincerely,


Thomas W. Fisher

PERMISSION GRANTED FOR THE USE REQUESTED ABOVE:

By: 
MLLC - Middle Level Leadership Center
Dr. Jerry Valentine
University of Missouri-Columbia

Date: 4-7-05

APPENDIX I: FCAT ACHIEVEMENT LEVELS

FCAT Achievement Levels

Achievement levels describe the success a student has achieved on the Florida *Sunshine State Standards* tested on the FCAT. Achievement levels range from 1 to 5, with Level 1 being the lowest and Level 5 being the highest.

Level 5 This student has success with the most challenging content of the *Sunshine State Standards*. A student scoring in Level 5 answers most of the test questions correctly, including the most challenging questions.

Level 4 This student has success with the challenging content of the *Sunshine State Standards*. A student scoring in Level 4 answers most of the test questions correctly, but may have only some success with questions that reflect the most challenging content.

Level 3 This student has partial success with the challenging content of the *Sunshine State Standards*, but performance is inconsistent. A student scoring in Level 3 answers many of the test questions correctly but is generally less successful with questions that are the most challenging

Level 2 This student has limited success with the challenging content of the *Sunshine State Standards*.

Level 1 This student has little success with the challenging content of the *Sunshine State Standards*.

The tables below list the achievement levels for FCAT SSS Reading along with the scale score ranges associated with each achievement level, by grade level. The table lists the achievement levels and scale score ranges that are used to determine the student's success on the FCAT.

FCAT Achievement Levels

Reading					
Level 1	Level 2	Level 3	Level 4	Level 5	Grade
100-258	259-283	284-331	332-393	394-500	3
100-274	275-298	299-338	339-385	386-500	4
100-255	256-285	286-330	331-383	384-500	5
100-264	265-295	296-338	339-386	387-500	6
100-266	267-299	300-343	344-388	389-500	7
100-270	271-309	310-349	350-393	394-500	8
100-284	285-321	322-353	354-381	382-500	9
100-286	287-326	327-354	355-371	372-500	10

Retrieved from the Florida Department of Education Website - http://www.firn.edu/doe/sas/fcat/pdf/fc_ufr2004.pdf

APPENDIX J: FLORIDA SCHOOL GRADES



GRADING FLORIDA PUBLIC SCHOOLS 2003-2004

DEPARTMENT OF EDUCATION, JIM HORNE, COMMISSIONER, www.fldoe.org

School grades for 2003-04 utilize a point system. Schools are awarded one point for each percent of students who score high on the FCAT and/or make annual learning gains.

Scoring High on the FCAT

The Florida Comprehensive Assessment Test (FCAT) is the primary measure of students' achievement of the Sunshine State Standards. Student scores are classified into five achievement levels, with 1 being the lowest and 5 being the highest.

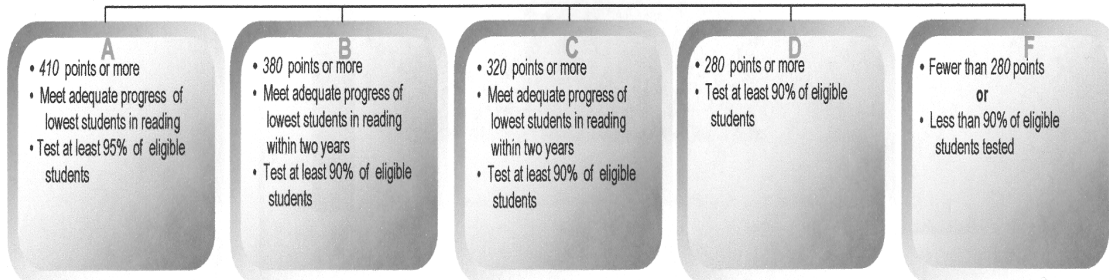
- ⇒ Schools earn one point for each percent of students who score in achievement levels 3, 4, or 5 in reading and one point for each percent of students who score 3, 4, or 5 in math.
- ⇒ The writing exam is scored by at least two readers on a scale of 1 to 6. The percent of students scoring "3" and above is averaged with the percent scoring "3.5" and above to yield the percent meeting minimum and higher standards. Schools earn one point for each percent of students on the combined measure. If a school does not have writing scores, the district average for all students in writing will be the substitute.

Making Annual Learning Gains

Since FCAT reading and math exams are given in grades 3 – 10, it is now possible to monitor how much students learn from one year to the next.

- ⇒ Schools earn one point for each percent of students who make learning gains in reading and one point for each percent of students who make learning gains in math. Students can demonstrate learning gains in any one of three ways:
 - (1) Improve achievement levels from 1-2, 2-3, 3-4, or 4-5; or
 - (2) Maintain within the relatively high levels of 3, 4, or 5; or
 - (3) Demonstrate more than one year's growth within achievement levels 1 or 2, but not retained.
- ⇒ Special attention is given to the reading gains of students in the lowest 25% in levels 1, 2, or 3 in each school. Schools earn one point for each percent of the lowest performing readers who make learning gains from the previous year. It takes at least 50% to make "adequate progress" for this group.

SCHOOL PERFORMANCE GRADING SCALE

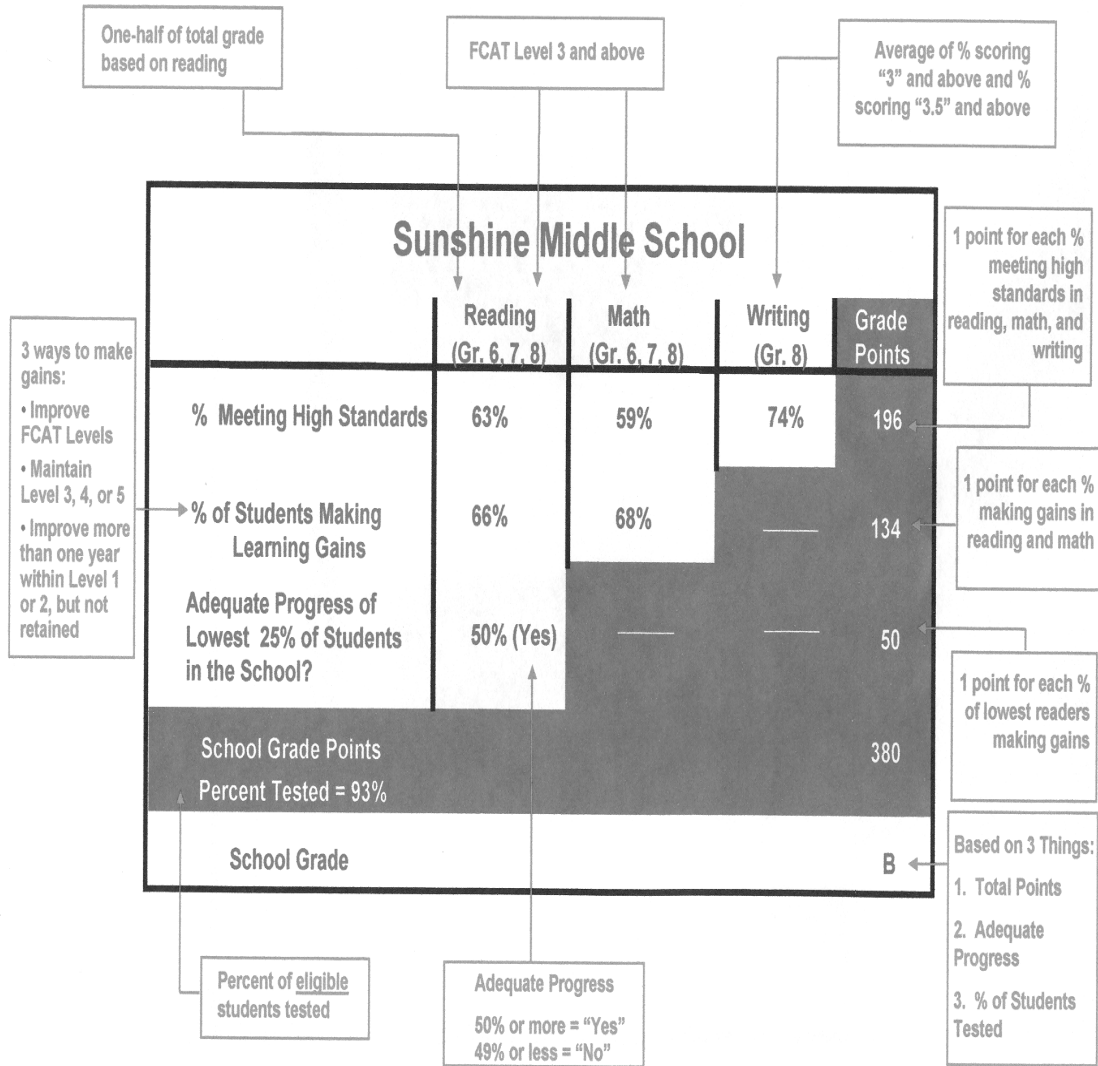


Which students are included in school grade calculations? As in previous years, only standard curriculum students who were enrolled in the same school in both October and February are included. Speech impaired, gifted, hospital/homebound, and Limited English Proficient students with more than two years in an ESOL program are also included. In 2004-05, students with disabilities and LEP students will be included in the learning gains component of the school grade calculation.

What happens if the lowest students in the school do not make "adequate progress" in reading? Schools that aspire to be graded "C" or above, but do not make adequate progress with their lowest students in reading, must develop a School Improvement Plan component that addresses this need. If a school, otherwise graded "C" or "B", does not demonstrate adequate progress in one of the last two years, the final grade will be reduced by one letter grade.

Retrieved from the Florida Department of Education Website - <http://www.firm.edu/doe/schoolgrades/pdf/guide04.pdf>

Example Report for 2004



Retrieved from the Florida Department of Education Website - <http://www.firn.edu/doe/schoolgrades/pdf/guide04.pdf>

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