A STUDY OF THE RELATIONSHIP BETWEEN SCHOOL LEADERSHIP AND THE CONDITION OF SCHOOL BUILDINGS

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(ABSTRACT)

The purpose of this study was to examine the relationship between school leadership and the quality, condition, maintenance, improvements, and renovations of public school buildings. The first question examined the relationship between building conditions and perceptions of school board members, superintendent and central office staff, board of supervisors, and principals. The second question examined the relationship between building conditions and the financial support of leadership positions. The third question examined the relationship between the behavioral effort of leadership and the condition of school buildings. This study had three major data components. These components are (a) perceptions of school board members, superintendent and central office staff, board of supervisors, and principals concerning the condition of school buildings; (b) findings of an independent contractor on condition of school buildings; and (c) the cyclical budgetary process of building maintenance and improvement requests from leadership within the school division over the past five years and subsequent budgetary approvals.

Survey responses were used to compile descriptive statistics and correlations. Actual observation data by an independent contractor were analyzed by percentage of scaled scores in each category and compared to

the perceptions of the leadership surveys on school building conditions and subsequently categorized into ratings of above standard, standard, or below standard. Descriptive comparisons of budget requests for building maintenance and improvements were used in determining the extent of responsiveness by school board members, superintendent and central office staff, board of supervisors, and principals to the future of the quality and condition of school buildings.

The findings in this study indicate there is a positive relationship between building conditions and leadership and financial support. The perceptions of the corporate leadership of the school division that maintaining school facilities was a high priority were related to their subsequent requests and allocations of funds.

Dedication

This study is dedicated to my family – to my wife, Belinda, who has been patient and offered endless love and encouragement; to my daughter, Courtney, whose own personal achievements serve as motivation to me each day; and to my son, Travis, whose determination to always do his best is an inspiration – all who have been very understanding while sharing their dad and husband with this study. This study is also dedicated to my mother, Marie, whose love and support throughout my life I will always cherish – to my father, Jack, who was always proud of my accomplishments – and to my nephew, Jason, whom I will always remember and miss in the years to come. Without the love of all of you, this would not have been possible.

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A STUDY OF THE RELATIONSHIP BETWEEN SCHOOL LEADERSHIP AND THE CONDITION OF SCHOOL BUILDINGS

Introduction

Educational facilities have been a symbol of American culture throughout history. Public school buildings have emerged from one-room wooden schoolhouses into an era of institutions which demand readiness for the 21st century. Over the past decades, the quality and condition of existing school facilities have deteriorated and are a major concern among educators across the country. As America moves into this new century, those with leadership responsibilities in school systems have an obligation to make a true effort in providing maintenance and improvements that will support advancements in the quality and conditions of school facilities.

Are building conditions in need of repair, or is educational reform promoting awareness of the unenviable task of modernizing all public school facilities to support the enhancement of student achievement? At the request of the United States Congress, the General Accounting Office completed a recent survey on the quality and condition of public school facilities within the United States. This nationwide random sample survey of school systems encompassed 5,000 school divisions and addressed three major concerns about educational facilities:

1. Do America's schools provide the key facility requirements and environmental conditions for educational reform and improvement?

2. Do America's schools have appropriate technologies and the facility infrastructure to support new technologies?

3. Do America's schools have the physical capacity to support learning into the 21st century? (GAO, 1995)

The results of this study found that the grave concerns regarding the poor quality and substandard condition of public school facilities were clearly substantiated by the GAO Report.

Three years after the GAO Report, Moulton (1998) completed a study on the perceptions school board members have of the condition of school facilities. He found that the majority of the respondents felt the school buildings under their jurisdiction were in good condition. This study selected a random sample of selected school board members nationwide to respond to a questionnaire concerning their perceptions of conditions of school facilities. This questionnaire, which consisted of 21 survey items, addressed the perception school board members have of the quality and condition of existing public school facilities, the maintenance of these facilities, and what actions had been taken to address the improvement and renovation of these facilities. Results of this study seem to contradict the findings of earlier GAO studies, which reported a great need in the area of maintenance, improvement, and renovation to protect the quality and condition of public schools. Respondents in this study reported a high degree of satisfaction with conditions of facilities in their school divisions and view themselves as being

proactive in maintaining or improving the quality and condition of public school facilities (Moulton, 1998).

School leadership, in the form of a principal, a central office administrator, a superintendent, a school board member, or a member of the board of supervisors, develops perceptions which determine the direction in which a local school system will move regarding the condition of school buildings. From these perceptions comes a generalization of the importance these leaders place on the condition of the physical structure that houses the educational process of students. If the promotion of building conditions that are conducive to the process of educating students is visible among the leaders in the school system, then a high level of importance would be evident.

The emphasis on building conditions by school leaders will materialize in securing maintenance and custodial staff in sufficient numbers and providing them with training, supervision, and resources. Since the condition of school facilities is a long-term result of the efforts by the school custodial and maintenance staffs, the school board, the superintendent, and building administration must provide leadership to assure their success.

Consequently, the quality and condition of school facilities fall primarily upon the financial support of the school board and the perceptions of the quality and condition of the school buildings by the superintendent and central office staff, school board, board of supervisors, and principals. If school leadership communicates that building conditions are an important goal of the school system, then the staff illustrates that importance through their performance.

Upon the arrival of the new millennium, research data over the last decade reporting the critical quality and condition of school facilities are in contrast to what school board members and other school leaders believe the condition of school facilities in their communities to be. If, as the research seems to report, there is a difference between the condition of school buildings and the perception of school board members and other leaders, what explains this? This question leads to the supposition that perhaps there is a relationship between what school board members and other educational leaders think and do and the subsequent condition in which the buildings are found.

Statement of the Problem

Considerable research has been conducted that suggests there is a positive, but tenuous, relationship between building conditions and student achievement. However, minimal research is available on the relationship of leadership and financial support and the condition of school buildings. Similarly, do the actions taken by school leaders represent the perceptions they have on the quality and condition of school buildings?

Purpose of the Study

The purpose of this study was to examine the relationship between certain school building conditions and leadership and financial support in a county school system in Southwest Virginia. If leadership within the administrative structure can be related to improvement in the quality and

condition of school buildings, then the perceptions and actions of these leaders could have a positive effect on maintenance and improvement of school buildings.

Research Questions

1. Is there a relationship between the perceptions of school board members, superintendent and central office staff, board of supervisors, and principals concerning the condition of school buildings and the subsequent actions taken?

2. Is there a relationship between building conditions and the financial support of the school leadership?

3. Is there a relationship between the behavioral effort of leadership and the condition of school buildings?

Significance of the Study

This study provided data which could lead to identifying, recognizing, and defining a relationship among leadership perceptions, financial support, and the condition of school buildings and, in the process, show whether there is a relationship between what the leadership perceives and the action taken. If the perception and actions of the leadership are not congruent in maintaining and improving facilities, the deterioration of the infrastructure may well continue.

A priority of all educational leaders should be to ensure a quality education for all students by enhancing the quality and condition of existing school buildings. Since this study found that the perceptions and subsequent actions of school leaders do confirm a positive relationship with building conditions, the results of this study indicate that educational leaders and their actions dictate a definite role in providing proper maintenance, renovation, and improvements in school facilities. This study leads to solidifying the attitudes of maintaining or creating a more conscientious effort on the part of educational leaders in making recommendations to improve the condition of school buildings, as well.

Definitions

The following definitions are provided for terms used in the study.

1. Facility condition – is defined by the rating of a building obtained from an assessment of building classrooms and general building conditions.

2. Leadership – is defined as individual or combined efforts of school board members, superintendent, central office staff, board of supervisors, and principal.

3. Financial support – the amount of budgeted and allocated dollars used to support the maintenance and improvement of public school facilities.

4. School board leadership – actions taken as a corporate body. In this study, the allocation of funds for maintenance and operation budgets was used as a surrogate for leadership of the school board.

Theoretical Model

A theoretical model (see Figure 1) which examined the relationship between school building condition and student achievement and behavior was developed by Cash (1993) and applied to rural Virginia high schools. Student scores on achievement tests, adjusted for socioeconomic status, were found to be up to 5 percentile points lower in buildings with poorer quality ratings than for students in better quality buildings. Achievement also appeared to be more directly related to cosmetic factors than to structural ones. Lower achievement was associated with specific building condition factors such as substandard science facilities, air conditioning, locker conditions, classroom furniture, more graffiti, and noisy external environments. These studies show that there was a small, but positive relationship between student achievement and the condition of the building where they attend.

A similar study by Hines (1996) of large, urban high schools in Virginia also found a relationship between building condition and student achievement. He found that student achievement was as much as 11 percentile points lower in substandard buildings as compared to above-standard buildings.

In proposing this study, a model was developed which adapts the variables of the Cash (1993) model on leadership and financial ability, and how the perceptions and actions of these variables may have an effect on the condition of school buildings (see Figure 2). This model focuses on the two variables of leadership and financial support. Leadership is defined as the

perceptions of superintendent and central office staff, the school board, the board of supervisors, and principals regarding the condition of buildings and the adequacy of financial funding. These measurements could be used in defining the initial part of the Cash (1993) model which signifies that the condition of school buildings relies upon the financial support and desire of the leadership of the school system to have the buildings in good shape. These variables may play an important role in determining the condition of a building.

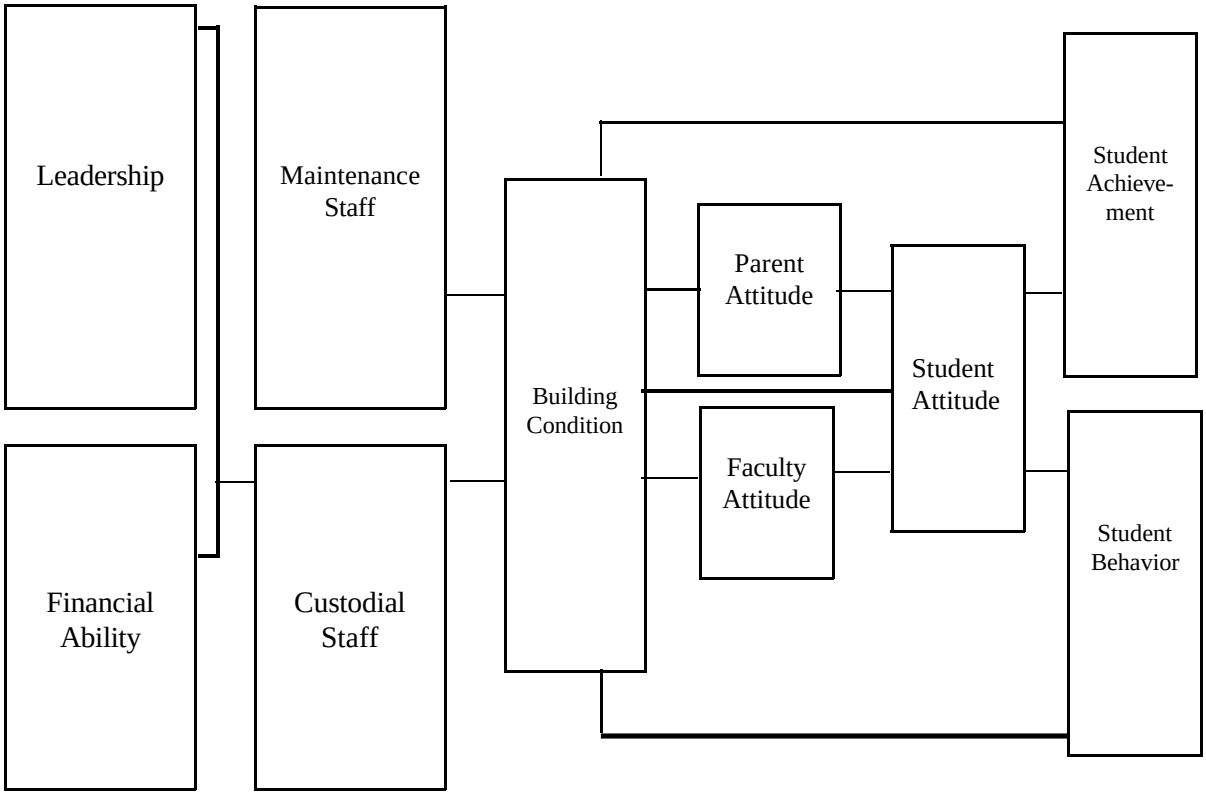


Figure 1. Model design of theoretical construction of how students learn and behave in a school building.

From: School Building Condition and Student Achievement and Behavior, (1993) Carol Cash. Unpublished dissertation. Virginia Polytechnic Institute and State University.

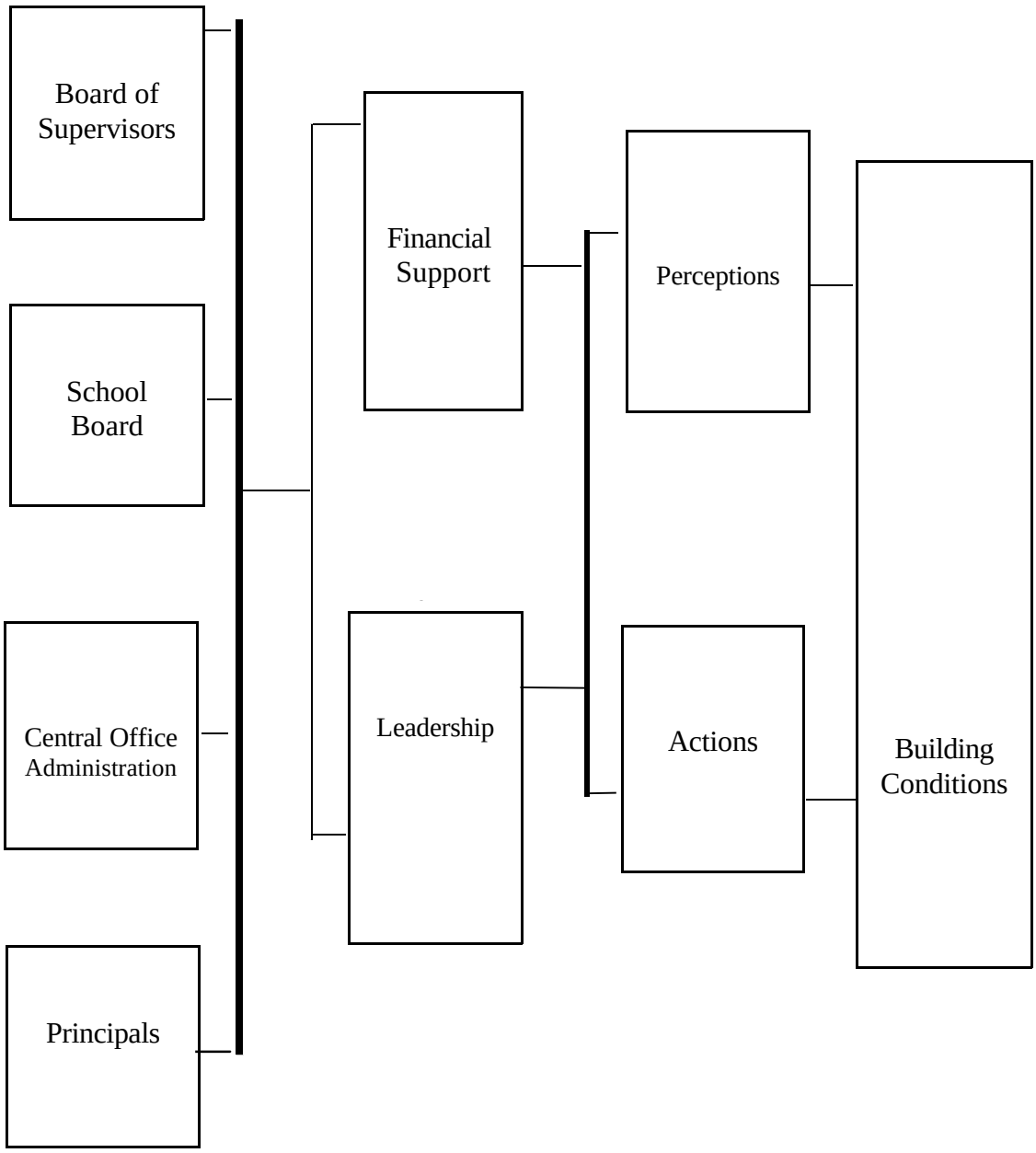


Figure 2. The effect of leadership and financial ability on the condition of school buildings.

Organization of the Study

This study of the relationship between school leadership and the condition of school buildings is divided into five chapters. Chapter 1 includes an introduction, a statement of the problem, the purpose of the study, research questions, the significance of the study, definitions, a theoretical model, and the study's organization.

Chapter 2 includes a review of the literature related to building condition environments and their effects on the educational process, student achievement, and the quality and condition of public school buildings. Also included in this chapter are leadership roles and perceived perceptions of building conditions and the related financial support allocated for improvement and renovations.

Chapter 3 contains a description of the research methodology, the setting, the population, data collection, and the method of data analysis.

Chapter 4 describes the data and the findings of the survey and provides an analysis of the data related to the research questions.

Chapter 5 contains the summary of findings, discussion, conclusion, implications for practice, and recommendations for further study.

Chapter 2

Review of the Literature

The purpose of this chapter is to provide a review of the literature which is relevant to the theoretical model that links school leadership and financial support to the quality and condition of school buildings. A context for this study was developed by exploring why building conditions are important to the educational process and reviewing specific studies which examine the significance of building and classroom conditions to student achievement. Research, which supports the public's growing concern on the quality and condition of public school buildings, was explored to determine the condition of our buildings, as reported by these studies. Research on the role of leadership in education and the variance between perception and action of school leaders toward facility improvement was presented. Finally, works relating to the apparent necessity of increased financial support needed to maintain and improve public school facilities was reviewed.

Building Conditions and the Educational Process

Most educators agree that maintaining quality school buildings is essential in the educational process for students. Lane (1991) stated that students could either be drawn to or distracted from the educational process by the facilities they inhabit. The Carnegie Foundation found that educational quality could not exist in deteriorating educational environments, and the

presence of decaying conditions sent a negative perception to parents, students, and members of the community (Carnegie Foundation for the Advancement of Teaching, 1988).

Educators, students, administrators, financiers, builders, and communities as a whole must all play a vital part in the survival of the educational process. All organizations need some type of structure in order to function effectively and efficiently. A school system is no different. Much of what is done in the school system lends itself to long-range or strategic planning, especially activities related to housing students in school buildings. Not many states, however, require local school systems to produce long-range plans. Nonetheless, school systems plan for the long term because they cannot change, improve, or respond to community needs in a short period of time. (Earthman, 1992)

Building Conditions and Student Achievement

Student achievement is directly linked to many factors, such as genes from their parents, study habits, delivery of instruction by various teachers, and overall initiative and desire to learn. Students should not deliberately fail to learn or receive enhanced learning as a result of building conditions and facility influences. Much emphasis is now placed on technology, ergonomics of a learning environment, safety of a facility, teacher-to-pupil ratio, and many other factors which are part of the 21st- century school setting. Much of the variables involved in student achievement are controlled by the aforementioned factors in addition to state and local governing bodies and

natural surroundings and conditions which affect student activities from the day they are born. Even if these are the major factors in the variance of student achievement, other outcomes of learning and attitude can be controlled through educational leadership and the climate and environment of school facilities.

Lanham (1999) conducted a study to explore the relationship between student achievement and the physical condition of school buildings and specific classrooms in Virginia's elementary schools. He surveyed elementary building principals to rate specific features of their school buildings and classrooms. Student achievement was assessed by utilizing the Spring 1990 test scores from the Virginia Standards of Learning Assessment. Lanham (1999) concluded there were certain school buildings and cosmetic characteristics, when combined with socio-economic information, that can provide partial explanations for the variance in student achievement on Standards of Learning Assessments in English, mathematics, and technology.

Lanham (1999) stated that architecture and education are linked in both a symbolic and functional relationship, which, in turn, sends a strong cultural message to citizens of the community. Thus, if the cultural message is negative, and if the building impedes rather than fosters learning, architecture and education are in conflict. Cash (1993) agrees in that influences upon student outcomes by building conditions are both direct and indirect. She proposes that indirect influences include building conditions which influence both faculty and parental attitudes, which, in turn, influence student attitudes. Consequently, student attitudes then influence student achievement and

behavior. She also goes on to show direct influence on student achievement and behavior stemming from structural or environmental factors.

Earthman (1994) reported on findings which he felt presented a compelling case for addressing public school facilities issues in a manner similar to support requirements necessary to maintain the infrastructure of roads, airports, and municipal public buildings. However, school systems, in general, are most apt to remain in a catch-up position in maintaining their aging infrastructure.

A study conducted by Edwards (1991) examined the relationship between building quality and condition and student achievement. She found in the Washington, D. C. public school system that (a) students assigned to schools in poor condition can be expected to fall 5.5 percentage points below those students attending schools in fair condition, and (b) students assigned to school in poor condition can be expected to fall 11 percentage points below those students attending schools in excellent condition. She concluded that a positive correlation did exist between building condition and student achievement.

Quality and Condition of Public School Buildings

A meeting of the American Association of School Administrators (AASA) was convened in January 1992 to examine the issue of the condition of America's public schools. Nationwide attention was being given to the restructuring of public education, however this group's concern was that little was being said about the schools' building structures themselves. Therefore,

the AASA undertook a project to conduct a nationwide survey of the quality and condition of America's school buildings. The results of this survey were published in a report entitled Schoolhouse in the Red: A Guidebook for Cutting Our Losses (AASA, 1992).

This study, for example, asked just what is meant by poor facilities and just what to do about them. This national examination of the quality and condition of school facilities, a survey designed by the Educational Research Service, revealed that, indeed, the quality and condition of public schools throughout the United States were in jeopardy. Additional concerns were expressed regarding the abilities of state and local governments to properly fund the needed maintenance in order to improve these school facilities.

From January 1994 through February 1995, the United State General Accounting Office conducted a comprehensive study on the condition of public school facilities throughout the United States. The GAO reviewed whether America's schools (a) provide the key facilities requirements and environmental conditions for education reform and improvement; (b) have appropriate technologies and the facility infrastructure to support new technologies; and (c) have the physical capacity to support learning into the 21st century. (GAO Report HEHS-95-95, 1995)

The General Accounting Office survey found the following:

1. Most school are, indeed, unprepared for the 21st century.

2. At least three-quarters of schools have sufficient computers and television, although they do not have the infrastructure to fully use these technologies.

3. One-third of schools with sufficient computers are not networked, limiting their access to available electronic information.

4. About 40 percent of schools cannot adequately meet the functional requirements for laboratory science or large-group instruction.

5. About 54 percent of schools have unsatisfactory instructional space to implement effective teaching strategies.

6. Schools in the same division often differ because the construction of new facilities takes precedent over maintaining and renovating existing facilities.

7. Air-conditioning affects learning because it is necessary for schools to operate effectively in hot weather or use computers. (GAO Report HEHS-95-95, 1995)

The GAO compiled research for all states relative to technological insufficiencies in their schools. Table 1 takes excerpts from this report and compares research of six area states and the percentage of schools which reported insufficient elements present in their school buildings for preparation for the 21st century.

Table 1

Schools in Selected States Reporting Percentage of Insufficient Elements Present in School Buildings for Preparation for the 21st Century

	Ohio	North Carolina	West Virginia	Kentucky	Virginia	Tennessee
Insufficient technology						
Computers	38.2	30.1	16.5	13.1	31.3	20.4
Printers	50.7	33.3	17.2	19.8	37.7	22.8
Networks	78.8	51.1	32.3	35.5	56.5	48.0
Modems	74.0	62.2	56.8	57.2	54.1	62.7
Modem phone lines	70.5	62.6	51.5	55.7	52.9	65.6
Instructional phone lines	76.2	73.0	71.0	67.2	56.0	68.0
TV's	16.0	15.2	4.2	3.2	4.1	6.9
Laser disks/VCR players	44.1	30.9	30.8	23.2	36.7	37.1
Cable TV	31.3	24.5	14.4	8.0	18.4	27.1
Conduits	76.6	66.0	49.9	49.8	57.5	58.0
Cable	95.0	92.3	93.2	75.2	93.5	94.3
Wiring	63.0	55.4	36.2	35.8	36.1	38.8
Electric power	50.6	41.8	18.0	25.1	29.5	25.4

table continues

	Ohio	North Carolina	West Virginia	Kentucky	Virginia	Tennessee
Activities						
Small group instruction	17.6	5.6	19.0	4.0	10.0	7.5
Large group instruction	42.7	36.9	49.7	30.5	31.9	24.9
Store student assessment	43.1	27.9	40.3	26.2	38.3	19.4
Display student assessment materials	33.0	26.6	38.7	19.4	35.8	22.3
Parent support	30.0	17.1	27.4	22.4	30.6	18.2
Social/health services	31.7	21.4	47.3	26.8	25.0	40.8
Teacher planning	17.2	16.1	15.5	7.8	18.9	8.4
Private counseling and testing areas	31.6	24.6	38.9	20.1	18.6	22.9
Labs	50.6	38.4	43.1	35.2	40.8	43.8
Library	16.8	7.2	28.4	6.0	13.5	7.8
Day care	88.9	69.1	93.9	77.8	88.4	79.2
Before/after school care	69.5	33.4	81.1	62.0	56.9	52.4
Environmental needs						
Lighting	13.9	17.4	23.9	14.6	14.4	8.3
Heating	24.9	14.0	34.1	17.7	16.6	17.1
Ventilation	33.3	23.4	46.5	25.6	21.7	19.2
Indoor air quality	18.6	17.7	31.3	19.2	19.8	16.0
Acoustics	39.6	29.5	44.0	26.4	24.0	21.5
Flexible space	80.6	59.0	68.7	50.5	37.5	48.6
Physical security	23.5	21.8	34.4	21.0	20.6	27.9

table continues

Note. From “School Facilities: America’s School not Designed or Equipped for the 21st Century,” General Accounting Office, 1995, Publication No. HEHS-95-95. Reprinted with permission.

The American Association of School Administrators survey (1991) reported the following problems as reasons for inadequate facilities: (a) old age, (b) overcrowding, (c) flaws in structures or mechanical systems, (d) environmental hazards, and (e) electrical capacity. This goes along with the GAO report in Table 1 which shows that most schools in the six selected states are below 50 percent in the adequate building elements needed for preparation for the 21st century.

Role of Leadership

Leadership within a school system can be defined to include the principal, the superintendent, central office staff, the school board, and the board of supervisors. This leadership structure can determine the amount of emphasis placed on any educational reform movement which could include improvement of the quality and condition of school buildings. According to Lanham (1999), leaders in public school buildings who see value in facilities will give them a high priority. Their decisions to maintain facilities appropriate to conducive learning environments, however, are tempered by local financial ability.

Stinnette, Peterson, and Hallinger (1997) developed a checklist for principals to help them reflect upon leadership and practices in their particular schools. The checklist was designed to stimulate principals' thinking about what they are doing and what they might consider doing in the future as well as give thought to some items, which describe an effective leader. It included such questions as the following:

1. Do leaders communicate their values and mission in the things they do, how they spend their time, and what they consider important?

2. Is authority in schools based more on professional knowledge and competence than on position and rules?

3. Do leaders create a culture that supports risk-taking and encourages innovation?

4. Are principals open to multiple approaches and solutions rather than reliance on single answers and past practices?

5. Is decision making consensual and inclusive as opposed to top-down and non-participatory?

6. Do leaders accept conflict as “normal” and use it as a stimulus for change, or is it viewed as “bad” and something simply to be controlled?

7. Is communication in the school open and fluid as opposed to regulated by traditional chains of command?

8. Do we create an environment that is safe, supportive, and conducive to learning?

9. Do leaders model lifelong learning for others by sharing new learning, successes, and failures? (p. 1)

By answering questions such as these, school leaders can easily assess their abilities to work together with a community of learners to articulate a shared purpose and educational vision focused on learning.

According to Douglas Reeves (1998), accountability falls disproportionately on superintendents and principals. Boards of education, frustrated that student achievement has not sufficiently improved, are, therefore, selected based on promises of change, and leadership positions are

the most visible indicators of apparent stagnation. Thus, the promise for achievement to “improve or heads will roll” sums up a facile approach to the current challenges of educational leadership.

Reeves (1998) stated that accountability must be more than a promise of change. It provides a clear strategic direction, properly implemented, for schools and their leaders with a direct focus on student achievement and specific strategies that will be used at the school level to create improvement. Through examining the relationship between perceptions and actions of educational leaders and the condition of school facilities, educators will be better able to initiate and implement positive change in building conditions. Since building conditions play an integral role in providing a proper learning environment for student achievement, this study can initiate the onset of improved facility budget decisions and develop attitudes that seek improvements on school buildings.

Perceptions and Actions of School Board Members

Moulton (1998) prepared a study on the perceptions of selected school board members regarding the quality and condition, maintenance, and improvement and renovation of existing public school facilities. This study assessed school board members nationally for the first time regarding their perceptions on these issues. Moulton (1998) stated that a school building can contribute to a positive school climate conducive to teaching and learning. The support given in this area is an important ingredient to this belief. School board members are responsible for policy and budget decisions that determine

the level of support for such facility maintenance and improvement and renovation. Thus, these decision are made in conjunction with competing demands for limited fiscal resources needed to address all school issues, not just those for building conditions. (Moulton, 1998)

Moulton (1998) utilized a descriptive research methodology for this study. The data collected reported that the majority of the respondents reported their schools to be 25-50 years old. The majority also indicated that their perceptions of the overall quality and condition of their schools were either better than adequate or adequate. Regarding the existence of a plan to evaluate the quality and condition of their school facilities, more than half indicated that they had a formal assessment plan in place. (Moulton, 1998)

Moulton's (1998) study went on to report that most board members perceive themselves as proactive in addressing maintenance issues, and nearly three quarters of the respondents indicated that maintenance of school facilities was one of their top priorities. It was also found that more than two thirds reported that less than 5 percent of the total school system budget was designated for this purpose; however, most respondents said that this is an adequate percentage of funding needed to accomplish maintenance tasks.

Critical input toward the impetus for board action with respect to the improvement and renovation of existing school facilities, according to Moulton (1998), relies on the input from the school division superintendent and staff. This input, in turn, stems directly from various concerns about maintaining the quality and condition of existing school facilities and gives the board members needed information upon which to base their decisions regarding the improvement and renovation of school facilities. Therefore,

ongoing and careful reviews and analyses of facility conditions in relationship to educational programs need to be conducted, and the awareness and shared outcomes should be reported to school board members on an ongoing basis. (Moulton, 1998)

Financial Support to Improve Educational Facilities

Constitutionally, education is the responsibility of the state, and school building construction and maintenance are generally the local division's responsibility. The lack of funds to implement state and federal mandates places a financial burden on local divisions, and, in most cases, divisions must rely on taxpayers' ability or willingness to help meet capital expenses (Lewis, 1988).

Earthman (1992) agrees that the local school system has the largest responsibility for funding school construction and maintenance. He further states that the local school system has a very limited tax base upon which to secure needed funding for capital construction. The local real estate tax is the sole source of revenue for school systems for both operational funds and capital funds.

It is also Earthman's (1992) belief that the local school systems can receive state assistance for capital projects through loan programs. Under such programs a fund is established from which school systems may receive loans secured by the title to the property on which the school is sited. The local school system may borrow a set amount of money to be used in constructing a school building. The payback for the loan is usually over a 20-

year period. Presently six states have such a loan program: Arkansas, California, Indiana, Minnesota, North Dakota, and Virginia (Earthman, 1992).

Many studies have found that America's public schools are in a current crisis. However, the nation is confronting that crisis by talking it to death. Crumbling schools present a real problem. Not only are many of them in the words of one critic, "profoundly unhappy places," but certainly no less than roads and bridges, they are part of the deteriorating economic infrastructure on which our competitiveness as a nation depends (Barr-Kuman, 1997). State and local leaders are very much aware of this problem. However, the means to "fix" it remain up in the air with less and less time for securing an adequate remedy.

It is evident that our national and state political leaders are listening to public concerns regarding educational facilities. President Clinton has proposed a $5 billion, four-year school construction initiative. The key elements of this proposal are as follows:

1. Expected enrollment growth imposes additional burdens and has prompted the need for many school divisions to face the need to build new schools, with public school enrollment in grades K-12 expected to rise 20 percent between 1990 and 2004.

2. The initiative will reduce interest costs on new school construction and various renovation projects by up to 50 percent, with a sliding subsidy scale depending on need.

3. Twenty billion dollars in school construction will be spurred by $5 billion in federal jump-start funding over four years with most of the money administered by the states.

4. A goal of 25 percent increase in school construction over four years is included. (Summary, President Clinton, 1996)

It is felt by many experts that even though the President's efforts are commendable, they are only a "drop in the bucket." The Commonwealth of Virginia has taken further steps in its role in financing education and has continued to make available a Literary Fund which is used to provide low-interest loans for public school construction and to make debt service payments on technology equipment (Tillett, 1998). According to Tillett (1998), as of June 1997, the Literary Fund's principal totaled approximately $414 million and includes an estimated $123 million will be available for public school construction and improvements over the 1998-00 biennium. In going hand-in-hand with the desired outcome of student achievement, this budget includes additional funding for programs such as (a) the Standards of Quality, (b) teacher salary increases of 2.25 percent in each fiscal year, (c) the new Standards of Learning Remediation Program, (d) the new Standards of Learning Teacher Training Program, and (e) additional elementary teachers. According to Edwards (1991), however, until more funds for school improvements actually become available, facilities improvement will have to be achieved through local efforts.

Summary

The purpose of this chapter was to review the literature which is relevant to the theoretical model that possibly links school leadership and financial support to the quality and condition of school buildings.

Chapter 3

Methodology

The purpose of this study was to examine the relationship between certain school building conditions and leadership and financial support in a county school system. The five purposes of this chapter are to a) identify the setting, b) explain the population, c) describe methods of data collection, and d) provide an explanation of procedures used to analyze the data.

Research Methodology

Descriptive research methodology was used in this study. “A descriptive study describes and interprets what is. It is concerned with conditions or relationships that exist, opinions that are held, processes that are going on, effects that are evident, or trends that are developing” (Best & Kahn, 1989, p. 76).

Setting

The county used in this study covers 565 square miles and is home to approximately 50,000 people. The county has a board of supervisors and county administrator form of government. There are three incorporated towns within the county. The public schools are a division of the local government and are fiscally dependent upon the board of supervisors for all funds. This

county has seven elementary schools, four middle schools, four high schools, two vocational/technical schools, and an adult skill center. These schools serve approximately 7,500 students. There are approximately 600 professional staff and 300 support staff in the county's school system. Per-pupil expenditure is approximately $5,600.00, compared to the Virginia mean average of $6,400.00. The county's educational program provides a curriculum, founded on the basics of language arts, math, science, and social studies, that is designed to meet and exceed the Standards of Learning set forth by the Commonwealth of Virginia.

The county's school board includes seven members representing the seven magisterial districts of the county. Members are elected to the board by public vote in each respective magisterial district.

Three of the county's high schools' instructional day consists of seven 50-minute periods, 180 days per year. The fourth high school is on a modified block schedule which includes two 90-minute blocks and three single 50-minute periods. The middle school and elementary instructional days consist of 5½ hours of instruction per day, 180 days per year. The vocational/technical schools offer curriculum-based, half-day programs for occupational preparation options. A varied curriculum at the secondary level, special programs, technology-oriented classes and extracurricular offerings such as mentorship programs, governor's school, and dual college enrollment provide opportunities for students to develop academic achievement, leadership skills, and healthy civic and social attitudes.

The countywide grading policy is designed to evaluate a student's academic progress, and standardized test scores are also used to reflect how a

student's performance compares to that of others in the same age group or grade. The recently mandated Standards of Learning (SOL) tests by the Commonwealth of Virginia is another tool for measuring student performance.

Population

For this study, the school board members, the superintendent and central office staff, and principals of a local school division in Southwest Virginia, and the county's board of supervisors were surveyed to obtain data. The population consisted of 7 school board members, 13 administrative staff members in the central office, 7 board of supervisors members, and 16 principals and an assistant principal. It should be noted that the seventeenth principal conducted the research, and the assistant principal of that particular school served as the respondent to this survey.

Data Collection

Data on the physical condition of school buildings were collected. These data were collected using a combination of the Commonwealth Assessment of Physical Environment (CAPE, Cash 1993) instrument and the Assessment and Building and Classroom Conditions in Elementary Schools in Virginia (Lanham, 1998) which were developed into a survey instrument entitled Assessment of Physical Environment. These data were collected by an independent building contractor with no affiliation to the local school

division. This contractor was trained in administering the Assessment of Physical Environment survey instrument in November 1999 and evaluated the schools in December 1999. Based upon results of the Assessment of Physical Environment survey instrument, school buildings were categorized into three classes: a) below standard, b) standard, and c) above standard.

The CAPE assessment instrument was originally developed by Carol S. Cash by reviewing current available facility assessment instruments and research regarding facility factors which may affect student achievement. This instrument was divided into structural and cosmetic items. It was validated by three people experienced in facility assessment and field tested by eight Virginia Beach high school administrators. Interrater reliability of the assessment instrument was determined by comparing ratings of randomly selected assessments by Cash with the actual assessments completed by school personnel. This instrument asked objective questions regarding the condition of school facilities. Results of this assessment were then used by Cash to arrive at a rating of the building of either (a) substandard, (b) standard, or (c) above standard.

The Assessment of Building and Classroom Conditions in Elementary Schools in Virginia was developed by James W. Lanham III in November, 1998. Questions from this assessment provided input from each school surveyed in regard to technology services and computer networking.

Data on the perception of physical condition of school buildings by school board members, superintendent and central office staff, board of supervisors, and principals were gathered. These data were produced from a survey used to examine the perceptions of school board members,

superintendent and central office staff, board of supervisors, and principals regarding the quality and condition, maintenance and improvements, and renovation of existing public school facilities.

Selected questions from the Moulton (1998) survey were used to construct similar surveys designed to gather data on the perceptions of principals, school board personnel, superintendent, board of supervisors, and school board members regarding their beliefs on the conditions of school buildings. The items in Moulton's (1998) survey were developed by analyzing previous studies, interviews with educational experts, and by reviewing the literature. The content of this survey was checked for validity and reliability by a former school board chairman, assistant superintendent for facilities, a maintenance director, and the Research Department of The American School Board Journal.

Perception surveys were mailed in December 1999 to school board members and the board of supervisors with a cover letter and a self-addressed, stamped envelope. A follow-up postcard reminder was mailed. A second follow-up, which would have utilized telephone contacts in an effort to increase the data collection return rate, was not needed. Perception surveys for the superintendent, central office staff, and principals were given out in bulk form during a group meeting in December 1999 with immediate, anonymous collection at the conclusion of the meeting. There were no incomplete or unreturned surveys.

Data on the budget process for the last five years in the local school division were collected as follows:

1. Individual school building maintenance and improvement budgetary requests submitted by principals to the central office were used to determine the need of each building. This was listed by building needs and resources required for building improvement.

2. Central office maintenance and improvement budgetary requests submitted to the school board were examined to determine the amount of these requests sent to the school board which includes total budget amount requested and a prioritized list of work to be completed.

3. School board maintenance and improvement budget allocated for each individual school building with any reductions or additions to amount requested were used.

4. Board of supervisors' approval of school board budget and any reductions or additions to the amount requested were used.

Data Analysis

This study has three major data components. These components are (a) a survey of perceptions of school board members, superintendent and central office staff, board of supervisors, and principals on the condition of school buildings; (b) findings of an independent contractor of condition of school buildings by administering an assessment of building classrooms and general building conditions; and (c) the cyclical budgetary process of building maintenance and improvement requests from leadership within the school division over the past five years.

The survey responses of school board members, superintendent and central office staff, board of supervisors, and principals on the condition of school buildings were used in compiling descriptive statistics and correlations. The actual observation data accumulated by the independent contractor were analyzed by percentage of scaled scores in each category and were compared to the perception of the leadership surveys on school building conditions. The data derived from scaled scores of the independent contractor and the data from the perceptions surveys were then placed into the following categories: a) above standard, b) standard, or c) below standard. Descriptive comparison of budget requests for building maintenance and improvements, central office administration requests, and school board budget allocations were used in determining the extent of responsiveness by school board members, superintendent and central office staff, board of supervisors, and principals to the future of the quality and condition of school buildings by utilizing percentage difference.

Survey items were constructed to obtain a specific rating which were categorized into above standard, standard, or below standard. Where certain questions had a choice of one of five answers, answers one and two were categorized as above standard; answer three was categorized as standard; and answers four and five were categorized as below standard. Where certain questions had a choice of only three answers, these answers corresponded directly with above standard, standard, or below standard. In all cases, the responses were structured to offer the most positive response first.

A comparison was made among the results of the perceptions survey of school board members, superintendent and central office staff, principals, and

board of supervisors and the Assessment of Physical Environment on building classrooms and general building conditions of each individual school building to determine if the perceptions of these individuals were congruent to the actual building conditions. Finally, these data were categorized into the following groups: a) above standard, b) standard, or c) below standard.

Frequency tables and percentage of responses were constructed to display results of the 10 survey questions administered to school board members, central office staff and superintendent, principals, and board of supervisors.

Budget requests for a five-year period, 1995-1999, and allocations per school for building maintenance and improvements and capital outlay projects were categorized in regard to each of the county's 17 schools, the principals' requests, the central office requests and percentage of difference, and school board allocations and the percentage of difference. Further comparisons were made in regard to these budget requests based on building square footage and the allocations in schools rated as above standard, standard, or below standard. Sources for the budgetary data were derived from principals' annual budget requests for maintenance and capital improvements, central office budgetary requests to the school board, and the school board's budget allocation presented to the board of supervisors for final approval.

Summary

The purpose of this chapter was to describe the methodology of this study, to describe instruments used in collecting the data, the data collection procedure, and methods used in analyzing the data collected.

Chapter 4

Findings

The purpose of this study was to examine the relationship between school leadership on the quality and condition, and maintenance and improvements of public school buildings. This chapter contains the findings of the three research questions in this paper. The first question dealt with the relationship between building conditions and perceptions of school board members, superintendent and central office staff, board of supervisors, and principals on building conditions and their subsequent actions. The second question dealt with the relationship among building conditions, budget requests by building administrators, and the financial support of the school board. The third question was concerning the relationship between the behavioral effort of leadership and the condition of school buildings. Upon selecting the research topic, it was hoped this study would lead to identifying, recognizing, and defining a relationship between leadership and financial support and the condition of school buildings and, in the process, show whether there is a relationship between what the leadership perceives and the action taken.

Description of the Population and Sample

For this study, the school board members, superintendent and central office staff, and principals of a local school division in Southwest Virginia

and the county's board of supervisors were surveyed to obtain data. The population consisted of 7 school board members, 13 administrative staff members in the central office, 7 board of supervisors members, and 16 principals and an assistant principal. The principal at one of the high schools conducted this research and disqualified himself from participation. The assistant principal at this school completed the survey instrument so that the school would be included in the results of the study.

During the week of December 6, 1999, the school board members and board of supervisors were mailed surveys (Appendices A and D), along with a cover letter and postage-paid, self-addressed return envelopes. Recipients were asked to complete the surveys and return them in the envelopes provided as soon as possible. A follow-up postcard reminder was sent three weeks later to each member of the survey group. Over a five-week period ending January 12, 2000, 14 surveys (100 percent) were returned and subsequently analyzed. On December 20, 1999, surveys (Appendices B and C) were given out to the superintendent, central office staff, and principals during a group staff meeting. The respondents completed the surveys at that time and were collected by two principals and delivered to the researcher in anonymous bulk form. At the conclusion of the meeting, 30 surveys (100 percent) were returned and subsequently analyzed. Table 2 contains data relative to the distribution of surveys mailed and returned by the respondents.

Table 2

Distribution of Surveys Mailed and Returned by Survey Groups

Survey Group	Number Surveys Mailed	Number Surveys Returned	%
School Board Members	7	7	100
Board of Supervisors	7	7	100
Superintendent & Central Office Staff	13	13	100
Principals*	17	17	100

*One Assistant Principal

Survey Responses

Following are the findings from the collective survey group. These findings were gathered through data collected through surveys and summarize the perceptions of each group surveyed.

Question I asked the survey group their perceptions regarding the extent to which the school facilities meet the needs of the educational program. Table 3 shows the results of the responses of the school board members, board of supervisors, superintendent and central office staff, and principals regarding this question. The majority of all groups felt that most of the facilities meets the needs of the educational program with the board of

Table 3

Distribution of Survey Group's Perceptions Regarding School Facilities Meeting the Needs of the Educational Program

Group	Characteristic	N	%
School Board Members	All facilities meet the needs	1	14.3
	Most facilities meet the needs	4	57.1
	Some facilities meet the needs	2	28.6
	Few facilities meet the needs	0	0.0
	None meet the needs	0	0.0
		7	100.0
Board of Supervisors	All facilities meet the needs	0	0.0
	Most facilities meet the needs	5	71.4
	Some facilities meet the needs	2	28.6
	Few facilities meet the needs	0	0.0
	None meet the needs	0	0.0
		7	100.0
Superintendent and Central Office Staff	All facilities meet the needs	2	15.4
	Most facilities meet the needs	9	69.2
	Some facilities meet the needs	2	15.4
	Few facilities meet the needs	0	0.0
	None meet the needs	0	0.0
		13	100.0
Principals	All facilities meet the needs	2	11.8
	Most facilities meet the needs	8	47.0
	Some facilities meet the needs	6	35.3
	Few facilities meet the needs	1	5.9
	None meet the needs	0	0.0
		17	100.0

supervisors' perceptions being the highest at 71 percent. However, over one fourth of the participants surveyed felt that only some of the facilities meet the needs of the educational program.

More principals felt only some of the facilities meet the needs than the other three groups. The superintendent and central office staff and school board members showed a higher response to the evaluation that all facilities meet needs than did the principals.

When the bottom three categories are combined, 41 percent of the principals rated the buildings as some, few, or none of the facilities meet the educational needs as contrasted to 15 percent for the superintendent and central office staff, 26 percent for board of supervisors, and 28 percent for school board members.

Question II asked the survey group their perceptions as to what extent school facilities are technologically adequate for the future. Table 4 compares the perceptions of school board members, board of supervisors, superintendent and central office staff, and principals regarding this question. While over half of the school board members and board of supervisors surveyed, 57 percent, felt that school facilities are adequate for the future or will be with the implementation of planned improvements, only 12 percent of the principals and 15 percent of the superintendent and central office staff respondents reported adequacy for the future.

Over half, or 58 percent, of the principals felt the schools were either less than adequate or were not adequate. This is contrasted to the responses of the school board members where none of them responded to these categories.

Table 4

Distribution of Survey Group's Perceptions Regarding the Extent to Which School Facilities are Adequate for the Future

Group	Characteristic	N	%
School Board Members	All are adequate	1	14.3
	All will be adequate with implementation of planned improvements	4	57.1
	More than half are adequate	2	28.6
	Less than half are adequate	0	0.0
	None are adequate	0	0.0
	Total	7	100.0
Board of Supervisors	All are adequate	0	0.0
	All will be adequate with implementation of planned improvements	4	57.1
	More than half are adequate	1	14.3
	Less than half are adequate	2	28.6
	None are adequate	0	0.0
	Total	7	100.0
Superintendent and Central Office Staff	All are adequate	0	0.0
	All will be adequate with implementation of planned improvements	2	15.4
	More than half are adequate	5	38.4
	Less than half are adequate	5	38.4
	None are adequate	1	7.8
	Total	13	100.0

table continues

Group	Characteristic	N	%
Principals	All are adequate	0	0.0
	All will be adequate with implementation of planned improvements	2	11.8
	More than half are adequate	5	29.4
	Less than half are adequate	9	52.9
	None are adequate	1	5.9
	Total	17	100.0

Question III asked the survey group their perceptions as to the priority of maintaining school facilities. Table 5 compares the results of the responses of school board members, board of supervisors, superintendent and central office staff, and principals regarding this question. The majority of all groups surveyed reported that maintaining school facilities either a top priority or one of their top priorities, with the principals reporting 94 percent followed by the board of supervisors at 86 percent. Approximately 70 percent of the school board members and the superintendent and central office staff reported that maintaining school facilities as a top priority or one of the top priorities. One third of the school board members and the superintendent and central office staff reported that maintaining school facilities is a middle priority.

Question IV asked the survey group their perceptions as to the adequacy of the amount of money budgeted for the maintenance of school facilities. Table 6 displays the results of the responses of school board members, board of supervisors, superintendent and central office staff, and principals regarding this question. School board members and the board of supervisors, with 100 percent, reported that they believed the amount of money budgeted for the maintenance of school facilities is adequate. Eighty-five percent of the superintendent and central office staff respondents and 82 percent of the principals stated that the money budgeted for the maintenance of school facilities was either adequate or more than adequate. Fifteen percent of the superintendent and central office staff and 18 percent of the principals felt that the amount budgeted was less than adequate.

Table 5

Distribution of Survey Group's Perceptions Regarding the Priority of Maintaining School Facilities

Group	Characteristic	N	%
School Board Members	A top priority	0	0.0
	One of the top priorities	5	71.4
	A middle priority	2	28.6
	A low priority	0	0.0
	Not a priority	0	0.0
	Total	7	100.0
Board of Supervisors	A top priority	0	0.0
	One of the top priorities	6	85.7
	A middle priority	1	14.3
	A low priority	0	0.0
	Not a priority	0	0.0
	Total	7	100.0
Superintendent and Central Office Staff	A top priority	2	15.4
	One of the top priorities	7	53.8
	A middle priority	4	30.8
	A low priority	0	0.0
	Not a priority	0	0.0
	Total	13	100.0
Principals	A top priority	0	0.0
	One of the top priorities	16	94.1
	A middle priority	1	5.9
	A low priority	0	0.0
	Not a priority	0	0.0
	Total	17	100.0

Table 6

Distribution of Survey Group's Perceptions Regarding the Adequacy of the Amount of Money Budgeted for the Maintenance of School Facilities

Group	Characteristic	N	%
School Board Members	More than adequate	0	0.0
	Adequate	7	100.0
	Less than adequate	0	0.0
	Total	7	100.0
Board of Supervisors	More than adequate	0	0.0
	Adequate	7	100.0
	Less than adequate	0	0.0
	Total	7	100.0
Superintendent and Central Office Staff	More than adequate	3	23.1
	Adequate	8	61.5
	Less than adequate	2	15.4
	Total	13	100.0
Principals	More than adequate	1	5.9
	Adequate	13	76.4
	Less than adequate	3	17.7
	Total	17	100.0

Question V asked the survey group if they receive enough information regarding the need to improve and renovate existing school facilities in order to make effective decisions. Table 7 compares the results of the responses of the school board members, board of supervisors, superintendent and central office staff, and principals regarding this question. All of the groups surveyed felt they received enough information in order to make effective decisions regarding the need to improve and renovate existing school facilities, with the exception of the principals who reported nearly 60 percent adequacy in receiving enough information with 35 percent reporting less than enough information received.

Question VI asked the survey group if, in their opinion, the amount of money spent on the improvement and renovation of school facilities is adequate. Table 8 compares the results of the responses of the school board members, board of supervisors, superintendent and central office staff, and principals regarding this question. The majority of the respondents reported the money spent on the improvement and renovation of school facilities, in their opinion, is adequate with the school board members and board of supervisors reporting at 100 percent. However, nearly one fourth of the principals felt that the amount of money spent on the improvement and renovation of school facilities is less than adequate.

Question VII asked the survey group their perceptions regarding the overall condition of schools, taking into consideration all buildings, classrooms, and technology characteristics. Table 9 displays the results of responses of the school board members, board of supervisors, superintendent and central office staff, and principals regarding this question. The majority

Table 7

Distribution of Survey Group's Perceptions Regarding the Amount of Information Received in Order to Make Effective Decisions Regarding the Need to Improve and Renovate Existing School Facilities

Group	Characteristic	N	%
School Board Members	More than enough	1	14.3
	Enough	6	85.7
	Less than enough	0	0.0
	Total	7	100.0
Board of Supervisors	More than enough	1	14.3
	Enough	6	85.7
	Less than enough	0	0.0
	Total	7	100.0
Superintendent and Central Office Staff	More than enough	2	15.4
	Enough	9	69.2
	Less than enough	2	15.4
	Total	7	100.0
Principals	More than enough	1	5.9
	Enough	10	58.8
	Less than enough	6	35.3
	Total	17	100.0

Table 8

Distribution of Survey Group's Perceptions Regarding the Amount of Money Spent on the Improvement and Renovation of School Facilities

Group	Characteristic	N	%
School Board Members	More than adequate	0	0.0
	Adequate	7	100.0
	Less than adequate	0	0.0
	Total	7	100.0
Board of Supervisors	More than adequate	0	0.0
	Adequate	7	100.0
	Less than adequate	0	0.0
	Total	7	100.0
Superintendent and Central Office Staff	More than adequate	4	30.8
	Adequate	8	61.5
	Less than adequate	1	7.7
	Total	13	100.0
Principals	More than adequate	1	5.9
	Adequate	12	70.6
	Less than adequate	4	23.5
	Total	17	100.0

of the respondents, with the exception of the principals, reported that the overall condition of schools is either outstanding or very good with the superintendent and central office staff's perceptions being the highest at a combined 85 percent in this area. Forty-three percent of the school board members reported that their perceptions of the overall condition of school was outstanding with 59 percent of principals rating the overall condition of schools as satisfactory or needing improvement. Only the principals reported the buildings needed improvement. All other respondents reported the buildings either satisfactory, very good, or outstanding. None of the principals, however, reported the buildings in outstanding condition.

Question VIII asked the survey group their perceptions regarding the overall cosmetic condition of classrooms and the schools' interiors. The respondents were to consider such locations as hallways, auditorium, and offices within the school. Table 10 displays the results of the school board members, board of supervisors, superintendent and central office staff, and principals regarding this questions. One hundred percent of the school board members rated the overall cosmetic condition of classrooms and the schools' interiors as outstanding or very good. Seventy-one percent of the board of supervisors and 77 percent of the superintendent and central office staff perceived the overall cosmetic condition of classrooms and the schools' interiors as outstanding or very good. Fifty-nine percent of the principals perceived the overall cosmetic condition of classrooms and schools' interior as outstanding or very good, and 30 percent of the principals perceived the overall cosmetic condition to be satisfactory. Only two principals perceived their buildings as needing improvement.

Table 9

Distribution of Survey Group's Perceptions Regarding the Overall Condition of Schools

Group	Characteristic	N	%
School Board Members	Outstanding	3	42.8
	Very good	1	14.4
	Satisfactory	3	42.8
	Needs improvement	0	0.0
	Poor	0	0.0
	Total	7	100.0
Board of Supervisors	Outstanding	0	0.0
	Very good	5	71.4
	Satisfactory	2	28.6
	Needs improvement	0	0.0
	Poor	0	0.0
	Total	7	100.0
Superintendent and Central Office Staff	Outstanding	1	7.7
	Very good	10	77.0
	Satisfactory	2	15.3
	Needs improvement	0	0.0
	Poor	0	0.0
	Total	13	100.0
Principals	Outstanding	0	0.0
	Very good	7	41.2
	Satisfactory	4	23.5
	Needs improvement	6	35.3
	Poor	0	0.0
	Total	7	100.0

Table 10

Distribution of Survey Group's Perceptions Regarding the Overall Cosmetic Condition of Classrooms and Schools' Interiors

Group	Characteristic	N	%
School Board Members	Outstanding	2	28.6
	Very good	5	71.4
	Satisfactory	0	0.0
	Needs improvement	0	0.0
	Poor	0	0.0
	Total	7	100.0
Board of Supervisors	Outstanding	2	28.6
	Very good	3	42.8
	Satisfactory	2	28.6
	Needs improvement	0	0.0
	Poor	0	0.0
	Total	7	100.0
Superintendent and Central Office Staff	Outstanding	4	30.8
	Very good	6	46.1
	Satisfactory	3	23.1
	Needs improvement	0	0.0
	Poor	0	0.0
	Total	13	100.0
Principals	Outstanding	2	11.8
	Very good	8	47.0
	Satisfactory	5	29.4
	Needs improvement	2	11.8
	Poor	0	0.0
	Total	17	100.0

Question IX asked the survey group their perceptions of the overall cosmetic condition of the school buildings' exteriors. Table 11 compares the results of the responses of the school board members, board of supervisors, superintendent and central office staff, and principals regarding this question. One hundred percent of the school board members and board of supervisors surveyed perceived the overall cosmetic condition of the schools' exteriors to be outstanding or very good. In fact, the responses of the school board members and board of supervisors were exactly identical. Over three fourths of the superintendent and central office staff reported the overall cosmetic condition of the schools' exteriors to be outstanding or very good with only 47 percent of the principals reporting the condition to be outstanding or very good. Over one half of the principals perceived the overall cosmetic condition of the schools' exteriors to be satisfactory or needing improvement.

Question X asked the survey group how they would rate the overall maintenance of school buildings. Table 12 displays the results of the responses of the school board members, board of supervisors, superintendent and central office staff, and principals regarding this question. One hundred percent of the school board members surveyed reported that their perception regarding the overall maintenance of school buildings as being outstanding or very good. This figure was around 71 percent for the board of supervisors with about 29 percent perceiving the overall maintenance to be only satisfactory. Of the superintendent and central office staff surveyed, 85 percent reported the overall maintenance of school buildings to be outstanding or very good. Fifty-three percent of the principals, however, believed the overall maintenance of school buildings to be outstanding or

Table 11

Distribution of Survey Group's Perceptions Regarding the Overall Cosmetic Condition of the Schools' Exteriors

Group	Characteristic	N	%
School Board Members	Outstanding	1	14.3
	Very good	6	85.7
	Satisfactory	0	0.0
	Needs improvement	0	0.0
	Poor	0	0.0
	Total	7	100.0
Board of Supervisors	Outstanding	1	14.3
	Very good	6	85.7
	Satisfactory	0	0.0
	Needs improvement	0	0.0
	Poor	0	0.0
	Total	7	100.0
Superintendent and Central Office Staff	Outstanding	4	30.8
	Very good	6	46.1
	Satisfactory	3	23.1
	Needs improvement	0	0.0
	Poor	0	0.0
	Total	13	100.0
Principals	Outstanding	1	5.9
	Very good	7	41.2
	Satisfactory	6	35.2
	Needs improvement	3	17.7
	Poor	0	0.0
	Total	17	100.0

Table 12

Distribution of Survey Group's Perceptions Regarding the Overall Maintenance of School Buildings

Group	Characteristic	N	%
School Board Members	Outstanding	3	42.8
	Very good	4	57.2
	Satisfactory	0	0.0
	Needs improvement	0	0.0
	Poor	0	0.0
	Total	7	100.0
Board of Supervisors	Outstanding	1	14.3
	Very good	4	57.1
	Satisfactory	2	28.6
	Needs improvement	0	0.0
	Poor	0	0.0
	Total	7	100.0
Superintendent and Central Office Staff	Outstanding	4	30.8
	Very good	7	53.9
	Satisfactory	2	15.3
	Needs improvement	0	0.0
	Poor	0	0.0
	Total	13	100.0
Principals	Outstanding	1	5.9
	Very good	8	47.0
	Satisfactory	5	29.4
	Needs improvement	3	17.7
	Poor	0	0.0
	Total	17	100.0

very good, with 47 percent reporting their perceptions of the overall maintenance of school buildings to be satisfactory or needing improvement.

These data were further categorized into a percentage distribution of scaled survey results. Survey questions I, II, III, VII, VIII, IX, and X, if answered with a 1 or 2, and survey questions IV, V, VI, if answered with a 1, were categorized as above standard. Survey questions I, II, III, VII, VIII, IX, and X, if answered with a 3, and survey questions IV, V, VI, if answered with a 2, were categorized as standard. Survey questions I, II, III, VII, VIII, IX, and X, if answered with a 4 or 5, and survey questions IV, V, and VI, if answered with a 3, were categorized as below standard. These data were scaled so that comparative conclusions could be made with an independent contractor's assessment of the condition of the same school buildings which are categorized into three groups: above standard, standard, and below standard. This rating and coding scale is shown in Table 13.

Table 13

Survey Questions' Scale Rating and Coding

Group	Survey Question	Answer Number
Above Standard	I, II, III, VII, VIIII, IX, X	1,2
	IV, V, VI	1
Standard	I, II, III, VII, VIIII, IX, X	3
	IV, V, VI	2
Below Standard	I, II, III, VII, VIII, IX, X	4,5
	IV, V, VI	3

Questions from the survey group were then categorized into a percentage distribution depicting answers to each question as above standard, standard, or below standard. These findings are shown in Table 14.

Table 14

Percentage Distribution of Scaled Survey Results Categorized into Above Standard, Standard, or Below Standard Regarding Perceptions of School Building Conditions

Survey Question	Group	% Above Standard	% Standard	% Below Standard
School facilities meet the needs of educational program	School Board Members	60	30	10
	Central Office Staff and Superintendent	85	15	0
	Principals	59	35	6
	Board of Supervisors	71	29	0
School facilities technologically adequate for future	School Board Members	60	30	10
	Central Office Staff and Superintendent	15	39	46
	Principals	12	29	59
	Board of Supervisors	57	14	29
Maintaining school facilities as top priority	School Board Members	50	30	20
	Central Office Staff and Superintendent	69	31	0
	Principals	94	6	0
	Board of Supervisors	86	14	0
Amount of money budgeted for maintenance of school facilities	School Board Members	60	30	10
	Central Office Staff and Superintendent	23	62	15
	Principals	6	76	18
	Board of Supervisors	0	100	0
Enough information received regarding the need to improve and renovate existing school facilities to allow for effective decisions	School Board Members	40	20	40
	Central Office Staff and Superintendent	15	70	15
	Principals	6	59	35
	Board of Supervisors	14	86	0

table continues

Survey Question	Group	% Above Standard	% Standard	% Below Standard
Adequate amount of money spent on the improvement and renovation of school facilities	School Board Members	80	20	0
	Central Office Staff and Superintendent	31	62	7
	Principals	6	71	23
	Board of Supervisors	0	100	0
Overall perception of the condition of schools taking into consideration all buildings, classrooms, and technology characteristics	School Board Members	60	30	10
	Central Office Staff and Superintendent	85	15	0
	Principals	41	24	35
	Board of Supervisors	71	29	0
Overall perception of the cosmetic condition of classrooms and the schools' interiors, e.g. hallways, auditoriums, and offices	School Board Members	50	50	0
	Central Office Staff and Superintendent	92	8	0
	Principals	59	29	12
	Board of Supervisors	71	29	0
Overall perception of the cosmetic condition of the school buildings' exteriors	School Board Members	40	40	20
	Central Office Staff and Superintendent	77	23	0
	Principals	47	35	18
	Board of Supervisors	100	0	0
Overall maintenance of school buildings considering general repairs, light bulb replacement, plumbing maintenance, electrical and similar systems, etc.	School Board Members	60	30	10
	Central Office Staff and Superintendent	85	15	0
	Principals	53	29	18
	Board of Supervisors	71	29	0

A summary of the frequency distribution of survey questions of the school board members, board of supervisors, superintendent and central office staff, and principals according to the characteristic of their answers is displayed in Tables 15 through 18. The surveys can be found in Appendices A through D. Each of these tables presents information from the respondents regarding the frequency of each answer characteristic and overall rating. Perceptions of each group will then be compared in order to determine an overall perception of school building conditions. Each survey question is presented Table 15 lists each question and the number and percentage of ratings given to each question by school board members.

Table 16 lists each question and the number and percentage of ratings given to each question by board of supervisors members.

Table 17 lists each question and the number and percentage of ratings given to each question by superintendent and central office staff.

Table 18 lists each question and the number and percentage of ratings given to each question by principals.

A recap of information presented in Tables 15 through 18 was compiled into an overall rating of building conditions based on all 10 questions and the overall category rating when ranking the questions as a whole. This presents a percentage of perception answers on the condition of school conditions for each scaled survey group relative to above standard, standard, and below standard. Twenty-two percent of the principals perceived the overall condition of school buildings to be below standard. This information is presented in Table 19. An overall look at the perceptions of these respondents is graphically displayed in Appendix F.

Table 15

Frequency Distribution of Survey Questions of School Board Members Surveyed According to Characteristic of Answers

Survey Question	Characteristic	Frequency	%
School facilities meet the needs of educational program	Above Standard	5	71.4
	Standard	2	28.6
	Below Standard	0	0.0
	Total	7	100.0
School facilities technologically adequate for future	Above Standard	5	71.4
	Standard	2	28.6
	Below Standard	0	0.0
	Total	7	100.0
Maintaining school facilities as top priority	Above Standard	5	71.4
	Standard	2	28.6
	Below Standard	0	0.0
	Total	7	100.0
Amount of money budgeted for maintenance of school facilities	Above Standard	0	0.0
	Standard	7	100.0
	Below Standard	0	0.0
	Total	7	100.0
Enough information received regarding the need to improve and renovate existing school facilities to allow for effective decisions	Above Standard	1	14.3
	Standard	6	85.7
	Below Standard	0	0.0
	Total	7	100.0
Adequate amount of money spent on the improvement and renovation of school facilities	Above Standard	0	0.0
	Standard	7	100.0
	Below Standard	0	0.0
	Total	7	100.0
Overall perception of the condition of schools taking into consideration all buildings, classrooms, and technology characteristics	Above Standard	4	57.1
	Standard	3	42.9
	Below Standard	0	0.0
	Total	7	100.0
Overall perception of the cosmetic condition of classrooms and the schools' interiors, e.g. hallways, auditoriums, and offices	Above Standard	7	100.0
	Standard	0	0.0
	Below Standard	0	0.0
	Total	7	100.0

table continues

Survey Question	Characteristic	Frequency	%
Overall perception of the cosmetic condition of the school buildings' exteriors	Above Standard	7	100.0
	Standard	0	0.0
	Below Standard	0	0.0
	Total	7	100.0
Overall maintenance of school buildings considering general repairs, light bulb replacement, plumbing maintenance, electrical and similar systems, etc.	Above Standard	7	100.0
	Standard	0	0.0
	Below Standard	0	0.0
	Total	7	100.0

Table 16

Frequency Distribution of Survey Questions of Board of Supervisors Surveyed According to Characteristic of Answers

Survey Question	Characteristic	Frequency	%
School facilities meet the needs of educational program	Above Standard	5	71.4
	Standard	2	28.6
	Below Standard	0	0.0
	Total	7	100.0
School facilities technologically adequate for future	Above Standard	4	57.1
	Standard	2	28.6
	Below Standard	1	14.3
	Total	7	100.0
Maintaining school facilities as top priority	Above Standard	6	85.7
	Standard	1	14.3
	Below Standard	0	0.0
	Total	7	100.0
Amount of money budgeted for maintenance of school facilities	Above Standard	0	0.0
	Standard	7	100.0
	Below Standard	0	0.0
	Total	7	100.0
Enough information received regarding the need to improve and renovate existing school facilities to allow for effective decisions	Above Standard	1	14.3
	Standard	6	85.7
	Below Standard	0	0.0
	Total	7	100.0
Adequate amount of money spent on the improvement and renovation of school facilities	Above Standard	0	0.0
	Standard	7	100.0
	Below Standard	0	0.0
	Total	7	100.0
Overall perception of the condition of schools taking into consideration all buildings, classrooms, and technology characteristics	Above Standard	5	71.4
	Standard	2	28.6
	Below Standard	0	0.0
	Total	7	100.0
Overall perception of the cosmetic condition of classrooms and the schools' interiors, e.g. hallways, auditoriums, and offices	Above Standard	5	71.4
	Standard	2	28.6
	Below Standard	0	0.0
	Total	7	100.0

table continues

Survey Question	Characteristic	Frequency	%
Overall perception of the cosmetic condition of the school buildings' exteriors	Above Standard	7	100.0
	Standard	0	0.0
	Below Standard	0	0.0
	Total	7	100.0
Overall maintenance of school buildings considering general repairs, light bulb replacement, plumbing maintenance, electrical and similar systems, etc.	Above Standard	5	71.4
	Standard	2	28.6
	Below Standard	0	0.0
	Total	7	100.0

Table 17

Frequency Distribution of Survey Questions of Superintendent and Central Office Staff Surveyed According to Characteristic of Answers

Survey Question	Characteristic	Frequency	%
School facilities meet the needs of educational program	Above Standard	11	84.2
	Standard	2	15.4
	Below Standard	0	0.0
	Total	13	100.0
School facilities technologically adequate for future	Above Standard	2	15.4
	Standard	5	38.5
	Below Standard	6	46.1
	Total	13	100.0
Maintaining school facilities as top priority	Above Standard	9	69.2
	Standard	4	30.8
	Below Standard	0	0.0
	Total	13	100.0
Amount of money budgeted for maintenance of school facilities	Above Standard	3	23.1
	Standard	8	61.5
	Below Standard	2	15.4
	Total	13	100.0
Enough information received regarding the need to improve and renovate existing school facilities to allow for effective decisions	Above Standard	2	15.4
	Standard	9	69.2
	Below Standard	2	15.4
	Total	13	100.0
Adequate amount of money spent on the improvement and renovation of school facilities	Above Standard	4	30.8
	Standard	8	61.5
	Below Standard	1	7.7
	Total	13	100.0
Overall perception of the condition of schools taking into consideration all buildings, classrooms, and technology characteristics	Above Standard	11	84.6
	Standard	2	15.4
	Below Standard	0	0.0
	Total	13	100.0
Overall perception of the cosmetic condition of classrooms and the schools' interiors, e.g. hallways, auditoriums, and offices	Above Standard	12	92.3
	Standard	1	7.7
	Below Standard	0	0.0
	Total	13	100.0

table continues

Survey Question	Characteristic	Frequency	%
Overall perception of the cosmetic condition of the school buildings' exteriors	Above Standard	10	76.9
	Standard	3	23.1
	Below Standard	0	0.0
	Total	13	100.0
Overall maintenance of school buildings considering general repairs, light bulb replacement, plumbing maintenance, electrical and similar systems, etc.	Above Standard	11	84.6
	Standard	2	15.4
	Below Standard	0	0.0
	Total	13	100.0

Table 18

Frequency Distribution of Survey Questions of Principals Surveyed According to Characteristic of Answers

Survey Question	Characteristic	N	%
School facilities meet the needs of educational program	Above Standard	10	58.8
	Standard	6	35.3
	Below Standard	1	5.9
	Total	17	100.0
School facilities technologically adequate for future	Above Standard	2	11.8
	Standard	5	29.4
	Below Standard	10	58.8
	Total	17	100.0
Maintaining school facilities as top priority	Above Standard	16	94.1
	Standard	1	5.9
	Below Standard	0	0.0
	Total	17	100.0
Amount of money budgeted for maintenance of school facilities	Above Standard	1	5.9
	Standard	13	76.5
	Below Standard	3	17.6
	Total	17	100.0
Enough information received regarding the need to improve and renovate existing school facilities to allow for effective decisions	Above Standard	1	5.9
	Standard	10	58.8
	Below Standard	6	35.3
	Total	17	100.0
Adequate amount of money spent on the improvement and renovation of school facilities	Above Standard	1	5.9
	Standard	12	70.6
	Below Standard	4	23.5
	Total	17	100.0
Overall perception of the condition of schools taking into consideration all buildings, classrooms, and technology characteristics	Above Standard	7	41.2
	Standard	4	23.5
	Below Standard	6	35.3
	Total	17	100.0
Overall perception of the cosmetic condition of classrooms and the schools' interiors, e.g. hallways, auditoriums, and offices	Above Standard	10	58.8
	Standard	5	29.4
	Below Standard	2	11.8
	Total	17	100.0

table continues

Survey Question	Characteristic	N	%
Overall perception of the cosmetic condition of the school buildings' exteriors	Above Standard	8	47.1
	Standard	6	35.3
	Below Standard	3	17.6
	Total	17	100.0
Overall maintenance of school buildings considering general repairs, light bulb replacement, plumbing maintenance, electrical and similar systems, etc.	Above Standard	9	52.9
	Standard	5	29.4
	Below Standard	3	17.7
	Total	17	100.0

Table 19

Percentage of Perceptions on the Overall Condition of School Buildings

Group	Rating	%
School Board Members	Above Standard	58.6
	Standard	41.4
	Below Standard	0.0
Board of Supervisors	Above Standard	54.3
	Standard	44.3
	Below Standard	1.4
Superintendent and Central Office Staff	Above Standard	57.7
	Standard	33.8
	Below Standard	8.5
Principals	Above Standard	38.2
	Standard	39.4
	Below Standard	22.4

Additional Comments Provided by Respondents

At the conclusion of the survey, respondents were invited to provide additional information regarding their perceptions of the condition of school buildings. A concern was expressed by some members of the board of supervisors relating to the inadequacy buildings to be prepared for technology advancements, but most felt the school buildings were in good condition considering their age. A comment by a member of the superintendent and central office staff survey group reported the need for some additions in the future in order to meet specific program needs. The overall concerns of the principals surveyed included that of the age of school buildings and the need for repairs due to this factor. Other factors which were stated as areas of concern included the lack of adequate storage space and enough classroom space to meet the curriculum needs.

Assessment of School Facilities

The second section of the study presents data relative to an actual assessment of school facilities. The results of the building assessment were used to examine the relationship between the behavioral effort of leadership and the condition of school buildings. This assessment was made using an Assessment of Physical Environment questionnaire (see Appendix F) by an independent contractor . The findings of the survey instrument are presented in the following tables which states each question on the instrument and the contractor's assessment of all schools in the survey group as they pertain to

the individual question. Question 1 asked the age of the facility. It was found that the majority of the school facilities, 65 percent, were 20 to 39 years old. Only one school was 50-59 years old, and no schools were built in the last 10 years. The data are presented in Table 20.

Table 20

Age of School Facilities

Description	N	%
60 years old or older	0	0.0
50-59 years old	1	5.9
40-49 years old	2	11.8
30-39 years old	7	41.2
20-29 years old	4	23.5
10-19 years old	3	17.6
Under 10 years old	0	0.0
Total	17	100.0

Question 2 asked if there were windows in each instructional space or classroom. It was found that over 50 percent of the schools had windows in at least three fourths of their instructional spaces or classrooms, and 40 percent of the schools had at least one fourth but less than three fourths of their instructional spaces or classrooms with windows. These findings are shown in Table 21.

Table 21

Number of Windows in Instructional Spaces (Classrooms)

Description	N	%
Fewer than 1/4th	1	5.9
At least 1/4th, but fewer than 3/4ths	7	41.2
At least 3/4th	9	52.9
Total	17	100.0

Question 3 asked what kind of flooring was found in the majority of the instructional spaces. The majority of the schools, nearly 65 percent, have tile or terrazzo on their floors. The other 35 percent have carpet as their major flooring. These findings are shown in Table 22.

Table 22

Type of Flooring Found in Instructional Spaces

Description	N	%
Wood floor	0	0.0
Tile or terrazzo	11	64.7
Carpet	6	35.3
Total	17	100.0

Question 4 asked about the quality of heat found in the majority of the instructional spaces. An overwhelming 94 percent of the schools were found to have some type of even heating system, either controlled in the individual classrooms or by a central thermostat. These findings are reported in Table 23.

Table 23

Quality of Heat Found in Instructional Spaces

Rating	N	%
Uneven heat (unable to control in each room)	1	5.9
Even heat (unable to control in each room)	7	41.2
Even heat (able to control in each room)	9	52.9
Total	17	100.0

Question 5 looked at the quality of air conditioning which is present in the majority of the instructional spaces. These findings are presented in Table 24. Over two thirds of the schools have air conditioning ranging in all instructional spaces or air conditioning in some spaces. However, one third of the schools are shown to have no air conditioning at all.

Table 24

Air Conditioning Quality

Rating	N	%
No air conditioning in facility	5	29.4
Air conditioning in some Instructional spaces, or air conditioning in all instructional spaces but not well regulated	5	29.4
Air conditioning in all instructional spaces which can be well regulated	7	41.2
Total	17	100.0

Question 6 determined the last time the interior walls, including classroom spaces, were painted. Nearly 88 percent of the schools' interior walls, including classrooms, have been painted in the last 15 years, with nearly half of these having been painted less than 8 years ago. These findings are found in Table 25.

Table 25

Date Interior Walls, Including Classroom Spaces, Were Last Painted

Time Frame	N	%
Over 15 years ago	2	11.8
Between 8 and 15 years	8	47.0
Less than 8 years ago	7	41.2
Total	17	100.0

Question 7 asked if there were regularly-scheduled painting cycles for the school's interior walls. The majority of the schools, 82 percent, have no regular painting cycle. This information is found in Table 26.

Table 26

Regularly-Scheduled Painting Cycle for Interior Walls of Schools

Time Frame	N	%
No regular painting cycle	14	82.3
Yes – over 8-year cycle	2	11.8
Yes – 8-year or fewer-year cycle	1	5.9
Total	17	100.0

Question 8 asked when was the last the time the exterior walls or windows and trim had been painted. In over three fourths of the schools, the exterior walls or windows and trim have been painted within the last four years. The exterior walls or windows and trim in only two schools, or nearly 12 percent, have not been painted within the last seven years. Table 27 presents these findings.

Table 27

Last Exterior Walls or Windows and Trim Were Painted

Time Frame	N	%
Over 7 years ago	2	11.8
Between 4 and 7 years	2	11.8
Within the last 4 years or no exterior surface requires periodic painting	13	76.4
Total	17	100.0

Question 9 asked if there was a regularly scheduled painting cycle for exterior walls or windows and trim, and, if so, what was the time cycle. These data are presented in Table 28. Of the 17 schools examined, 94 percent have a seven-year or fewer-year painting cycle, or the exteriors do not require painting due to the type of exterior finish, with the only exception being the windows and trim which are painted as needed.

Table 28

Frequency of Regularly-Scheduled Painting Cycle for Exterior Walls or Windows and Trim

Time Frame	N	%
No regularly-scheduled painting cycle	1	5.9
Over 7-year cycle	0	0.0
7-year or fewer-year cycle or not needed because no exterior surface requires periodic painting	16	94.1
Total	17	100.0

Question 10 asked the contractor to determine if there were visible indications of roof leaks. Over 50 percent of the schools were found to have ceilings which were currently developing new stains due to minor leaks. The remainder of the schools, 41 percent, had no visible signs or only a few old water spots in ceilings. These findings are shown in Table 29.

Table 29

Visible Indications of Roof Leaks

Rating	N	%
Ceiling deteriorating due to water damage/ water falls in some area requiring buckets for water collection	0	0.0
Ceiling currently developing few new stains to minor leaks	10	58.8
No visible signs or only a few old water spots in ceiling	7	41.2
Total	17	100.0

Question 11 asked how often the instructional area floors are swept, if wood, tile, or terrazzo, or how often they are vacuumed, if carpeted. Table 30 presents these data. One hundred percent of the schools' floors are swept daily or more frequently.

Table 30

Frequency of Floors Swept

Time Frame	N	%
Monthly	0	0.0
Weekly	0	0.0
Daily or more frequently	17	100.0
Total	17	100.0

Question 12 asked how often the instructional area floors are mopped, if wood, tile, or terrazzo or vacuumed, if carpeted. Over 94 percent of the schools' floors are mopped weekly or daily. These findings are shown in Table 31.

Table 31

Frequency of Floors Mopped

Time Frame	N	%
Annually	0	0.0
Monthly	1	5.9
Weekly or daily	16	94.1
Total	17	100.0

Question 13 asked about the condition of the lockers. Three fourths of the schools were reported having had at least three fourths of their lockers functional or in good repair. This information is found in Table 32.

Table 32

Locker Conditions

Rating	N	%
Most not functional or not in good repair	0	0.0
At least 3/4ths are functional, in good repair	13	76.5
Over 3/4ths are functional, in good repair	4	23.5
Total	17	100.0

Question 14 asked what type of material was used for interior ceilings. Nearly 60 percent of the schools have plaster or acoustical tiles in at least three fourths of their instructional spaces or classrooms. The remainder, 41 percent, have acoustical tiles throughout the school buildings. These data are found in Table 33.

Table 33

Material Used for Interior Ceilings

Description	N	%
Wood or open beams	0	0.0
Plaster or acoustical tiles in at least 3/4ths of instructional spaces	10	58.8
Acoustical tiles throughout	7	41.2
Total	17	100.0

Question 15 asked about the type of lighting available in the instructional areas. The majority of the schools, 65 percent, have hot fluorescent lighting. The remainder of the schools have an even split of incandescent lighting or cold fluorescent lighting. These data are presented in Table 34.

Table 34

Lighting in Instructional Areas

Description	N	%
Incandescent	3	17.6
Fluorescent – hot	11	64.8
Fluorescent – cold	3	17.6
Total	17	100.0

Question 16 asked what was the condition of the classroom furniture. Seventy percent of the schools have student desks with minor facial scars in at least one half of their classroom. All of the furniture is functionally sound and looks satisfactory. Of the classrooms in the remaining schools, 30 percent, have functionally-sound furniture that is facially attractive. Table 35 presents these findings.

Table 35

Condition of Classroom Furniture

Rating	N	%
Most rooms have furniture that is either facially scarred or functionally damaged	0	0.0
At least ½ of rooms have minor facial scars on students desks, but all is functionally sound and looks satisfactory	12	70.1
All classrooms have furniture which is functionally sound and facially attractive	5	29.9
Total	17	100.0

Question 17 asked about the condition of the school grounds. This information is gathered in Table 36. Over 88 percent of the schools have some type of landscaping present where sidewalks are present and are in good repair. They are within an acceptable condition for their respective communities.

Table 36

Condition of School Grounds

Description	N	%
No landscaping – sidewalks not present or damaged (unattractive to community)	0	0.0
Landscaping present – sidewalks present and in good repair (acceptable to community)	15	88.2
Landscaping and other outside facilities are attractive and well-maintained (center of pride to community)	2	11.8
Total	17	100.0

Question 18 looked at the color of the walls in the instructional areas. Nearly 59 percent of the schools' walls are white, or in a "white" family of colors. The walls in the other 41 percent of the schools are painted pastel colors. Table 37 presents these data.

Table 37

Wall Color

Description	N	%
Dark colors	0	0.0
White	10	58.8
Pastel colors	7	41.2
Total	17	100.0

Question 19 asked the independent contractor's opinion as to the condition of the facility, both cosmetically and structurally. The contractor determined that of the schools' cosmetic and structural condition, 64.7 percent are in standard condition. Five schools were rated above standard. One building, almost 6 percent of the total facilities, was rated below standard on this item. Table 38 displays this information.

Table 38

Cosmetic and Structural Condition of Facilities

Rating	N	%
Below standard	1	5.9
Standard	11	64.7
Above standard	5	29.4
Total	17	100.0

Question 20 asked the independent contractor to best describe electrical service in the classrooms. The majority of the schools, 94 percent, have two or three outlets per classroom. These data are presented in Table 39.

Table 39

Electrical Service in Classrooms

Condition	N	%
One outlet	0	0.0
Two or three outlets	16	94.1
At least one outlet per wall – four or more	1	5.9
Total	17	100.0

Question 21asked if the classrooms have connections to a school-wide local area computer network. Seventy percent of the schools have at least some classrooms that have connections to a school-wide local area computer network. The other 30 percent of schools' classrooms are connected to a school-wide local area computer network. These responses are found in Table 40.

Table 40

Number of Classrooms That Have Connections to a School-wide Local Area Computer Network

Condition	N	%
None	0	0.0
Some	12	70.6
All	5	29.4
Total	17	100.0

Question 22 asked if classrooms have connections to a district-wide or other wide area computer network. Seventy percent of the schools have at least some classrooms that have connections to a district-wide or other wide area computer network. The other 30 percent of schools' classrooms are connected to a district-wide or other wide area computer network. These findings are shown in Table 41.

Table 41

Number of Classrooms That Have Connections to a District-wide or Other Wide Area Computer Network

Condition	N	%
None	0	0.0
Some	12	70.6
All	5	29.4
Total	17	100.0

Question 23 looked at Internet accessibility in classrooms. It was found that the majority, 82 percent, of the schools have some of their classrooms equipped for Internet access. The other 18 percent of schools have all of their classrooms equipped for Internet access. These findings are reported in Table 42.

Table 42

Number of Classrooms That Have Internet Access

Description	N	%
None	0	0.0
Some	14	82.4
All	3	17.6
Total	17	100.0

Question 24 asked if classrooms have cable connections to a central television antenna or other cable television system. The contractor reported that two-thirds of the schools have all classrooms with connections to a central television antenna or other cable television system. Thirty percent of the schools' classrooms have at least some type of central television or cable system. One school was found to have no connections to a central television antenna. Table 43 shows these findings.

Table 43

Number of Classrooms That Have Connections to a Central Television Antenna or Other Cable Television System

Description	N	%
None	1	5.9
Some	5	29.4
All	11	64.7
Total	17	100.0

The independent contractor was asked to report on any areas of the assessment instrument which he felt required further comments. The main comment made by the building contractor was that there was a lack of storage spaces in the majority of the schools. Also, the fact that the four high schools did not have air conditioning was a concern. Another area of concern noted by the contractor was that ceiling tiles need to be replaced which were either faded or stained due to leaks. Some of the schools which now house middle schools are converted elementary schools, and their features were not adequately suitable for middle-school-aged children. These included amenities such as water fountains, urinals, or other features were originally built for younger children. It was also noted, that even though nearly 60 percent of the schools are 30 years old or older, they remained in good condition as a result of the good custodial care and overall maintenance. Thus, it was noted that the contractor's first impression of each school was good with adequate landscaping and entrance ways. Vinyl replacement and aluminum windows in the schools were noted as a positive feature, as well as canopies which have been upgraded or installed over exterior doors. The contractor also made note of the excellent condition of the schools' interior floors.

The questions on the Assessment of Physical Environment were categorized into a percentage distribution of scaled survey results. Question 1, if answered with "a", "b", or "c" and questions 2 through 24, if answered with an "a", were scaled to a numerical score of 1 which was then placed in a range which produced a group of schools in the bottom 25 percent and categorized as Below Standard. Question 1, if answered with a "d" or "e"

and questions 2 through 24, if answered with a “b”, were scaled to a numerical score of 2 and then placed in a range which produced a group of schools in the mid 50 percent and categorized as Standard. Question 1, if answered with an “f” or “g” and questions 2 through 24, if answered with a “c”, were scaled to a numerical score of 3 and then placed in a range which produced a group of schools in the top 25 percent and categorized as Above Standard. This rating and coding scale is shown in Table 44.

Table 44

Survey Instrument’s Scale Rating and Coding

Survey Question(s)	Answer Number	Scaled Rating
1	a, b, c	1
2-24	a	1
1	d, e	2
2-24	b	2
1	f, g	3
2-24	c	3

All 24 questions on the assessment of physical environment of the 17 schools in the sample group were then categorized into the rating of Below Standard, Standard, or Above Standard and were used to compare overall building conditions. Table 45 shows the number of schools in each ranking and category.

Table 45

The Range, Count, and Percentage of Schools in Each Category: Below Standard, Standard, or Above Standard

Category	Range	N	%
Below Standard	1.70 - 1.93	3	18
Standard	1.94 - 2.43	10	59
Above Standard	2.44 - 2.65	4	23
Total		17	100

Note: The scores indicated in the range column were derived from responses to questions in the Assessment of Physical Environment survey tool.

The different types of schools were then ranked, according to their range, into the category of below standard, standard, or above standard. These findings are reported in Table 46.

Table 46

Schools' Rating According to the Assessment of Physical Environment

Category	School
Below Standard	Elementary School #5
	High School #2
	Vocational School #2
Standard	Elementary School #1
	Elementary School #4
	Elementary School #6
	Middle School #1
	Middle School #2
	Middle School #3
	High School #1
	High School #3
	High School #4
	Vocational School #1
Above Standard	Elementary School #2
	Elementary School #3
	Elementary School #7
	Middle School #4

Budget Requests and Allocations

The third area of study looked at maintenance and improvement projects and the budget requests by building administrators for this allocation over a five-year period, 1995-96 through 1999-2000 fiscal years. These data were gathered for the 17 schools in the county sample. Square footage of each school was also obtained and presented as a comparison of school sizes. The requested budget figures by each school principal for maintenance and improvement projects, the total square footage of each school, and the requested budget dollar amount per square foot is shown in Table 47.

Table 47

Budget Requests and Allocations per School for Building Maintenance and Improvement Projects Over a Five-Year Period and Square Footage Comparison

Year	School	$ Budget Requests	Square Footage per School	$ Request per Square Foot
1995-96	Elementary #1	7,240	56,750	0.128
	Elementary #2	6,825	77,120	0.088
	Elementary #3	24,300	63,700	0.381
	Elementary #4	20,800	56,750	0.367
	Elementary #5	22,330	41,764	0.535
	Elementary #6	21,390	82,586	0.259
	Elementary #7	26,420	67,120	0.394
	Middle School #1	28,570	82,516	0.346
	Middle School #2	18,740	64,926	0.289
	Middle School #3	14,660	51,600	0.284
	Middle School #4	21,115	67,120	0.315
	High School #1	40,605	157,759	0.257
	High School #2	42,720	153,715	0.278
	High School #3	37,440	90,043	0.416
	High School #4	24,890	64,727	0.385
	Vocational #1	19,480	70,686	0.276
	Vocational #2	16,230	52,632	0.308

table continues

Year	School	$ Budget Requests	Square Footage per School	$ Request per Square Foot
1996-97	Elementary #1	15,750	56,750	0.278
	Elementary #2	61,000	77,120	0.791
	Elementary #3	43,500	63,700	0.683
	Elementary #4	31,210	56,750	0.550
	Elementary #5	31,660	41,764	0.758
	Elementary #6	24,900	82,586	0.302
	Elementary #7	28,950	67,120	0.431
	Middle School #1	36,475	82,516	0.442
	Middle School #2	25,450	64,926	0.392
	Middle School #3	11,320	51,600	0.219
	Middle School #4	16,910	67,120	0.252
	High School #1	56,475	157,759	0.358
	High School #2	62,100	153,715	0.404
	High School #3	33,690	90,043	0.374
	High School #4	43,000	64,727	0.664
	Vocational #1	43,080	70,686	0.609
	Vocational #2	28,190	52,632	0.536
1997-98	Elementary #1	11,200	56,750	0.197
	Elementary #2	15,600	77,120	0.202
	Elementary #3	36,500	63,700	0.573
	Elementary #4	27,600	56,750	0.486
	Elementary #5	19,400	41,764	0.465
	Elementary #6	11,230	82,586	0.136
	Elementary #7	26,990	67,120	0.402
	Middle School #1	49,000	82,516	0.594
	Middle School #2	13,660	64,926	0.210
	Middle School #3	41,400	51,600	0.802
	Middle School #4	6,250	67,120	0.093
	High School #1	23,650	157,759	0.150
	High School #2	49,500	153,715	0.322
	High School #3	35,400	90,043	0.393
	High School #4	9,650	64,727	0.149
	Vocational #1	71,900	70,686	1.017
	Vocational #2	18,460	52,632	0.351

table continues

Year	School	$ Budget Requests	Square Footage per School	$ Request per Square Foot
1998-99	Elementary #1	5,200	56,750	0.092
	Elementary #2	3,860	77,120	0.050
	Elementary #3	21,760	63,700	0.342
	Elementary #4	15,500	56,750	0.273
	Elementary #5	36,100	41,764	0.864
	Elementary #6	20,400	82,586	0.247
	Elementary #7	27,400	67,120	0.408
	Middle School #1	31,500	82,516	0.382
	Middle School #2	81,300	64,926	1.252
	Middle School #3	27,650	51,600	0.536
	Middle School #4	28,500	67,120	0.425
	High School #1	36,350	157,759	0.230
	High School #2	65,500	153,715	0.426
	High School #3	23,220	90,043	0.586
	High School #4	19,250	64,727	0.297
	Vocational #1	3,750	70,686	0.053
	Vocational #2	27,800	52,632	0.528
1999-2000	Elementary #1	3,100	56,750	0.278
	Elementary #2	11,250	77,120	0.791
	Elementary #3	19,490	63,700	0.683
	Elementary #4	18,900	56,750	0.550
	Elementary #5	14,600	41,764	0.758
	Elementary #6	25,550	82,586	0.302
	Elementary #7	65,100	67,120	0.431
	Middle School #1	33,100	82,516	0.442
	Middle School #2	21,600	64,926	0.392
	Middle School #3	13,800	51,600	0.219
	Middle School #4	23,800	67,120	0.252
	High School #1	48,750	157,759	0.358
	High School #2	69,650	153,715	0.404
	High School #3	83,000	90,043	0.374
	High School #4	76,900	64,727	0.664
	Vocational #1	56,700	70,686	0.609
	Vocational #2	79,750	52,632	0.536

A five-year average for the requested budget figures by each school principal for maintenance and improvement projects and the requested budget dollar amount per square foot was obtained from the data shown in Table 47. This information is presented in Table 48.

Table 48

Budget Requests and Allocations per School for Building Maintenance and Improvement Projects per Five-Year Average, 1995-96 through 1999-2000, per Square Footage Comparison

School	Mean Budget Request	Square Footage per School	Mean Request per Square Foot
Elementary #1	13,142	56,750	0.232
Elementary #2	19,707	77,120	0.256
Elementary #3	29,110	63,700	0.457
Elementary #4	22,802	56,750	0.402
Elementary #5	24,818	41,764	0.594
Elementary #6	20,694	82,586	0.251
Elementary #7	34,972	67,120	0.521
Middle School #1	35,729	82,516	0.433
Middle School #2	32,150	64,926	0.495
Middle School #3	21,766	51,600	0.422
Middle School #4	19,315	67,120	0.288
High School #1	41,166	157,759	0.261
High School #2	50,564	153,715	0.329
High School #3	42,550	90,043	0.473
High School #4	34,738	64,727	0.537
Vocational #1	38,982	70,686	0.551
Vocational #2	34,086	52,632	0.648

In order to present a comparison of budget requests and allocations per school for building maintenance and improvement projects per square foot for the five-year average 1995-96 through 1999-2000, as presented in Table 48, and the schools' ratings according to the Assessment of Physical Environment, as presented in Table 46, the following data are presented in Table 49. These data report that the school with the highest mean dollar request per square foot was found in below standard condition by the independent contractor. The lowest mean budget request was from a school rated as standard. Two schools, an elementary school and a middle school, were reported as above standard by the independent contractor, however, they had two of the lowest mean dollar request per square foot. There is no pattern of higher budget requests in buildings rated below standard as compared to either of the two other categories of buildings.

Table 49

School Ratings' Comparison to Budget Requests per Square Foot

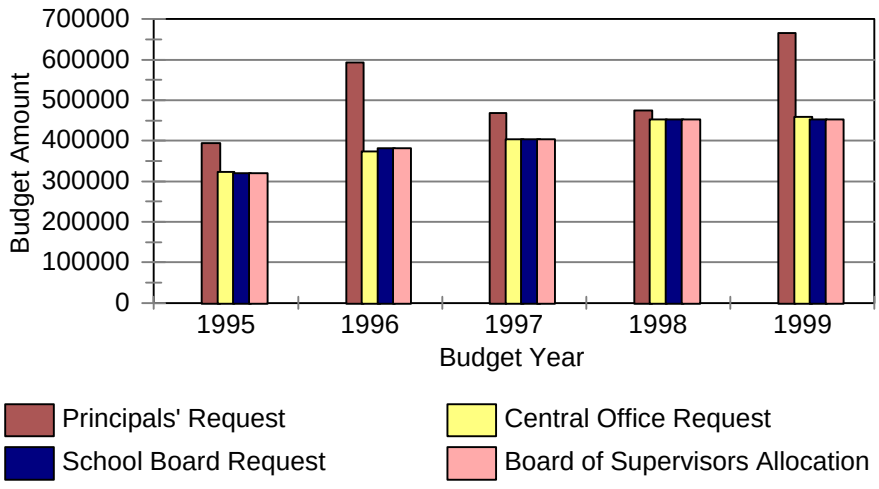
Category	School	Mean Request per Square Foot
Below Standard	Elementary School #5	0.251
	High School #2	0.329
	Vocational School #2	0.648
Standard	Elementary School #1	0.232
	Elementary School #4	0.594
	Elementary School #6	0.251
	Middle School #1	0.433
	Middle School #2	0.495
	Middle School #3	0.422
	High School #1	0.261
	High School #3	0.473
	High School #4	0.537
	Vocational School #1	0.551
Above Standard	Elementary School #2	0.256
	Elementary School #3	0.473
	Elementary School #3	0.457
	Middle School #4	0.288

Next, the budget requests of principals were compared to budget requests of the central office, school board, and final allocation of the board of supervisors, respectively. Every fiscal year the principals of each school are asked to submit requests for maintenance needs to be included in the following year's fiscal year budget to the superintendent and central office staff. The principals' requests are then validated or adjusted by the superintendent and central office staff who, in turn, submits a combined maintenance budget request to the school board. The school board then submits a budget to the board of supervisors for final approval. The board of supervisors has the final authority on budget allocation. Table 50 compares the maintenance budget requests or allocation of each group over a five-year period and presents the percentage of difference in the requested amounts of the principals compared to the requested amounts by the superintendent and central office, the school board, and the allocated amounts by the board of supervisors. For the 1996-97 fiscal year, the budget request of principals was higher than the 1995-96, 1997-98, and 1998-99 fiscal years because of the need for sidewalk replacements and paving in the school parking lots for the majority of the schools. For the 1999-2000 fiscal year, the budget request of principals escalated to a five-year high due to increasing demands and needs for technology enhancements.

Table 50

Budget Requests by Principals Compared to Central Office Request, School Board Request, and Board of Supervisors' Allocation

Year	Principals' Request	Central Office Request	± %	School Board Request	± %	Board of Supervisors' Allocation	± %
1995-96	393,755	322,691	-18.0	319,173	-18.9	319,173	-18.9
1996-97	593,660	372,715	-37.2	380,480	-35.9	380,480	-35.9
1997-98	467,430	402,700	-13.8	402,700	-13.8	402,700	-13.8
1998-99	475,040	452,366	-04.8	451,895	-04.9	451,895	-04.9
1999-00	665,040	458,238	-30.1	452,700	-31.9	452,700	-31.9



Summary

Chapter 4 provided perception survey responses concerning building conditions from the school board, board of supervisors, central office staff and superintendent, and building principals. Perception survey responses were then calculated into a scaled score which would correspond with the perception of above standard, standard, or below standard ranking of school building conditions. Next, the findings of an independent contractor's assessment of school facilities were analyzed. Each question was analyzed by the percentage and frequency of responses for each question. Chapter 4 concludes with budgetary requests for building maintenance and improvements which were recorded by analyzing the amount of money requests by each principal for a five-year period. This amount was then reported on a dollar amount per square foot of building space for each school. These amounts were then reported in comparison to the amount requested by the central office staff, the school board, and money allocated by the board of supervisors.

Data reported in Chapter 4 were collected through surveys mailed to persons in leadership positions within the survey group of the particular county used in the study, the scaled results of an independent contractor's assessment of the physical environment of each school, and school maintenance and improvement budgetary requests over a five-year period. The chapter provided descriptive statistics about the responses, presented findings which are related to the research questions, and summarized the results.

Chapter 5

Summary of Findings, Discussion, Conclusion, Implications for Practice, and Recommendations for Further Study

The purpose of this chapter is to present a summary of findings, a discussion of the study, and provide an appropriate conclusion. Implications for educational practice and research from the results will be provided. Recommendations for further study conclude this chapter.

Perception Surveys

With a return rate of 100 percent, a comprehensive analysis of the survey responses provided a variance of perceptions by educational leaders on the condition of school buildings in this school division. As a whole, perception responses on the overall condition of their school buildings were positive with the school board members and the board of supervisors. The central office staff and superintendent responses produced a similar percentage of positive responses. Across the majority of the survey questions, principals' ratings were not as favorable. However, by analyzing each individual question, several areas of concern, along with potential concerns, are found that can detract from a positive perception.

One concern is the extent to which school facilities are adequate for the future. Slightly more than 25 percent of the total responses reported that all school facilities were adequate or adequate with implementation of planned improvements. Over 40 percent of the respondents reported less than half of

the facilities were adequate for the future. Assuring facilities are adequate for the future is a necessity for educators so they may ensure the influx of technology to be usable, permit students to be housed comfortably, and guarantee the facilities meet the academic and extracurricular needs of students.

The majority of the respondents felt that school facilities meet the needs of the educational program, but less than the majority of the principals reported that school facilities meet the needs. Educators should make a combined effort to have all facilities meet the needs so that one or more school attendance zones within the school division are not deficient in school facilities.

Seventy-one percent of the school board members, 86 percent of the board of supervisors, and 94 percent of the principals reported that maintaining school facilities was one of their top priorities, while 54 percent of the central office staff and superintendent stated that maintaining school facilities was one of their top priorities. These positive responses can reflect that appropriate building conditions are recognized as a vital part of a child's educational process.

While 88 percent of the group respondents reported that the amount of money budgeted for maintenance of school facilities was either adequate or more than adequate, general satisfaction with budgetary amounts should not be seen as the norm for future budget years. Increasing costs and needs in the 21st century learning might dictate additional funds just to remain at the adequate level. It is also reported in the study that 88 percent of the survey groups who responded state that the amount of money spent on the

improvement and renovation of school facilities is adequate or more than adequate.

When asked if the amount of information received in order to make effective decisions regarding the need to improve and renovate existing school facilities, 100 percent of the school board and of the board of supervisors reported that they had enough or more than enough information. Eighty-five percent of the central office staff and superintendent and 65 percent of the principals reported they received enough or more than enough information to make effective decisions regarding the need to improve and renovate existing school facilities. Communication is a high priority when it relates to the process of improving building conditions. Providing information and keeping all levels of educational leaders involved should be maintained.

One hundred percent of the school board members reported they perceived the overall cosmetic condition of the schools' exteriors, interiors, and classrooms as very good or outstanding. Over 71 percent of the board of supervisors responded that the classrooms and schools' interiors were very good or outstanding, with 100 percent regarding the schools' exteriors as very good or outstanding. However, 53 percent of the principal responses stated the schools' exteriors were satisfactory or needed improvement, and 41 percent of this group reported the classrooms and schools' interiors were satisfactory or needed improvement.

Responses from this study of each survey group were categorized into a scaled score, which indicated each respondent's perception of the condition of school buildings as above standard, standard, or below standard. This scale

was used to draw comparative conclusions with the assessment of the condition of the respective school buildings by an independent contractor.

The school board members' scaled score perceptions were all calculated as standard or above standard for each survey question. Their perceptions of the condition of school buildings appear to be at a very high level.

The board of supervisors' scaled score perceptions were all calculated as standard or above standard for each survey question with one exception. In response to the question that asked if school facilities are technologically adequate for the future, one response rated the schools as below standard. The overall perception of the board of supervisors could be rated as a high level of satisfaction.

The scaled results of the central office staff and superintendent varied greatly. The largest percentage of perceptions given to a below standard rating, 46 percent, was in answer to the schools being technologically adequate for the future. This included buildings that had classrooms with no Internet access, no access to a central television antenna or cable television system, and those with no district or wide-area network system. Three responses to the survey questions regarding technology indicated the buildings were standard. As discussed with the two previous groups, the responses to items regarding how well the facilities met the educational needs, the overall condition of buildings, the overall interior conditions, the overall exterior conditions, and the overall maintenance as top priorities were above standard and standard.

The principals' responses were scaled, and the data produced four ratings of above standard with a majority percentage of responses for those questions dealing with school facilities meeting the needs of the educational program and overall interior condition and overall maintenance being a top priority. The majority of principals responded that the school facilities were below standard in regards to being technologically adequate for the future. A standard rating was reported by the majority on the items regarding amount of money budgeted for maintenance and repairs, enough information received to improve and renovate building facilities, and adequate money spent on school facilities.

The percentage of perception answers on the condition of school facilities for each scaled survey group relative to above standard, standard, and below standard was reported. School board members' perceptions on the condition of school buildings were rated as 58.6 percent above standard, 41.4 percent standard, and 0 percent below standard. The board of supervisors' perceptions on conditions of school buildings were rated as 54.3 percent above standard, 44.3 percent standard, and 1.4 percent below standard. The central office staff's and superintendent's perceptions on conditions of school buildings were rated as 57.7 percent above standard, 33.8 percent standard, and 8.5 percent below standard. The principal's perceptions on conditions of school buildings were rated 38.2 percent as above standard, 39.4 percent standard, and 22.4 percent below standard.

Assessment of Physical Environment

An analysis of an independent contractor's assessment of the condition of school buildings within this school division provided an unbiased profile on the reality of building conditions. The findings of this assessment report were that there are many positive aspects to the condition of school buildings in this division. However, close analysis of each question revealed some areas of concern and certain problems that would suggest a less-than-favorable overall rating.

One area of concern is the age of the school buildings. No schools have been built within the last 10 years, and only 17.6 percent of the schools in the study are less than 20 years old. More than 60 percent of the schools are 20-39 years old, and 17.7 percent of the schools are 40 years or older. Structures this old are often costly to maintain and operate. All too often, aging facilities include specific problems that are sometimes ignored and continue to deteriorate over time.

The presence of windows in instructional spaces were identified to be in less than three-fourths but at least one-fourth of the classrooms in 41.2 percent of the schools. However, windows were present in at least three-fourths of the classrooms in 52.9 percent of the schools. Carpet, tile, and terrazzo were reported as being the type of flooring in instructional spaces in 100 percent of the schools.

The quality of heat and air conditioning in instructional spaces seemed to be a major concern. The quality of heat found in almost 50 percent of the schools was uneven, or where even heat was reported, it was found that it was unable to be controlled in each room. Respectively, air conditioning was

not found in 29 percent of the schools, and another 29 percent of the schools had some air conditioning, but the air conditioning was not well regulated.

Although it was reported that 82 percent of the schools do not have a regular painting cycle, over 80 percent of the interior walls and classrooms in the schools have been painted within the last 15 years. One hundred percent of the schools' interior walls were reported as being painted white or pastel colors. Over 76 percent of the schools' exterior walls have been painted within the last four years or do not require exterior paintings. Renovations, including vinyl replacement windows, aluminum canopies to windows, and exterior door replacements were noted as building improvements.

More than 50 percent of the schools were currently developing a few ceiling stains due to minor leaks. These leaks, if caused by a faulty roof, must be given high priority in order to protect against major changes in ceiling and roof conditions and large expenditures for repair in the future.

The contractor reported that almost 100 percent of the floors in the schools were swept, vacuumed, or mopped daily or weekly. The floors were in excellent shape considering the age of most of the buildings and the large amount of student traffic encountered each day. Lockers were found to be in good repair, with 100 percent of the schools having at least three-fourths of their lockers functional and in good repair. The interior ceilings in 100 percent of the schools were either plaster or acoustical tiles, and more than 80 percent of the schools were reported as having either hot or cold fluorescent lighting. More than two-thirds of the classrooms, 70.1 percent, were found to have furniture that was functionally sound and looked satisfactory.

Of all the schools reported, 88.2 percent had landscaping present and sidewalks in good repair. The cosmetic and structural condition of 94.1 percent of the facilities appraised were either standard or above standard. The evaluator ascertained that one received an excellent first impression when arriving at the facility.

One major area of concern was found by the evaluator to be an inadequate amount of electrical service in the classrooms. Over 90 percent of the schools were reported as having two or three outlets per classroom which does not meet the generally accepted standard of one electrical outlet per wall. This deficiency of electrical service is not conducive to the fact that more and more technology equipment is being purchased for classroom use each year. Electrical upgrades in older buildings can be difficult, but such upgrades must be planned and implemented in order to have means for practical use in the 21st century.

While more than two-thirds of the schools were reported has having some classrooms accessible to school-wide and district-wide networks and the Internet, those classrooms that did not have access need to be corrected. Almost 95 percent of the schools have classrooms that have connections to a central television antenna or other cable television system.

The data reported by the independent contractor's assessment of the facilities were categorized into a percentage distribution of scaled survey results in order for the conditions of the schools to be reported as above standard, standard, or below standard. This method was used so that comparative results might draw some conclusions between the reality of the

contractor's assessment of building conditions and the perceptions school leaders have on conditions of the same buildings.

Using the Assessment of Physical Environment Survey Instrument, a range was calculated to indicate those schools that were placed in the bottom 25 percent as below standard, the middle 50 percent as standard, and the top 25 percent as above standard. Based on the scaled results of the independent contractor's assessment, 3 schools were rated as below standard, 10 schools were rated as standard, and 4 schools were rated as above standard.

Budget Requests

An analysis of the budget and allocation process over a five-year period, 1995-1996 through 1999-2000, for maintenance and improvements of building conditions in this school division reveal the financial efforts of the educational leaders and the subsequent action that was taken based on the needs of the school physical environment. The mean dollar request per square foot in each school building was reported. There was no particular pattern which emerged based on large schools making large financial requests. A vocational school, with one of the smallest areas per square foot, was reported with the highest dollar request per square foot at 65 cents (.648) per square foot, while a high school almost three times the size of the vocational school had a dollar request per square foot of 26 cents (.261). Mean dollar requests ranged from 23 cents (.232) per square foot to 65 cents (.648) in all schools. This range could be explained by such variables as age of building, effort of principal to request improvements, quality of maintenance work

performed throughout the year, or reluctance to change the status quo because of denial of previous years' recommended improvements.

When comparing the budget requests by principals to the central office requests, school board requests, and board of supervisors' allocations of money, several relationships can be determined. In each of the years, from 1995-1996 to 1999-2000, the board of supervisors allocated the exact amount of money that the school board requested. Additionally, these amounts were always less than the principals' requests. The school board's requests for funds were between 0 and 1.8 percent, more or less, than the amount the superintendent and central office requested.

Over this five-year period, the requests initiated by the principals had never been fully funded, and one year the decrease was less than a 5 percent reduction. This could be meaningful in determining whether the principals' requests exceed what they actually need, or if some areas of maintenance and improvements of school building conditions are left unattended to because of financial restraints.

Discussion

There were limitations in this study in that the study group included the home school division of the researcher and included the schools in only this one school division. However, of the 17 schools studied, there was a 100 percent return rate of surveys, thus giving an in-depth look into the total schools represented by this county. A similar study could be undertaken by expanding the research group to include a wider area of school divisions to

include two or more. Research of a broader range of school divisions could lead to a comparison of differences within school building conditions based on geographical areas.

Since the findings of this study have shown a trend toward the perception of principals regarding school building conditions being lower than those of the superintendent and central office staff, the school board members, and the board of supervisors, several observations can be made. Principals are in and around their buildings each day, while other respondents visit the schools periodically. Thus, principals have the opportunity to be more familiar with the condition of school facilities. The maintenance and building needs are observed daily, and the principals submitted to the superintendent and central office budget requests based on building maintenance needs according to these perceptions.

This was evidenced in the responses concerning the following survey questions: school facilities being technologically adequate for the future (59 percent of the principals rated schools below standard); the amount of money budgeted for maintenance of school facilities (18 percent of the principals rated schools below standard); adequate amount of money spent on the improvement and renovation of school facilities (23 percent of the principals rated schools below standard); the overall perception of the condition of schools taking into consideration all buildings, classrooms, and technology characteristics (35 percent of the principals rated schools below standard); overall perception of the cosmetic condition of classrooms and the schools' interiors (12 percent of the principals rated schools below standard); and the

overall maintenance of school buildings considering general repairs (18 percent of the principals rated schools below standard).

Principals are not the ultimate decision-makers regarding the condition of schools, however, the other three groups are. Upon considering budget requests submitted by principals, the superintendent and central office staff appear to perceive the maintenance needs on a lesser scale, or they felt the request of the principal was in excess of needs. This is evident in comparing the percentage of perceptions between the principals and the other three groups. Nearly 9 percent of the superintendent and central office staff perceived the overall building conditions as below standard compared to 22 percent of the principals. This sequence continues with perception differences between superintendent and central office staff compared to the school board members and board of supervisors as below standard being 0 to 1 percent in contrast.

The perceptions of the principals in comparison to the assessment made by the building contractor are more closely related, in that the scaled survey ratings of the contractor resulted in 18 percent of the school buildings being rated as below standard. This assessment was made by the contractor's direct examination of the condition of each individual school building. Therefore, it could be assumed that a more thorough or actual observation of buildings by the superintendent and central office staff, school board members, and board of supervisors could lead to perceptions more closely related to those of building principals.

The scaled ratings of an independent contractor's findings indicated that the majority of schools were rated as standard. The contractor also noted

the mean age of each building, availability of Internet and network access, quality of heat and air conditioning, visible indications of roof leaks, and lack of electrical service to classrooms as areas of concern.

In looking further at building conditions and the environment whereby students learn, some items should be taken into consideration. Students cannot benefit from the educational process when classrooms are too hot or too cold, which is due to poor quality of heating and air conditioning, during any given time period when occupied. Technological inadequacies should be addressed in order to provide students with future needs. To have an educational environment that is conducive to learning, such deficiencies need to be eliminated. However, specific weaknesses of the building infrastructure that were reported by the independent contractor and alluded to by the perception responses of the principals indicate a need that should be addressed in the near future. Therefore, budget requests are made based on the need to maintain school buildings in a state whereby they are conducive to student learning.

The basis for analysis used to from the conclusion that there is a relationship between the leadership and financial ability of the school division and the condition of school buildings was an analysis of three sets of data: perceptions of four groups of authority, a physical appraisal of all buildings, and the budget requests and fund allocations for maintaining the buildings. The primary set of data was the results of a survey of the perceptions of financial ability of the school division and the beliefs of actual building conditions from the four groups included in the study. The results of the survey indicated members of these groups felt the school division was making

a very good effort to maintain the buildings in good repair. They further felt that sufficient resources were available and allocated to maintain the buildings. The support given to these ideas was not as strong among the principals as was the other three groups. Nevertheless, all groups supported the belief as stated above. Given this commitment on the part of those responsible for the buildings in the school division, the question then is to find support for this contention.

The results of the physical appraisal of all buildings indicated the buildings were in good condition. Only three buildings were rated below standard out of a total of 17 buildings. This provided strong evidence of the condition of buildings in the school division. This comparison would indicate a strong commitment for building maintenance on the part of the school authorities and the funding body.

The second part of the analysis included a review of the maintenance budget requests from the principals, the central office staff and superintendent, the school board, and subsequent budget allocation of the board of supervisors. Five years of budget requests and fund allocations were used for this analysis. Each principal made a request for funds based upon what was felt to be needed to maintain the building in good order. These requests were forwarded to the superintendent and subsequently to the school board. In every year, the budget requests of the principals were reduced by the superintendent and his staff. These reductions ranged from 4 percent to 37 percent. Further, the superintendent's budget requests to the school board were reduced by about the same amount as before. The budget requests from

the school board to the board of supervisors, however, were not reduced in any of the five years.

One would postulate that the budget requests and fund allocations would indicate in some fashion a relationship between the financial ability of the school division and school building condition. Data from this analysis, on first glance, would seem not to support the contention that the financial ability of the school division was used to maintain the buildings in good order. Review of the budget requests and fund allocations would indicate an increase in funds over the five years. The requests of the principals did not necessarily follow this pattern, but there were reasons for this divergence, as reported elsewhere in the study. Nevertheless, the increase in budget requests and fund allocations would indicate support for maintaining the buildings in good condition. This would then support the original concept of the model of a relationship between leadership and financial ability and condition of school buildings.

As a follow-up to the belief that efforts of leadership have a relationship to building conditions, the 2000-2001 budget requests of principals were examined. These data were the initial step in the 2000-2001 budget process and were available prior to the completion of this study. This information was to determine if the principals' requests reflected information reported by the independent contractor regarding the needs of the school in relation to building conditions. A majority of the principals requested painting of classrooms and replacement of ceiling tiles. However, there were no requests for repair of roof leaks. Over 70 percent of the principals requested

some type of electrical improvements to enhance the schools' technological capabilities or additional Internet access within instructional spaces.

Responsible leaders request what is needed to improve building conditions with school buildings, and do not make frivolous requests. Implications of the 2000-2001 budget year must go through the remainder of the budget process, and only time and money will approve the needs being considered.

Conclusion

The purpose of this study was to examine the relationship between certain school building conditions and the leadership and financial support in a county school division in Southwest Virginia. The findings in this study indicate there is a positive relationship between building conditions and leadership and financial support. Through the expressed beliefs or perceptions of the corporate leadership of the school division that maintaining school facilities in good condition is a high priority and their subsequent request and allocation of funds to support these perceptions, a relationship can be demonstrated. Additionally, the appraisal of the actual facilities indicated the buildings were in good condition. The physical evaluation supports the perceptions and actions of the leadership of the schools.

Upon reviewing the data, a pattern of relationship can be acknowledged. While some below-standard conditions exist, 14 of 17 school buildings were reported to be in standard or above-standard condition as determined by the scaled results of an independent contractor. Principals were

found, over a five-year period, to prepare budgets to request increases in the amount of money spent for maintenance and improvements. Although not fully funded, the school board and board of supervisors provided increases in budgetary dollars for the entire five-year period. These conditions and budget figures indicate a positive relationship exists between the actual condition of the school buildings and the financial support that is required to maintain them. Perceptions of educational leadership support this relationship as a majority of all groups reported they viewed maintaining school facilities as one of their top priorities. Their perceptions indicated that the overall maintenance and condition of school buildings were standard or above standard.

Implications for Practice

This study has implications for public educators across the country as the public's growing concern on the quality and condition of public school buildings affect their school division. Maintaining quality building conditions is essential to the educational process of students. Lane (1991) stated that students could either be drawn to or distracted from the educational process by the facilities they inhabit. With 100 percent of school board members, board of supervisors, and central office staff reporting all schools were between satisfactory and outstanding regarding the overall condition of schools, it is practical to assume the buildings in this division are in good condition. This stands in contrast to the GAO 1994-1995 study which

reported that over one half of the nation's schools are unprepared for the 21st century.

Another issue to confront is the role educational leaders play in determining the quality and condition of school buildings. Lanham (1999) reported that leaders in public school buildings who see value in facilities will give them a high priority. This study examined the relationship between perceptions and actions of educational leaders and the condition of school facilities. It is meaningful to report that 94 percent of the principals viewed maintaining school facilities as one of their top priorities. This same group requested more finances each budget year to maintain and improve their facilities than was allocated to be spent on their buildings. At least 70 percent of the school board members and board of supervisors listed this as a top priority, as well.

The General Accounting Office survey found that 75 percent of school buildings do not have the infrastructure to fully use 21st century technologies, and 50 percent are not equipped with air conditioning which allows schools to operate in hot weather and use computers efficiently. The Assessment of the Physical Environment results which coincide with this statement reported 58.8 percent of the schools had no air conditioning or had air conditioning in instructional spaces that could not be regulated. Electrical service was found to be inferior in 94 percent of the buildings, and lack of access to the Internet in all classrooms was reported in 82.4 percent of the buildings.

Meaningful implications from this study compare to what research has reported over the last decade – that the critical quality and condition of school facilities are in contrast to what school board members and other educational

leaders believe them to be. Moulton (1998) clearly showed that board members are not consistently in agreement with the findings of the AASA 1992 study and the GAO (1995) study that address the issues of maintenance and improvement to preserve the quality and condition of America's public schools.

In this study it is practical to state that the perceptions of the school board members and board of supervisors do not consistently agree with the findings of the Assessment of Physical Environment and the perceptions and budgetary requests of the building principals.

Recommendations for Further Study

The following topics have emerged from this study that can be considered for further study.

1. A more detailed study on how the financial actions of the local governing agency affect the conditions of school facilities could be conducted. This study could possibly determine if divisions with a larger pool of financial resources maintain buildings in better condition than those that have less. This type of study would also have to research the budget process for building maintenance and improvements from the initial stages to the approval and allocation of funds.

2. A study that closely examines the adequacy of school facilities for the technological advances that each school division will continue to experience in the future could be conducted. This study reported that perceptions of school leaders and assessments of facilities suggested that

deficiencies were evident within school buildings. The utilization of technology is a potential source of concern to school divisions who are already experiencing budget restraints.

3. A comparison of school divisions could be made by first evaluating and determining the condition of school buildings and then assessing the perceptions and financial actions of the leadership of the school divisions that are reported as being in the best and poorest physical condition.

4. An investigation could be made regarding the leadership style of superintendents and the possibility of a relationship between the different leadership styles and building condition.

5. A study could be performed whereby the financial abilities of school divisions are studied and a comparison made between those divisions with greater financial abilities and those with lesser financial abilities and the condition of school buildings. A more precise analysis might be made using a measure of financial ability and actual building condition from a larger population of school divisions. Comparing a stated index of financial ability and the results of a building appraisal for a large group of school division might lend itself to a better interpretation of this possible relationship.

6. An analysis of the number of maintenance and operational employees of a school division and the financial ability of the division could be made. This would include the amount of funds for outside contractors who perform maintenance work. A comparison of this ratio could be made to building condition.

7. An investigation could be made into the relationship between the secondary schools in Virginia that have achieved a 70-percent pass rate on

the Standards of Learning assessments and the condition of those school buildings based on a physical assessment of these facilities.

8. An instrument could be developed that could assess school building conditions at each educational level. All relevant categories should be included that affect building conditions and qualities that address the buildings' acceptance to technological change or additions. With the results of this assessment, an investigation could be made regarding relationship between building conditions and the number of maintenance and custodial staff assigned to each building and the amount of in-service and staff development they have received.

9. The data used to determine the financial ability of the school division used in this study exhibited a less than strong relationship. The budget requests and fund allocations increased each year over five years, but this does not necessarily indicate a relationship of any sort. A more in-depth analysis of what purpose the budget requests were made might lend some light on this possible relationship. The analysis could use actual item requests with an appraisal of the building.

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Appendix A

33319 Huckleberry Drive
Glade Spring, VA 24340
December 6, 1999

Washington County School Board
812 Thompson Drive
Abingdon, VA 24210

Dear School Board Member:

I am conducting this survey in order to obtain your perceptions regarding school building conditions within the county. This survey is in conjunction with a doctoral dissertation research being conducted on the relationship between school leadership and the condition of school buildings.

The enclosed survey should take less than ten minutes to complete. Your answers will be anonymous. Please return your completed survey to me in the enclosed self-addressed, stamped envelope by December 15. Responses will be entered into a database along with responses on the same questions from all groups involved: school board members, central office staff, superintendent, principals, and board of supervisors.

I appreciate your time and information given in the completion of this survey.

Sincerely,

Lee Brannon
Doctoral Candidate
Education Leadership and Policy Studies
Virginia Tech

Appendix A

1999 Survey of School Board Members' Perceptions of School Building Conditions

Please respond to the following questions regarding your perception of school building conditions.

I. In your opinion, to what extent do school facilities in your district meet the needs of the educational program?	_____ 1. All facilities meet the needs. _____ 2. Most facilities meet the needs. _____ 3. Some facilities meet the needs. _____ 4. Few facilities meet the needs. _____ 5. None meet the needs.
II. To what extent are school facilities in your district technologically adequate for the future?	_____ 1. All are adequate. _____ 2. All will be adequate with implementation of planned improvements. _____ 3. More than half are adequate. _____ 4. Less than half are adequate. _____ 5. None are adequate.
III. In your opinion, maintaining school facilities is	_____ 1. Your top priority _____ 2. One of your top priorities _____ 3. A middle priority _____ 4. A low priority _____ 5. Not a priority
IV. In your opinion, the amount of money budgeted for the maintenance of school facilities is	_____ 1. More than adequate _____ 2. Adequate _____ 3. Less than adequate
V. As a school board member, do you receive enough information regarding the need to improve and renovate existing school facilities to make effective decisions?	_____ 1. More than enough _____ 2. Enough _____ 3. Less than enough

VI. In your opinion, the amount of money spent on the improvement and renovation of school facilities is	_____ 1. More than adequate _____ 2. Adequate _____ 3. Less than adequate
VII. What is your perception of the overall condition of schools in your district, taking into consideration all buildings, classrooms, and technology characteristics?	_____ 1. Outstanding _____ 2. Very good _____ 3. Satisfactory _____ 4. Needs improvement _____ 5. Poor
VIII. What is your perception of the overall cosmetic condition of classrooms and the schools' interiors, e.g. hallways, auditoriums, and offices, in schools within your district?	_____ 1. Outstanding _____ 2. Very good _____ 3. Satisfactory _____ 4. Needs improvement _____ 5. Poor
IX. What is your perception of the overall cosmetic condition of the school buildings' exteriors within your district?	_____ 1. Outstanding _____ 2. Very good _____ 3. Satisfactory _____ 4. Needs improvement _____ 5. Poor
X. How would you rate the overall maintenance of the school buildings in your district? When answering please consider general repairs, light bulb replacement, plumbing maintenance, electrical, and similar systems, etc.	_____ 1. Outstanding _____ 2. Very good _____ 3. Satisfactory _____ 4. Needs improvement _____ 5. Poor

Is there any additional information you would like to provide about your perceptions of the condition of school buildings and classrooms? If so, please use this space for that purpose or attach an additional sheet.

Thank you for taking the time to respond to this survey. The results will be utilized in a doctoral dissertation paper for the purpose of examining the relationship of school leadership and the condition of school buildings. If you would like to receive a summary of the results, please include a note in the envelope containing the returned survey, and one will be mailed to you.

Questions used in this survey are derived from a national survey developed by J. C. Moulton, Jr. (1998). His assistance in this endeavor is acknowledged and greatly appreciated.

Appendix B

33319 Huckleberry Drive
Glade Spring, VA 24340
December 6, 1999

Dear Principal:

I am conducting this survey in order to obtain your perceptions regarding the condition of your school building(s). This survey is in conjunction with a doctoral dissertation research being conducted on the relationship between school leadership and the condition of school buildings.

The enclosed survey should take less than ten minutes to complete. Your answers will be anonymous. Responses will be entered into a database along with responses on the same questions from all groups involved: school board members, central office staff, superintendent, principals, and board of supervisors.

I appreciate your time and information given in the completion of this survey.

Sincerely,

Lee Brannon
Doctoral Candidate
Education Leadership and Policy Studies
Virginia Tech

Appendix B

1999 Survey of Principals' Perceptions of School Building Conditions

Please respond to the following questions regarding your perception of school building conditions.

I. In your opinion, to what extent do your school facilities meet the needs of the educational program?	_____ 1. All facilities meet the needs. _____ 2. Most facilities meet the needs. _____ 3. Some facilities meet the needs. _____ 4. Few facilities meet the needs. _____ 5. None meet the needs.
II. To what extent are your school facilities technologically adequate for the future?	_____ 1. All are adequate. _____ 2. All will be adequate with implementation of planned improvements. _____ 3. More than half are adequate. _____ 4. Less than half are adequate. _____ 5. None are adequate.
III. In your opinion, maintaining school facilities should be	_____ 1. Top priority _____ 2. One of your top priorities _____ 3. A middle priority _____ 4. A low priority _____ 5. Not a priority
IV. In your opinion, the amount of money budgeted for the maintenance of your school facilities is	_____ 1. More than adequate _____ 2. Adequate _____ 3. Less than adequate
V. As a principal, do you receive enough information regarding the need to improve and renovate existing school facilities to make effective decisions?	_____ 1. More than enough _____ 2. Enough _____ 3. Less than enough
VI. In your opinion, the amount of money spent on the improvement and renovation of your school facilities is	_____ 1. More than adequate _____ 2. Adequate _____ 3. Less than adequate

VII. What is your perception of the overall condition of your school, taking into consideration all buildings, classrooms, and technology characteristics?	_____ 1. Outstanding _____ 2. Very good _____ 3. Satisfactory _____ 4. Needs improvement _____ 5. Poor
VIII. What is your perception of the overall cosmetic condition of classrooms and the school's interiors, e.g. hallways, auditorium, and offices, in your school?	_____ 1. Outstanding _____ 2. Very good _____ 3. Satisfactory _____ 4. Needs improvement _____ 5. Poor
IX. What is your perception of the overall cosmetic condition of the school building's exterior?	_____ 1. Outstanding _____ 2. Very good _____ 3. Satisfactory _____ 4. Needs improvement _____ 5. Poor
X. How would you rate the overall maintenance of the your school building? When answering please consider general repairs, light bulb replacement, plumbing maintenance, electrical, and similar systems, etc.	_____ 1. Outstanding _____ 2. Very good _____ 3. Satisfactory _____ 4. Needs improvement _____ 5. Poor

Is there any additional information you would like to provide about your perceptions of the condition of school buildings and classrooms? If so, please use this space for that purpose or attach an additional page.

Thank you for taking the time to respond to this survey. The results will be utilized in a doctoral dissertation paper for the purpose of examining the relationship of school leadership and the condition of school buildings. If you would like to receive a summary of the results, please include a note in the envelope containing the returned survey, and one will be mailed to you.

Questions used in this survey are derived from a national survey developed by J. C. Moulton, Jr. (1998). His assistance in this endeavor is acknowledged and greatly appreciated.

Appendix C

33319 Huckleberry Drive
Glade Spring, VA 24340
December 6, 1999

Dear Superintendent/Central Office Staff:

I am conducting this survey in order to obtain your perceptions regarding the condition of your school building(s). This survey is in conjunction with a doctoral dissertation research being conducted on the relationship between school leadership and the condition of school buildings.

The enclosed survey should take less than ten minutes to complete. Your answers will be anonymous. Responses will be entered into a database along with responses on the same questions from all groups involved: school board members, central office staff, superintendent, principals, and board of supervisors.

I appreciate your time and information given in the completion of this survey.

Sincerely,

Lee Brannon
Doctoral Candidate
Education Leadership and Policy Studies
Virginia Tech

Appendix C

1999 Survey of Superintendent's and Central Office Staff's Perceptions of School Building Conditions

Please respond to the following questions regarding your perception of school building conditions.

I. In your opinion, to what extent do school facilities in your county meet the needs of the educational program?	_____ 1. All facilities meet the needs. _____ 2. Most facilities meet the needs. _____ 3. Some facilities meet the needs. _____ 4. Few facilities meet the needs. _____ 5. None meet the needs.
II. To what extent are school facilities in your county technologically adequate for the future?	_____ 1. All are adequate. _____ 2. All will be adequate with implementation of planned improvements. _____ 3. More than half are adequate. _____ 4. Less than half are adequate. _____ 5. None are adequate.
III. In your opinion, maintaining school facilities is	_____ 1. Your top priority _____ 2. One of your top priorities _____ 3. A middle priority _____ 4. A low priority _____ 5. Not a priority
IV. In your opinion, the amount of money budgeted for the maintenance of school facilities is	_____ 1. More than adequate _____ 2. Adequate _____ 3. Less than adequate
V. As a member of central office staff, do you receive enough information regarding the need to improve and renovate existing school facilities to make effective decisions?	_____ 1. More than enough _____ 2. Enough _____ 3. Less than enough

VI. In your opinion, the amount of money spent on the improvement and renovation of school facilities is	_____ 1. More than adequate _____ 2. Adequate _____ 3. Less than adequate
VII. What is your perception of the overall condition of schools in the county, taking into consideration all buildings, classrooms, and technology characteristics?	_____ 1. Outstanding _____ 2. Very good _____ 3. Satisfactory _____ 4. Needs improvement _____ 5. Poor
VIII. What is your perception of the overall cosmetic condition of classrooms and the schools' interiors, e.g. hallways, auditoriums, and offices, in schools within the county?	_____ 1. Outstanding _____ 2. Very good _____ 3. Satisfactory _____ 4. Needs improvement _____ 5. Poor
IX. What is your perception of the overall cosmetic condition of the school buildings' exteriors within the county?	_____ 1. Outstanding _____ 2. Very good _____ 3. Satisfactory _____ 4. Needs improvement _____ 5. Poor
X. How would you rate the overall maintenance of the school buildings within the county? When answering please consider general repairs, light bulb replacement, plumbing maintenance, electrical and similar systems, etc.	_____ 1. Outstanding _____ 2. Very good _____ 3. Satisfactory _____ 4. Needs improvement _____ 5. Poor

Is there any additional information you would like to provide about your perceptions of the condition of school buildings and classrooms? If so, please use this space for that purpose or attach an additional sheet.

Thank you for taking the time to respond to this survey. The results will be utilized in a doctoral dissertation paper for the purpose of examining the relationship of school leadership and the condition of school buildings. If you would like to receive a summary of the results, please include a note in the envelope containing the returned survey, and one will be mailed to you.

Questions used in this survey are derived from a national survey developed by J. C. Moulton, Jr. (1998). His assistance in this endeavor is acknowledged and greatly appreciated.

Appendix D

33319 Huckleberry Drive
Glade Spring, VA 24340
December 6, 1999

Washington County Board of Supervisors
29045 Zion Church Road
Damascus, VA 24236

Dear Board of Supervisors Member:

I am conducting this survey in order to obtain your perceptions regarding school building conditions within the county. This survey is in conjunction with a doctoral dissertation research being conducted on the relationship between school leadership and the condition of school buildings.

The enclosed survey should take less than ten minutes to complete. Your answers will be anonymous. Please return your completed survey to me in the enclosed self-addressed, stamped envelope by December 20. Responses will be entered into a database along with responses on the same questions from all groups involved: school board members, central office staff, superintendent, principals, and board of supervisors.

I appreciate your time and information given in the completion of this survey.

Sincerely,

Lee Brannon
Doctoral Candidate
Education Leadership and Policy Studies
Virginia Tech

Appendix D

1999 Survey of Board of Supervisors' Perceptions of School Building Conditions

Please respond to the following questions regarding your perception of school building conditions.

I. In your opinion, to what extent do school facilities in the county meet the needs of the educational program?	_____ 1. All facilities meet the needs. _____ 2. Most facilities meet the needs. _____ 3. Some facilities meet the needs. _____ 4. Few facilities meet the needs. _____ 5. None meet the needs.
II. To what extent are school facilities in the county technologically adequate for the future?	_____ 1. All are adequate. _____ 2. All will be adequate with implementation of planned improvements. _____ 3. More than half are adequate. _____ 4. Less than half are adequate. _____ 5. None are adequate.
III. In your opinion, maintaining school facilities is	_____ 1. Your top priority _____ 2. One of your top priorities _____ 3. A middle priority _____ 4. A low priority _____ 5. Not a priority
IV. In your opinion, the amount of money budgeted for the maintenance of school facilities is	_____ 1. More than adequate _____ 2. Adequate _____ 3. Less than adequate
V. As a board of supervisors member, do you receive enough information regarding the need to improve and renovate existing school facilities to make effective decisions?	_____ 1. More than enough _____ 2. Enough _____ 3. Less than enough
VI. In your opinion, the amount of money spent on the improvement and renovation of school facilities is	_____ 1. More than adequate _____ 2. Adequate _____ 3. Less than adequate

VII. What is your perception of the overall condition of schools in the county, taking into consideration all buildings, classrooms, and technology characteristics?	_____ 1. Outstanding _____ 2. Very good _____ 3. Satisfactory _____ 4. Needs improvement _____ 5. Poor
VIII. What is your perception of the overall cosmetic condition of classrooms and the schools' interiors, e.g. hallways, auditoriums, and offices, in schools within the county?	_____ 1. Outstanding _____ 2. Very good _____ 3. Satisfactory _____ 4. Needs improvement _____ 5. Poor
IX. What is your perception of the overall cosmetic condition of the school buildings' exteriors within the county?	_____ 1. Outstanding _____ 2. Very good _____ 3. Satisfactory _____ 4. Needs improvement _____ 5. Poor
X. How would you rate the overall maintenance of the school buildings in the county? When answering, please consider general repairs, light bulb replacement, plumbing maintenance, electrical and similar systems, etc.	_____ 1. Outstanding _____ 2. Very good _____ 3. Satisfactory _____ 4. Needs improvement _____ 5. Poor

Is there any additional information you would like to provide about your perceptions of the condition of school buildings and classrooms? If so, please use this space for that purpose or attach an additional sheet.

Thank you for taking the time to respond to this survey. The results will be utilized in a doctoral dissertation paper for the purpose of examining the relationship of school leadership and the condition of school buildings. If you would like to receive a summary of the results, please include a note in the envelope containing the returned survey, and one will be mailed to you.

Questions used in this survey are derived from a national survey developed by J. C. Moulton, Jr. (1998). His assistance in this endeavor is acknowledged and greatly appreciated.

Appendix E

ASSESSMENT OF PHYSICAL ENVIRONMENT

Instructions: Please indicate the status of the school facility in each area by circling the most appropriate description for each of the following questions. You may provide additional information in the space provided after each question.

Survey Instrument

1. What is the age of the facility? [A facility's age is your best estimate of the time period during which most of the space used by students was built. If the space was fully updated to the building standards of a later time period, consider the school in the later time period.]

    a. 60 years old or older

    b. 50-59 years old

    c. 40-49 years old

    d. 30-39 years old

    e. 20-29 years old

    f. 10-19 years old

    g. Under 10 years old

Comments: _____

2. Are there windows in each instructional space (classroom)?

    a. Windows are in fewer than 1/4th of the instructional spaces.

    b. Windows are in at least 1/4th, but fewer than 3/4ths of the instructional spaces.

    c. Windows are in at least 3/4ths of the instructional spaces.

Comments: _____

3. What kind of flooring is found in the majority of the instructional spaces?

    a. Wood floor

    b. Tile or terrazzo

    c. Carpet

Comments: _____

4. What quality of heat is found in the majority of the instructional spaces?
    a. Uneven heat – unable to control in each room
    b. Even heat – unable to control in each room
    c. Even heat – able to control in each room

Comments: _____

5. What quality of air conditioning is found in the majority of the instructional spaces?
    a. No air conditioning in the facility
    b. Air conditioning in some instructional spaces, or air conditioning in all instructional spaces but not well regulated
    c. Air conditioning in all instructional spaces which can be well regulated

Comments: _____

6. When was the last time the interior walls, including classroom spaces, were painted?
    a. Over 15 years ago
    b. Between 8 and 15 years
    c. Less than 8 years ago

Comments: _____

7. Is there a regularly scheduled painting cycle for interior walls? If so, what is it?
    a. No
    b. Yes – over 8-year cycle
    c. Yes – 8-year or fewer-year cycle

Comments: _____

8. When was the last time the exterior walls or windows and trim were painted?
    a. Over 7 years ago
    b. Between 4 and 7 years
    c. Within the last 4 years or no exterior surface requires periodic painting

Comments: _____

9. Is there a regularly scheduled painting cycle for exterior walls or windows and trim? If so, what is it?
    a. No
    b. Yes – Over 7-year cycle
    c. Yes – 7-year or fewer-year cycle or not needed because no exterior surface requires periodic painting

Comments: _____

10. Are there visible indications of roof leaks?
    a. Ceiling is deteriorating due to water damage and/or water falls in some areas of facility, requiring buckets for water collection.
    b. Ceiling is currently developing a few new stains due to minor leaks.
    c. No visible signs or only a few old water spots in ceiling.

Comments: _____

11. How often are the instructional area floors swept (if wood, tile, or terrazzo) or vacuumed (if carpeted)?
    a. Monthly
    b. Weekly
    c. Daily or more frequently.

Comments: _____

12. How often are the instructional area floors mopped (if wood, tile, or terrazzo) or vacuumed (if carpeted)?
    a. Annually
    b. Monthly
    c. Weekly or daily

Comments: _____

13. What is the condition of the lockers?
    a. Most are not functional or not in good repair.
    b. At least three-fourths of the lockers are functional and in good repair.
    c. Over three-fourths of the lockers are functional and in good repair.

Comments: _____

14. What type of material is used for interior ceilings?
    a. Wood or open beams
    b. Plaster or acoustical tiles in at least three-fourths of the instructional spaces
    c. Acoustical tiles throughout the instructional spaces

Comments: _____

15. What type of lighting is available in the instructional areas?
    a. Incandescent lighting
    b. Fluorescent lighting - hot
    c. Fluorescent lighting - cold

Comments: _____

16. What is the condition of the classroom furniture?
    a. Most rooms have furniture that is either facially scarred or functionally damaged.
    b. Though at least half the rooms may have some minor facial scars on the student desks, all the furniture is functionally sound and looks satisfactory.
    c. All the classrooms have furniture which is functionally sound and facially attractive.

Comments: _____

17. What is the condition of the school grounds?
    a. There is no landscaping, and sidewalks are either not present or damaged. (It is unattractive to the community.)
    b. There is landscaping, and the sidewalks are present and in good repair. (It is acceptable to the community.)
    c. The landscaping and other outside facilities are attractive and well-maintained. (It is the center of pride for the community.)

Comments: _____

18. What color are the walls in the instructional areas?

    a. Dark colors

    b. White

    c. Pastel colors

Comments: _____

19. What do you consider to be the condition of the facility cosmetically and structurally?

    a. Below standard

    b. Standard

    c. Above standard

Comments: _____

20. Which of the following best describes electrical service in classrooms?

    a. There is one outlet in each classroom.

    b. There are two or three outlets in each classroom.

    c. There is at least one outlet per wall in each classroom, or four or more outlets

Comments: _____

21. Do classrooms have connections to a school-wide local area computer network?

    a. None

    b. Some

    c. All

Comments: _____

22. Do classrooms have connections to a district-wide or other wide area computer network?

    a. None

    b. Some

    c. All

Comments: _____

23. Do classrooms have Internet access?
    a. None
    b. Some
    c. All

Comments: _____

24. Do classrooms have cable connections to a central television antenna or other cable television system?
    a. None
    b. Some
    c. All

Comments: _____

If there are any areas on this assessment instrument which you feel require further comment, please note them and your comments in the space provided. Thank you for your time and assistance in completing this assessment of the facility's physical environment.

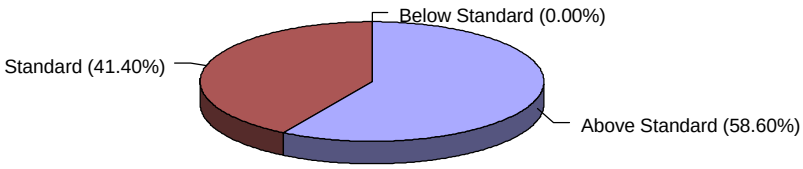
Comments:

Questions used in this survey are derived from the CAPE survey developed by Dr. Carol Cash (1993) and the Assessment of Building and Classroom Conditions in Elementary Schools in Virginia, Dr. James W. Lanham (1998). Their assistance in this endeavor is acknowledged and greatly appreciated.

Appendix F

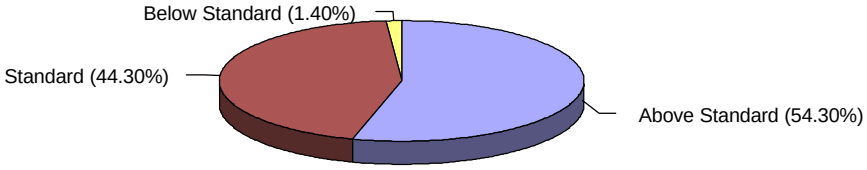
Perceptions of Sch. Bd. Members on

Overall Conditions of School Buildings



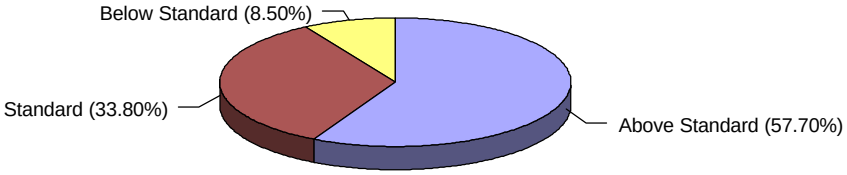
Perceptions of Board of Supervisors

Overall Conditions of School Buildings



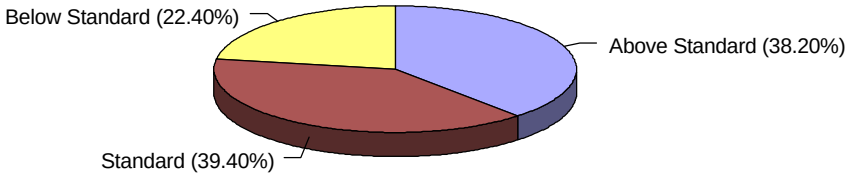
Supt. & Cent. Office Staff Perceptions

Overall Conditions of School Buildings



Perceptions of Principals on

Overall Conditions of School Buildings



Appendix G

November 15, 1999

Dr. J. C. Moulton, Jr.
5322 Windsor Hills Drive
Fairfax, VA 22032

Dear Dr. Moulton:

I am currently pursuing a doctoral degree in education from Virginia Tech in Blacksburg, Virginia. My study is entitled, "A Study of the Relationship Between School Leadership and the Condition of School Buildings." Within this paper I will utilize ten questions to survey various individuals regarding their perception of school building conditions.

This is to ask permission to use items taken from your National Survey of the Perceptions of Selected School Board Members Regarding the Quality and Condition, Maintenance, and Improvement and Renovation of Existing Public School Facilities as presented in your unpublished dissertation at Virginia Polytechnic Institute and State University, Blacksburg, in my survey instrument.

Thank you for your consideration to my request. Enclosed is an acknowledgment return for your signature and a self-addressed, stamped envelope. If you have any questions, you may reach me by e-mail at **lbrannon@wcs.k12.va.us** or at 540-628-1852.

Sincerely,

Lee Brannon
Principal

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enclosures

Appendix H

November 17, 1999

Dr. J. W. Lanham, III
2112 Rocky Point Parkway
Richmond, VA 23233

Dear Dr. Lanham:

I am currently pursuing a doctoral degree in education from Virginia Tech in Blacksburg, Virginia. My study is entitled, "A Study of the Relationship Between School Leadership and the Condition of School Buildings." Within this paper I will be surveying various individuals regarding their perception of school building conditions. I will also be using the findings of an independent contractor on the condition of school buildings by administering an assessment of building classrooms and general building conditions for a particular county in Virginia.

This letter is to ask your permission to use questions from your Assessment of Building and Classroom Conditions in Elementary Schools in Virginia which was utilized in your unpublished dissertation at Virginia Tech entitled Relating Building and Classroom Conditions to Student Achievement in Virginia's Elementary Schools in my assessment of building conditions which will be performed by an independent contractor in Virginia.

Thank you for your consideration to my request. Enclosed is an acknowledgment return for your signature and a self-addressed, stamped envelope. If you have any questions, you may reach me by e-mail at **lbrannon@wcs.k12.va.us** or at 540-628-1852.

Sincerely,

Lee Brannon
Principal

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Enclosures

Appendix I

November 16, 1999

Dr. Carol S. Cash
Lee Davis High School
7052 Mechanicsville Pike
Mechanicsville, VA 23111

Dear Dr. Cash:

As you are aware, I am currently pursuing a doctoral degree in education from Virginia Tech in Blacksburg, Virginia. My study is entitled, "A Study of the Relationship Between School Leadership and the Condition of School Buildings." I will also be using the findings of an independent contractor on the condition of school buildings by administering an assessment of building classrooms and general building conditions for a particular county in Virginia.

This letter is to ask your permission to use questions from your Commonwealth Assessment of Physical Environment (CAPE) instrument utilized in your paper entitled, "Building Condition and Student Achievement and Behavior," as presented in your unpublished doctoral dissertation at Virginia Tech. These questions will be incorporated into my assessment instrument for building conditions.

Thank you for your consideration to my request. Enclosed is an acknowledgment return for your signature and a self-addressed, stamped envelope. If you have any questions, you may reach me by e-mail at **lbrannon@wcs.k12.va.us** or at 540-628-1852.

Sincerely,

Lee Brannon
Principal

gh

Enclosures

VITA

William Lee Brannon

33319 Huckleberry Drive
Glade Spring, Virginia 24340
Telephone Home: 540-475-5656
Office: 540-628-1850

EDUCATIONAL BACKGROUND:

Doctor of Education

Education Administration, Virginia Polytechnic Institute and State University, April 2000. The dissertation addressed the relationship between school leadership and the condition of school buildings.

Education Specialist

Educational Leadership and Policy Studies, Virginia Polytechnic Institute and State University, July 1999.

Master's Degree

Education Administration, Virginia Polytechnic Institute and State University, December 1988.

Bachelor's Degree

Social Studies and Education, King College, Bristol, Tennessee, May 1981.

EMPLOYMENT:

Principal, Abingdon High School, Washington County Public Schools, Abingdon, Virginia.

Principal, John S. Battle High School, Washington County Public Schools, Abingdon, Virginia.

Principal, Glade Spring Middle School, Washington County Public Schools, Abingdon, Virginia.

Principal, Glade Spring Elementary School, Washington County Public Schools, Abingdon, Virginia.

Assistant Principal, Abingdon High School, Washington County Public Schools, Abingdon, Virginia.

Teacher, Patrick Henry High School, Washington County Public Schools, Abingdon, Virginia.