FACTORS THAT INFLUENCE BOARD MEMBERS IN THE SELECTION OF AN ARCHITECTURAL FIRM FOR NEW SCHOOL CONSTRUCTION AND/OR RENOVATION PROJECTS IN NORTH CAROLINA

by

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A dissertation submitted to the faculty of
The University of North Carolina at Charlotte
in partial fulfillment of the requirements
for the degree of Doctor of Education in
Educational Leadership

Charlotte

2015

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ABSTRACT

STUART TAYLOR BLOUNT. Factors that influence board members in the selection of an architectural firm for new school construction and/or renovation projects in North Carolina. (Under the direction of DR. JIM WATSON and DR. MICKEY DUNAWAY)

This research study examined the factors that influence board members in the selection of an architectural firm for new school construction and/or renovation projects in North Carolina. School board members completed a survey which allowed the researcher to identify factors which are important in the selection process of architectural firms. North Carolina law requires school systems to employ an architectural firm for new school construction and/or renovation projects within local school agencies. The data collected focused on four categories of architectural firms: reputation, costs, staffing, and other. Responses on the survey were coded to identify similarities/differences across gender, race/ethnicity, age, years as a school board member, years the school board member has resided in their local education agency (LEA), student enrollment, assigned district number, and personal involvement in the selection of an architectural firm in their LEA.

ACKNOWLEDGMENTS

This research study is a result of many people and the support they provided me. I would like to acknowledge first and foremost my family. I cannot thank them enough for the support and love they have shown. My children; Jacob, Nick, and Anna, have sacrificed time with their dad as I completed this dissertation. My wife; Toni, has been my constant encourager during this five year journey. As I reflect over the time it has taken to complete my doctoral degree, I truly realize that without their support I would never have been able to reach this point in my professional career. I love each of them greatly and they continue to be the shining stars in my life. Secondly, I would like to acknowledge the encouragement and assistance of all of my committee members. A special acknowledgement to Dr. Watson and Dr. Algozzine for their guidance and encouragement. The guidance of Dr. Algozzine during the "data phase" was both helpful and rewarding. The completion of Chapter 4 would not have been possible without Dr. Algozzine's guidance and patience. Dr. Lyons, retired UNCC professor, was extremely helpful to me as I started the doctoral program nearly five years ago. He was the voice of encouragement as I started the doctoral program and continues to be an inspiration to me. And finally, I would like to acknowledge the following colleagues (and more importantly friends) for their support: Rick Stout and Dr. Mark Duckworth. Thank you for being there when I needed the encouragement to push forward.

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CHAPTER 1: INTRODUCTION

The goal of this research study was to document the extent to which specific factors were perceived as important to K-12 public education school board members in the selection of architectural firms for new school construction and/or renovation projects in North Carolina schools. Through a quantitative method of research, the researcher identified the importance of criteria used by school boards to select architectural firms. The study included 52 of the 115 public schools in North Carolina and excluded public charter schools.

School facility renovation and new school construction decisions are challenges for local school district officials. A significant number of school facilities are in poor condition, not necessarily due to poor maintenance, but more due to their age. The sub-prime lending problems and housing market collapse of 2008 compounds the issue of school facility renovations and/or new school construction for local school districts in North Carolina. Per North Carolina General Statute 115C-521 (Erection of School Buildings, 2013), it shall be the duty of local boards of education to provide classroom facilities adequate to meet the requirements of G.S. 115C-47(10) (Powers and Duties Generally, 2013) and 115C-301 (Allocation of Teachers; Class Size, 2013). This general statute requires that local school boards complete long-range facility plans and submit them to the North Carolina Department of Public Instruction every five years. Due to this legislative mandate, the use of architectural firms for facility studies and/or construction

projects must be initiated. This mandate of local school boards yields an expensive requirement over time; and, failure to systematically forecast school construction costs may leave school boards in a state of financial uncertainty.

In 2013, the North Carolina Legislature discussed a bill that would eliminate local board of education ownership of school facilities in Wake County. NC Senate Bill DRS75135-LE-31B (Counties Responsible for School Construction, 2013) would have effectively transferred ownership of school facilities to the county commissioners of Wake County. If passed, this would have meant that county commissioners would control all components of school construction, maintenance, and facility use by community groups. The Senate Bill introduced would have statewide implications. All North Carolina boards of education own and have complete responsibility of school facilities within their district. A transfer of ownership to county commissioners would strip the local board of education of authority for the buildings in which they are held responsible for providing a sound basic education to the students whom attend their schools. On April 11, 2013, the North Carolina Senate Bill was defeated with a vote of 62 -54 but remains a topic of concern for public school administrators and boards of education members. With the defeat of this bill, school construction remains the responsibility of the local board of education.

The selection of an architectural firm can be a decision with far-reaching implications. The opportunity to improve school construction and/or renovation can be related to the due diligence of the school board during the selection process of an architectural firm. School facility renovations and new school construction require the use of an architectural firm; therefore, specific identified factors which school board

members value in an architect could yield a better final decision. The costs of school construction and/or renovations drive the fiscal decisions of local school boards. These decisions may impact the community and the student learning environment for years.

Documenting the importance of criteria used by school boards to select the architectural firm who will oversee school projects may enable school boards to be confident in the selection process. These criteria should enhance the confidence of local citizens. Local school boards and local commissioners may agree that the funding of school facility renovation projects and new school construction projects are a matter of public scrutiny during lean fiscal times. Projects of this nature allow citizens the chance to voice opinions through town hall meetings, newspaper articles, social media, and letters to the editor. The use of public funds heightens the need to identify specific criteria that elected K-12 public education school board members perceive as important in the selection process of architectural firms. Currently, the selection and decision to hire an architectural firm varies among local school districts.

Per Watson and Driscoll (2012), the 2010 United States Census reported that North Carolina had a population of 9,535,483 residents. From 2000 to 2010 North Carolina was the sixth fastest growing state in the country. A 2013 estimate shows North Carolina continuing to grow to a population of 9,848,060 residents, an increase of 312,577 from the 2010 Census (Watson & Driscoll, 2012). This increase in overall population could have implications for the K-12 student population. During the 2002-2003 school year, the North Carolina Department of Public Instruction reported that there were 1,324,181 students enrolled in the 115 traditional public schools. Watson and Driscoll (2012) presented that by 2012-2013 the student population had increased to

1,443,998 representing a 9% increase in student population since 2002-2003. With this significant increase in student population, the need for additional school facilities is clear. A North Carolina Department of Public Instruction survey conducted in 2010-2011 provides support for this assumption. The survey included all 115 traditional school systems in the state. The results of this survey identified an overall need of $8 billion dollars for new schools, renovations, and repairs. From this total, new schools were projected to cost approximately 3 billion dollars. Fifty-one school systems indicated the need for 143 new schools. The survey further revealed that there were 5,845 mobile classrooms in use, housing over 10% of the overall student population in the state (Watson & Driscoll, 2012).

Purpose of the Study

The purpose of this research study was to document the extent to which specific factors were perceived as important to K-12 public education school board members in the selection of architectural firms for new school construction and/or renovation projects in North Carolina schools. Expected and possible benefits are:

1. A documented selection process used by school boards when selecting an architectural firm;
2. Criteria in the selection process will be available for use by North Carolina K-12 public education school boards;
3. Criteria in the selection process will be made available for architectural firms to use when marketing their services to K-12 public education school systems; and
4. A reduction in public scrutiny of funding for school facility renovations and new school construction projects.

Research Questions

The researcher answered the following questions related to factors that influence board members in the selection of an architectural firm for new school construction and/or renovation projects in North Carolina:

1. To what extent are perceptions of importance similar across four categories of selection factors (i.e., reputation, cost, staffing, and other)?
2. To what extent are perceptions of importance similar across four categories of selection factors for male and female school board members?
3. To what extent are perceptions of importance similar across four categories of selection factors for school board members from different racial/ethnic groups?
4. To what extent are perceptions of importance similar across four categories of selection factors for school board members from different age groups?
5. To what extent are perceptions of importance similar across four categories of selection factors for school board members with different years of service?
6. To what extent are perceptions of importance similar across four categories of selection factors with different years of residence in the LEA?
7. To what extent are perceptions of importance similar across four categories of selection factors for school board members with different levels of student enrollment in the LEA?
8. To what extent are perceptions of importance similar across four categories of selection factors for school board members in different districts of the state?

9. To what extent are perceptions of importance similar across four categories of selection factors for school board members with different previous involvement in selecting an architectural firm?

Delimitations

The State of North Carolina has 741 local school board members serving in a total of 115 school districts (Miller, 2014). The majority of school board members are elected by the local citizens through general non-partisan elections; however, some local school board members such as Asheville City are appointed. The gender and ethnicity of school board members should represent a cross section of the communities in which they represent. North Carolina General Statute Chapter 115C – 35 Article 5 requires school board members to reside within the boundaries of their local school district. These members serve the greater community through their position on the school board. Local school board members should be representative group of the local community. School board members are not required to have any previous educational training or professional affiliation with public schools. Public school board members across North Carolina completed a survey which shall identify characteristics they believe are important in the selection of an architectural firm.

Limitations

Factors affecting this research study included but were not limited to:

1. The return rate of the survey from local school board members;
2. The survey only targeted local school board members;
3. The length of service on the local school board by each school board member;

4. Some board members will have no “real life” experience with the selection process; and
5. Variances in inherent knowledge of building, construction, and bid processes by school board members.

Assumptions

For this research study, the following assumptions were made:

1. The school board members completing the survey will be honest with regard to the criteria they would see as important in the selection process of architectural firms;
2. The local school board members will have some knowledge of the existing process used within their school district when selecting an architect;
3. The results will yield information that will improve the process for selecting architectural firms for a local school district.

Definitions

Local school board member: An elected or appointed individual by the local community to oversee the operation of a local school district.

Architectural firm: A professional service organization that assists the local school board in the process of selecting contractors for school construction and/or school renovation projects.

Local Commissioners: Members of an elected board that oversees and manages the operation of county government. They allocate local funds for school construction and school renovation projects through capital outlay funds.

Local Education Agency (LEA): A local school system or a local school district, indicating that a public board of education or other public authority maintains administrative control of the public schools in a city or county.

Average Daily Membership (ADM): The number of days a student is in membership at a school divided by the number of days in a school month or school year. This number is used to calculate funding for school districts and individual schools.

Public schools: Traditional public schools operating in the State of North Carolina. These schools are funded through state taxes, local taxes, and federal government taxes. There are currently 115 local education agencies in North Carolina.

Summary

School facility renovations and new school construction decisions continue to be a concern of local school districts. A significant number of school facilities are in poor condition, not necessarily due to poor maintenance, but more due to their age. The sub-prime lending problem and housing market collapse of 2008 has had a lasting effect and compounds the issue of school facility renovations and/or new school construction for local school districts in North Carolina. The selection of an architectural firm can have far-reaching implications. The opportunity to lessen the negative implications can be accomplished through the selection process of an architectural firm. Throughout the history of public schools, the construction and renovation responsibilities of administrators and boards of education have changed. Charles Francis Adams stated in 1880 that these administrators were “mere purchasing agents and superintendents of-repairs” and that their monument was the “the four-square school hous and the separate desk” (Adams, 1880, p.65). As our schools have changed so have our students. Tapper

(2014) states that the transformation to 21st Century learning environments emphasizes the need to develop a solid relationship with architectural firms who design and build school facilities. These facilities support more that the aforementioned "four-square school hous and a separates desk" and are fully integrated with wiring and technology support to keep all students connected with the ever changing world around them. To fully support the development of learning environments for students, school designs must reinvent the traditional building models (Tapper, 2014). Education is transforming toward valuing group-thinking and redesigning workspaces to support increased teamwork (Erickson, 2014). This paradigm shift to a more connected classroom environment has today's administrators and board of education members constantly working towards providing all students with the best education possible.

School facility renovations and new school construction require the use of an architectural firm; therefore, specific identified factors which school board members' value in an architectural firm may yield a better final decision. Through a quantitative study, the researcher documented the importance of factors that influence school board members in the selection of an architectural firm for new school construction and/or renovation projects. School board members in North Carolina completed a survey. Through the data collected from this survey, the researcher identified specific factors that influenced school board members when selecting architectural firms. The surveys were mailed to 71 of the 115 superintendents who in turn distributed the survey to his/her school board members during a regularly scheduled school board meeting. The timeline for mailing and collecting the results took less than two months. The analyzing of data

was completed in an additional month. The successful completion of the study took approximately four months.

Chapter Two of the dissertation is a comprehensive review of literature of the topic. In addition, Chapter Two contains reference to previously completed surveys and/or questionnaires on the selection of architectural firms for school construction. Chapter Three of the dissertation contains the methodology used for the research study to include the research design, a description of the population, collection of data methods, and a summary of methods used to analyze data. Chapter Four of the dissertation presents the findings of the research and interpretation of data collected. Chapter Five of the dissertation contains summary findings, conclusions and recommendations for future research.

CHAPTER 2: REVIEW OF LITERATURE

School construction in the State of North Carolina is a continuous topic of interest and debate among school boards, local county/city commissioners, and communities. School facility renovation and new school construction decisions are of utmost importance for a community. Decisions are made within a political environment where power relationships are constantly being negotiated within the unique context of the situation (Mast, 2012). Many school facilities are in poor condition, not necessarily due to poor maintenance, but moreover due to their age. The sub-prime lending problems and housing market collapse of 2008 in our nation compounds the issue for school districts in North Carolina. The selection process of an architectural firm is a decision which should yield positive results. The need to provide school facilities remains a top priority with school boards, county/city commissions, and the community at large. There remains a budgetary strain on school districts to maintain school facilities in adequate working condition for instructional purposes. Few studies have documented the importance of factors that influence school board members when selecting an architectural firm for new school construction and/or renovations. Therefore, the purpose of this research study was to document the importance of factors that influence K-12 public education school board members in North Carolina during the selection process of architectural firms for new school construction and/or renovation projects.

Cost of School Construction

Abramson (2014) states that school districts in the United States spent just over $13 billion ($13,390,396,000) on construction projects completed during the 2013 calendar year. Almost $7.6 billion of that was spent on new schools, accounting for 56.6 percent of the construction dollars. School districts across the nation must contend with growing student populations and the age of existing school buildings/facilities. Abramson (2014) in the 19th Annual School Construction Report, reports that what was noticeable was that all of the increase was attributable to spending on fixing up and enlarging existing buildings. Table 1 illustrates the cost per square foot to build and the square foot provided for each student in 2013 (Abramson, 2014).

The cost of constructing an elementary school has more than doubled since 1995 from $93 to $202 (Abramson, 2014). This figure represents a slight decline from one year earlier when the median elementary school cost was $204.79 per square foot. The cost in 2013 for the median size high school was $47,500 per student with middle schools coming in at $38,178 per student and elementary schools at $30,551 per student (Abramson, 2014). Abramson (2014) reports that school districts in Region 4 (North Carolina, South Carolina, Kentucky and Tennessee) spent $963 million in 2013 for school construction and/or renovation projects.

The Institute of Education Sciences conducted a survey in the spring of 2013. The survey was mailed to 1,800 public school districts in the 50 states and the District of Columbia. The findings of the survey are based on the self-reporting data from districts. Based on the survey results, 53 percent of public schools needed to spend money on repairs, renovations and modernizations to put the schools' onsite buildings in good

overall condition (Moore, 2014). The total amount needed for these repairs and renovations was estimated at $197 billion with an average of 4.5 million dollars per school (Moore, 2014). This figure is up from the previous estimated figure of $127 billion which was identified in a 1999 national survey of school facilities.

In North Carolina, the total costs of school construction expenses has fluctuated from 2009 to 2013. Table 2 illustrates the building costs, total costs of school construction (including site work) and the average square footage costs for schools in North Carolina from 2009 to 2013 (North Carolina Prototype School Design, 2014). Table 3 illustrates the number of school projects (new school construction and renovation combined) by elementary, middle and high school (North Carolina Prototype School Design, 2014). It also identifies the decline in the number of new school construction projects and school renovation projects across North Carolina.

North Carolina Funding for School Construction

The American Recovery and Reinvestment Act of 2009 aided in the explosion of school construction projects in North Carolina. Currently, North Carolina provides school construction aid to LEAs through the Public School Building Capital Fund (PSBCF) through average daily membership numbers and the North Carolina lottery proceeds. The average daily membership fund which was established in 1987 uses part of the corporate income tax revenues to provide counties with an allotment based on average daily membership. LEAs may let their allotments accrue until they are ready to use them for a specific project. The fund is currently about $90 million per year to be divided among the 115 districts. The fund was frozen by the Legislature for 2002-2003 because of continued state budget shortfalls. More than $1 billion has been allotted from

the average daily membership fund since 1987 and the current average daily membership fund balance is over $60 million dollars.

The North Carolina Education Lottery began in March of 2006. The General Assembly allocated $140 million of anticipated lottery proceeds for school construction during the 2008-2009 fiscal year to be distributed quarterly to each local education agency. Lottery funds are divided among the LEAs based on 1) ADM as a percentage of state ADM, and 2) property tax rate as a percent of the average statewide property tax rate. Funding for school construction by lottery revenues differs from the public school building capital fund in two main areas: local matching funds are not required, and lottery funding cannot be used for technology needs. One-half of lottery sales are returned to the public as prizes; 15% is used for administrative expenses, and 35% is divided among the educational programs. Of the educational programs share, 40% is directed for school construction through the public school building capital fund (North Carolina Department of Public Instruction, 2014). Lottery funds have always supported specific education initiatives in all North Carolina counties. Each year in the state budget, the legislature can adjust how lottery dollars are allocated. Changes for the fiscal year 2015 budget went into effect on August 7, 2014. The figure below shows the percentage of lottery funds allocated by category (North Carolina Education Lottery, 2014).

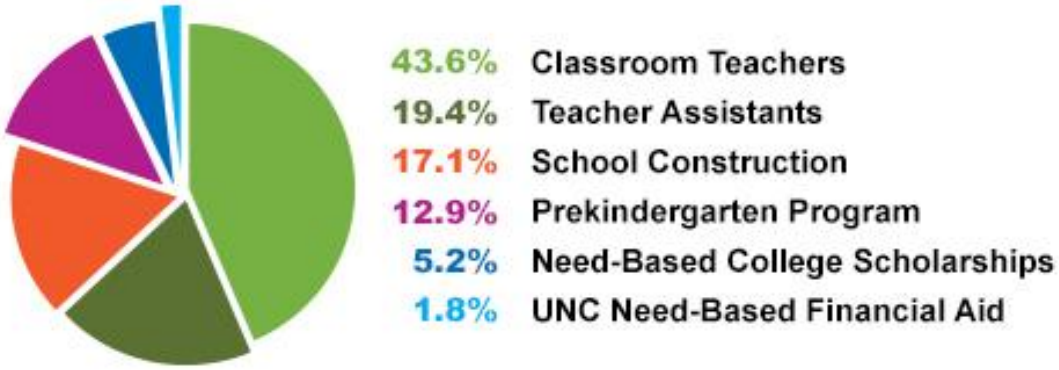

Figure 1: Percentage of 2014 lottery funds allocated by category

Several adjustments were made to the education lottery allocations by the North Carolina General Assembly in 2013. The General Assembly identified $100 million dollars for public school building capital funds. Session Law 2014-100 (budget appropriations) has language that reverts lottery funding to a variety of other areas outside of public school buildings. These adjustments to lottery funding will adversely affect the capital outlay funds for public schools. However, the researcher makes a note of this issue as a potential research topic as it is not the purpose of this study. North Carolina public schools have seen a decrease in state funding for capital outlay monies for school construction. Table 4 shows the rise and fall of allocated funds for school construction funding from state, federal, and local funds (North Carolina Department of Public Instruction, 2014). In addition to direct state aid, the State of North Carolina earmarks sales tax revenues for facilities improvements. State law allows counties to levy two one-half cent additions to the state sales tax (1983, 1986), 30 percent and 60 percent respectively goes to schools (all 100 counties levy the tax). The revenues are distributed to counties on a per capita basis and may be used for public school capital

outlay or to retire indebtedness incurred by the county for these purposes. In many cases, this has allowed counties to fund local bond issues without raising property taxes (North Carolina Department of Public Instruction, 2014).

The North Carolina Education Lottery also earmarks money for capital funds for the public schools of North Carolina. Table 5 illustrates the amount of lottery proceeds allocated to the public school building capital fund (North Carolina Prototype School Design, 2014). For the 2013-2014 school year, it is estimated that North Carolina public schools will serve 1,456,330 students in 115 school districts. Based on this number, a per student allocation for lottery funds is estimated to be $67.64. The rising costs of school construction and the decrease in revenues for school construction and/or renovations will continue to have an adverse effect on school facilities in North Carolina.

The federal government does not provide recurring funding for public schools. However, through a Qualified Zone Academy Bonds (QZABs) – a zero-interest bond program (IRS code) that requires a 10% match from a local business partner, public schools in North Carolina may address school renovation projects. In 2009, then North Carolina Governor Beverly Perdue signed Senate Bill 754 into law. This enabled North Carolina schools to use interest-free bonds for school construction, renovations and repairs as part of the American Recovery and Reinvestment Act (ARRA). This Act allowed North Carolina to administer $275,772,000 in bonding authority for new, qualified school construction bonds (QSCB). In addition, North Carolina could administer $56,699,000 in bonding authority to continue qualified zone academy bonds (QZAB). LEAs in North Carolina are required to apply for the QZAB and QZAB dollars through the North Carolina Department of Public Instruction. Since 2009, North

Carolina school districts have utilized these funding sources to address much needed school facility needs within their districts. The lottery proceed allocation continues to be used to pay the loans on school construction projects. However, as the economy continues to decline in North Carolina, the North Carolina General Assembly re-routed lottery proceeds to address other state funding issues, many school districts have been left scrambling to pay the loans on their projects.

Selection Process

North Carolina General Statute 133-1.1 (Certain Buildings Involving Public Funds to be Designed, etc., by Architects or Engineer, 2007) requires the selection of an architectural/engineering firm for new school construction and/or school renovation projects in North Carolina to oversee the design and implementation of these projects. The diversity of today's school programs and the increasing use of school facilities for a community make it difficult to define what is expected of a new school. To alleviate this situation, many districts are using a team approach for facility planning. The planning team consists of two basic groups of people 1) those responsible for defining the school and community requirements, and 2) those whose duties are to translate the educational requirements into a workable building design (Baas, 1973). School officials should compile a list of potential architectural firms from several sources. One source is architects previously employed by the school corporation while recent school construction projects provide another pool of possible candidates (Nixon, 2002). The selection of the architect is a crucial decision with careful delineation of the criteria for the selection being the first step. During this initial first step, the board of education must be perfectly honest with itself (Mulhorn, 1987). This first step will establish the success

or failure of a construction project with conflicts being costly to the school district in both time and money (Mulhorn, 1987). Ultimately, the board of education is responsible for the final product. They will pay the bills, will answer taxpayers' questions, and assume responsibility for the decisions made which determine the end results regardless of who actually made those decisions (Mulhorn, 1987). The understanding of this responsibility must remain a focus for local boards of education. The decision to select an architectural firm for such projects should be a decision based on factors that will meet the need of the school system facilities and community. When the time comes to plan, build, or renovate facilities, the local board and staff will need the services of many professionals in the field of design, including architects, engineers, landscape architects, and consultants (Johnson, 1968). Few studies document specific factors that school board members identify as important during the selection process. The selection process for these professionals can have a major impact on all other costs related to the project. Whether that impact represents a saving or loss for the school district can be affected by the process used to select and contract for professional services (Day, 1998).

Factors to Consider in the Selection Process

Local school board members bring a variety of experiences to the table when discussing school construction projects. Some may have little to no experience with facility construction and renovations while others through their professional experience bring a wealth of knowledge. Research has documented generic characteristics school boards should look for during the selection process of an architectural firm. Since school officials are required to employ an architect, they should make their selection with great care. Some criteria to consider when choosing a firm are: 1) is the firm a local person or

architectural firm, 2) do they have experience in designing schools, 3) is the size of the firm capable of handling the project, and 4) what are the associated fees (Johnson, 1968). Architects who have had experience in schoolhouse construction generally have a better perspective regarding areas of possible misunderstandings between their firm and public school officials, particularly if the school officials have never been involved in a construction project (Mulhorn, 1987). The need to document the specific factors that school board members look for in an architect will allow superintendents to guide the process from beginning to end and will create a level of trust and buy-in with members of the community. It has been recognized that an educational facility, and the teaching and learning which occurs within that facility, have a dynamic impact on the larger environment in which a facility resides and is long term in nature (Withum, 2006).

Other factors to consider in the selection process range from loyalty, integrity, competency, and personality of the architectural firm to the experience the architectural firm has with school construction and / or renovation projects (Day, 1985). The need to establish a positive relationship between the architectural firm and school system personnel is extremely important (Yearwood, 1984). The inability of an architect to communicate, listen, and ultimately understand the school projects will result in an unpleasant experience for the school system, the architect, and the community at large. A well written contract between the school system and the architectural firm is another factor that is imperative for a successful building project (Day, 1985). The single most important decision a school system will make in accomplishing building needs within their school system is the selection of an architectural firm (Day, 1985). From a school system perspective, the number of years a school board member has served, the

geographical location of the school system, the student enrollment of the LEA, and whether or not the elected school board member has actually been through the selection of an architect are a few additional factors to take into consideration.

Procedures to Use During the Selection Process

Day (1998) identifies two procedures typically used in the selection of an architect; 1) lowest price (bid) method and 2) a qualifications-based selection method. The competitive selection method considers competence, experience, prior performance, creativity, and technical qualifications (Nixon, 2002). However, superintendents typically must take control of the entire selection process. From the pre-qualification review to the recommendation to the school board, district staff should establish the framework (Day, 1998). Superintendents and school-board members generally are not very sophisticated at conducting interviews or with selecting the professional service of an architect. If school officials select the right architectural firm, the result may reduce building cost and increase customer satisfaction (Nixon, 2002). A lack of experience with hiring these types of professionals can make it difficult to determine what type of questions to ask during the process (Day, 1998). Larger school districts may employ architects, former building inspectors, and/or general contractors to assist with the design of school facilities. The expertise of such individuals will only enhance the final selection process. Regardless, the final decision of selecting an architectural firm rests with the school board. In larger school systems, the process is typically vetted prior to the school board becoming involved.

Summary

School facilities, once built, are a marker for communities well in to the future. The need to document factors that influence school board members enable a school district and a community to establish a high level of trust with the taxpayers within the community. The school board member is a representative of the larger community and the responsibility they have to facilitate the business of the school system is paramount to the success of the community. School board members bring a variety of experiences to the table when discussing school construction projects. Some may have little to no experience with facility construction and renovations while others through their professional experience may bring a wealth of knowledge. The results of this research study should assist school board members in reaching a decision that will foster a cost savings and increased knowledge base for architectural firm selection. The continued growth of student population in the public schools of North Carolina will create the need to build new schools and for existing school facilities to be renovated. The results of this research study should assist school board members in reaching a decision that will foster a cost savings and increased knowledge base for architectural firm selection. This literature review shows that the selection of an architectural firm for school construction and/or school renovation is important. The process of selection has been studied; however, there is little research on specific factors that school board members identify as important in the selection process. The analysis of this literature review documents that the selection of architectural firms is important but fails to document specific factors that individual public school board members believe are important in the selection process.

Chapter One of the dissertation provided an introduction of the proposed need for

the research study. Chapter Three of the dissertation contains the methodology used for the research study including the research design, a description of the population, collection of data methods, and a summary of methods used to analyze data. Chapter Four of the dissertation presents the findings of the research and interpretation of data collected. Chapter Five of the dissertation contains summary findings, conclusions and recommendations for future research.

Table 1: Cost per square foot to build and square foot provided for each student in 2013

School level	Cost per square foot to build	Square foot provided for each student
Elementary	$201.79	149.6
Middle	$221.82	173.3
High	$249.47	174.2

Table 2: Building costs, total costs, and average square footage costs from 2009-2013

Year	Building Costs	Total Costs (including site prep)	Average Square Footage Costs
2009	346,762,396	379,390,266	127.92
2010	201,379,886	224,907,587	140.91
2011	122,112,227	136,515,221	153.81
2012	118,785,445	135,062,932	146.52
2013	87,768,878	109,568,501	166.29
	876,808,832	985,444,507	147.09

Table 3: Number of school projects elementary, middle, high, and other from 2009-2013

	2009	2010	2011	2012	2013
Elementary	12	6	2	6	3
Middle	6	6	1	2	1
High	4	2	3	1	1
Other	4	2			
	26	16	6	9	5

Table 4: Capital outlay for school facilities

Fiscal Year	State Funds	Federal Funds	Local Funds	Totals
1996-97	$43,853,339	$383,545	$565,670,606	$609,907,490
1997-98	240,704,605	215,489	526,754,170	767,674,264
1998-99	554,588,979	1,291,004	561,394,095	1,117,274,078
1999-00	518,506,820	8,272,720	627,673,264	1,154,452,804
2000-01	371,109,242	-	789,866,134	1,160,975,376
2001-02	170,257,261	517,911	842,184,297	1,012,959,469
2002-03	41,949,345	9,697,902	782,630,041	834,277,288
2003-04	46,210,952	9,528,857	752,716,127	808,455,936
2004-05	21,169,420	3,690,000	699,746,058	724,605,478
2005-06	13,842,620	1,790,866	1,003,523,533	1,019,157,019
2006-07	21,216,361	743,931	1,170,080,840	1,192,041,132
2007-08	18,024,915	212,220	939,450,137	957,687,272
2008-09	12,741,320	139,932	1,266,076,911	1,278,958,164
2009-10	13,211,971	2,370,296	415,228,020	430,810,287
2010-11	15,124,664	3,810,633	381,005,150	399,940,447
2011-12	8,709,622	12,880,229	330,098,767	351,688,618
2012-13	23,736,874	7,449,196	313,077,437	344,263,507
Total	$2,134,958,310	$62,994,731	$11,967,175,587	$14,165,128,629

Table 5: Lottery proceeds allocated to capital fund

Year	Money Allocated from Lottery Proceeds
2009	162,262,428
2010	179,109,129
2011	108,099,979
2012	98,500,000
2013	98,500,000
	646,471,536

CHAPTER 3: METHOD

School facility renovations and new school construction require the use of an architectural firm. This research study documents perceptions of specific factors that school board members value when selecting an architect for renovation and construction projects. Accountability concerns regarding the use of public funds heightens the need to identify specific factors that elected K-12 public education school board members could use in the selection process. The purpose of this research study was to document the extent to which specific factors were perceived as important to K-12 public education school board members in the selection of architectural firms for new school construction and/or renovation projects in North Carolina schools. Using a survey (see Appendix A), the researcher addressed the following questions:

1. To what extent are perceptions of importance similar across four categories of selection factors (i.e., reputation, cost, staffing, and other)?
2. To what extent are perceptions of importance similar across four categories of selection factors for male and female school board members?
3. To what extent are perceptions of importance similar across four categories of selection factors for school board members from different racial/ethnic groups?
4. To what extent are perceptions of importance similar across four categories of selection factors for school board members from different age groups?

5. To what extent are perceptions of importance similar across four categories of selection factors for school board members with different years of service?
6. To what extent are perceptions of importance similar across four categories of selection factors with different years of residence in the LEA?
7. To what extent are perceptions of importance similar across four categories of selection factors for school board members with different levels of student enrollment in the LEA?
8. To what extent are perceptions of importance similar across four categories of selection factors for school board members in different districts of the state?
9. To what extent are perceptions of importance similar across four categories of selection factors for school board members with different previous involvement in selecting an architectural firm?

Participants

There are 100 county school districts and 15 city school districts in North Carolina. The LEAs (i.e., both types of school districts) across North Carolina are varied by geographical regions and socio-economic status. LEA enrollment numbers range from 600 to over 175,000 students. A school board member represents a smaller segment of a community and serves as a voice for the constituents in their LEA. All North Carolina public school boards are comprised of citizens from a community. School board members are elected through a general non-partisan election every two years through a staggered election process. A staggered election process ensures that school boards have veteran and new members. Without a staggered election process, school boards could have all new members during an election. School districts serve the students that reside

in the geographical boundaries of the LEA. In North Carolina, individual school boards have a range of 5 to 12 members. At the time of this study, North Carolina public schools are represented by 741 school board members comprised of 309 (42%) females and 432 (58%) males. The ethnic breakdown of the 741 school board members in the State of North Carolina are as follows: African-American 167 (23%), Asian 3 (.004%), Caucasian 534 (72%), Hispanic 1 (.001%), Native-American 13 (2%), and Other 23 (3%). LEAs in North Carolina are divided into eight districts for administrative purposes (see Appendix B). Probability sampling through a cluster sampling technique was used to obtain the desired sample size of 230 participants or 31% of the total number of public school board members in the state of North Carolina.

Of the 115 superintendents in North Carolina, 71 agreed to participate in the study by distributing the survey to their school board members for a 62% potential participation rate. The total number of school board members comprised within the 71 LEAs is 469. The researcher received responses from 52 of the 71 LEAs for a 73% response rate from the superintendents agreeing to participate. The researcher received 279 out of possible 469 surveys from school board members for a 59% response rate. Table 6 illustrates the demographics of the participants. Table 7 illustrates the comparison of state percentage for gender to the study participants. Table 8 illustrates the race/ethnicity to the study participant percentage. Table 7 and Table 8 further illustrate that the study participants are representative of the board members representing school boards in North Carolina across gender and race/ethnicity. LEAs with less than 3,999 students are considered small school districts. There are 32 LEAs within this range. There was a response rate of 17 out of 32 small LEAs (53%) completing the survey. Another important note is that

North Carolina identifies LEAs with more than 24,000 students as large school districts. There are 10 such districts in North Carolina which fall in this category. Of the 10 LEAs, five participated in the research study by completing the survey (50% participation rate).

Procedure

An e-mail was sent to the 115 North Carolina superintendents requesting their permission to distribute the survey to each of their school board members during a regularly scheduled school board meeting (see Appendix C and Appendix D). Permission was received from 71 (62%) of the 115 North Carolina superintendents. The survey was then mailed to the 71 superintendents for distribution to their school board members. The survey was anonymous. Responses were received from 52 (73%) of the 71 LEAs. Once the survey was completed by the school board members, the superintendent collected and secured the surveys in a self-addressed stamped envelope (see Appendix E). The surveys were mailed back to the researcher for analysis. Once received, the researcher scanned the surveys and obtained the data in a Microsoft Excel sortable spreadsheet. The data were imported into SPSS for data analysis using descriptive *t*-test and analysis of variance statistics. The results were transferred to tables for summary and interpretation. The data analysis consisted of comparing the selected choices of the school board members across gender, race/ethnicity, age range of the school board member, years as a school board member, years residing in the LEA, student enrollment, assigned district number, and personal involvement in the selection of an architectural firm.

Instrumentation

Perceptions and factors that influence school board members in the selection process of architectural firms were of interest in this study. A general survey, using a Likert-type scale, was completed by North Carolina public school board members. The survey allowed the researcher to gather data for the study. The survey consisted of specific identifiable information of each board member. School board members were asked to select the number of years of service as a school board member (e.g. 0-4, 5-8, 9-12, 13-16, and 17+), the number of years he/she has resided in the LEA (e.g. 0-4, 5-8, 9-12, 13-16, and 17+), the student enrollment of the LEA (e.g. less than 3,999; 4,000-9,999; 10,000-14,999; 15,000-23,999 and 24,000 +), the district (region) in which their LEA is located in North Carolina (e.g. district 1, district 2, district 3, district 4, district 5, district 6, district 7, district 8), whether they have been involved in the selection of an architectural firm (e.g. yes or no), and to identify (optional) their gender (e.g. male or female), race (e.g. African-American, Caucasian, Hispanic, Native American, Asian, Other), and age range (e.g. 18-29, 30-39, 40-49, 50-59, and 60+). The survey was comprised of ten statements within four categories: reputation, cost, staffing and other. The reputation category identified the importance of architectural experience, completion of projects on time, completion of projects within budget, and references from current and/or previous school system clients. The cost category identified the importance of architectural fees and the architectural firm's knowledge of the local economy. The staffing category identified the importance of architectural firm size and the minority representation of the architectural firm. The final category (other) identified the importance of the architectural firm's location and the superintendent's recommendation.

A total score was calculated for each category by dividing the sum of the responses by the number of items in it.

Design and Data Analysis

A 10-item questionnaire was constructed to assess the factors that influence K-12 public school board members in the selection process of an architectural firm for new school construction and/or school renovation projects. Each item was rated on a 4-point Likert-type scale: 1 – not very important 2 – somewhat important 3 – important and 4 – very important. Four categories were included reflecting subscales for reputation (4 items), cost (2 items), staffing (2 items), and other (2 items). The questionnaire was administered as part of a regularly scheduled board of education meeting. Descriptive statistics were used to document responses across gender, race/ethnicity, age range of the school member, years as a school board member, years residing in LEA, student enrollment, assigned district number, and personal involvement in the selection of architectural firm. Analysis of variance and *t*-test statistics were used to compare responses within and across groups. The $p = < .01$ level of significance was used for all tests.

Summary

The purpose of the research study was to document factors that influence K-12 school board members in the selection process of an architectural firm. Through a quantitative research approach, the researcher conducted a survey of 279 school board members from 52 LEAs in North Carolina. The survey attempted to identify factors that influence their decisions with regard to architectural firm selection. The survey was instrumental in obtaining information from local school board members across the state

of North Carolina. The data from the survey allowed the researcher to conduct an analysis which compares gender, race/ethnicity, age, years as a school board member, years residing in LEA, student enrollment, assigned district number, and personal involvement in the selection of architectural firm in LEA. Through this study, the identification of factors school board members look for in the selection process should allow superintendents to facilitate better processes for their school districts. The knowledge and experience of the participants may provide other school board members across the state of North Carolina with a greater understanding of what is important in the selection process.

Chapter One of the dissertation provided an introduction of the proposed need for the research study. Chapter Two of the dissertation provided a comprehensive review of literature of the topic. Chapter Four of this study addresses the findings and examines the factors that influence school board members in the selection process of architectural firms in North Carolina school systems. Chapter Four of the dissertation also presents the findings of the research and interpretation of data collected. Chapter Five of the dissertation contains summary findings, conclusions and recommendations for future research.

Table 6: Participant (n = 279) demographics

Characteristic	Number	Percent
Gender	272	97.5
Female	117	43.0
Male	155	57.0
Ethnicity	270	96.8
African-American	65	24.1
Asian	4	1.5
Caucasian	197	73.0
Hispanic	1	0.4
Other	3	1.1
Age	273	97.8
18-29	2	0.7
30-39	7	2.6
40-49	54	19.8
50-59	78	28.6
60 +	132	48.2

Table 6: (continued)

Years as School Board Member	274	98.2
0-4	96	35.0
5-8	81	29.6
9-12	38	13.9
13-16	26	9.5
17 +	33	12.0
Years Residing in LEA	274	98.2
0-4	5	1.8
5-8	9	3.3
9-12	9	3.3
13-16	10	3.6
17 +	241	88.0
Student Enrollment	279	100
< 3,999	91	32.6
4,000-9,999	84	30.1
10,000-14,999	50	17.9

Table 6: (continued)

15,000-23,999	31	11.1
24,000 +	23	8.2
Assigned District Number	278	99.6
1	63	22.7
2	38	13.7
3	26	9.4
4	36	12.9
5	28	10.1
6	20	7.2
7	51	18.3
8	16	5.8
Personal Involvement in Selection	276	98.9
Yes	181	65.6
No	92	33.3

Table 7: Percentage of state board members and study participants by gender

	State Percentage	Study Participant Percentage
Female	42	43
Male	58	57

Table 8: Percentage of state board members and study participants by race/ethnicity

	State Percentage	Study Participant Percentage
African-American	23	24
Asian	< 1	1.5
Caucasian	72	73
Hispanic	< 1	.4
Other	3	1.1

CHAPTER 4: RESULTS

In this study, the researcher addressed the following questions related to factors that influence board members in the selection of an architectural firm for new school construction and/or renovation projects in North Carolina:

1. To what extent are perceptions of importance similar across four categories of selection factors (i.e., reputation, cost, staffing, and other)?
2. To what extent are perceptions of importance similar across four categories of selection factors for male and female school board members?
3. To what extent are perceptions of importance similar across four categories of selection factors for school board members from different racial/ethnic groups?
4. To what extent are perceptions of importance similar across four categories of selection factors for school board members from different age groups?
5. To what extent are perceptions of importance similar across four categories of selection factors for school board members with different years of service?
6. To what extent are perceptions of importance similar across four categories of selection factors with different years of residence in the LEA?
7. To what extent are perceptions of importance similar across four categories of selection factors for school board members with different levels of student enrollment in the LEA?

8. To what extent are perceptions of importance similar across four categories of selection factors for school board members in different districts of the state?
9. To what extent are perceptions of importance similar across four categories of selection factors for school board members with different previous involvement in selecting an architectural firm?

An analysis of responses from 279 surveys completed in 52 LEAs is presented in this chapter.

Perceptions of Importance

The survey was divided into four categories of items: 1) reputation, 2) cost, 3) staffing, and 4) other. Summary and comparison statistics for participants' ratings across categories and items are in Table 9. A repeated measures analysis of variance showed that the overall ratings were significantly different, F (1.261) = 769.17, p = .000. Follow-up analyses using the Bonferroni post hoc criterion for significance indicated that total ratings for reputation (M = 3.74, SD = 0.30) were highest, followed by those for the cost (M = 3.40, SD = 0.57) and other (M = 2.77, SD = 0.68) categories of items, and lowest for staffing (M = 2.34, SD = 0.73).

Perceptions by Gender

Summary and comparison statistics for ratings of male and female board members across categories and items are in Table 10. No statistically significant differences were indicated for individual or total items and the pattern of ratings observed in Table 10 was evident across both groups. Follow-up analyses using the Bonferroni post hoc criterion for significance indicated that total ratings for reputation (M = 3.77, SD = 0.31) were highest, followed by those for the cost (M = 3.46, SD = 0.51) and other (M = 2.87, SD =

0.69) categories of items, and lowest for staffing (*M* = 2.41, *SD* = 0.78) for females. The analyses using the Bonferroni post hoc criterion for significance indicated that total ratings for reputation (*M* = 3.72, *SD* = 0.29) were highest, followed by those for the cost (*M* = 3.37, *SD* = 0.61) and other (*M* = 2.71, *SD* = 0.65) categories of items, and lowest for staffing (*M* = 2.28, *SD* = 0.69) for males.

Perceptions by Race/Ethnicity

Summary and comparison statistics for ratings of race/ethnicity across categories and items are in Table 11. No statistically significant differences were indicated in importance of reputation, cost, size of architectural firm, and other items across ethnic groups; however, statistically significant differences were indicated for minority representation (*F* = 22.69, *p* = .000) and staffing total (*F* = 10.53, *p* = .000). Follow-up comparisons indicated that importance ratings for minority (i.e., Asian, African-American, Hispanic, and Other) board members (*n* = 81, *M* = 3.01, *SD* = 0.84) were statistically significantly higher (*t* = 8.40, *df* = 275, *p* = < .01) than those for non-minority board members (*n* = 196, *M* = 2.05, *SD* =0.88) on the minority representation of architectural firm item. Similar findings were indicated for total staff ratings; minority board members (*n* =80, *M* =2.71, *SD* = 0.66) were statistically significantly higher (*t* = 5.68, *df* = 274, *p* = < .01) than those for non-minority board members (*n* = 196, *M* = 2.18, *SD* = 0.71) on the minority representation of architectural firm item.

Perceptions of Age of Board Member

Summary and comparison statistics for ratings of different age groups of board members across categories and items are in Table 12. No statistically significant differences were indicated in importance of experience with designing schools, complete

within budget, references, total of reputation, cost, staffing, and other items across age of board member; however, statistically difference was indicated for the complete on time item ($F = 4.06$, $p = .003$). Follow-up analyses using the Bonferroni post hoc criterion for significance indicated that ratings for board members in the 30-39 year old age group ($M = 3.14$, $SD = 0.69$) were lower than those for board members in older (50-59 and 60 +) age groups ($M = 3.83$, $SD = 0.41$ and $M = 3.75$, $SD = 0.48$, respectively).

Perceptions of Years as a Board Member

Summary and comparison statistics for ratings of years as a board members across categories and items are in Table 13. No statistically significant differences were indicated for individual or total items and the pattern of ratings observed in Table 13 was evident across years as a board member. Follow-up comparisons indicated that importance ratings for board members with 17 + years as a board member for reputation ($M = 3.82$, $SD = 0.21$) were higher than those of 0-4 years, 5-8 years, 9-12 years, and 13-16 years ($M = 3.70$, $SD = 0.31$, $M = 3.76$, $SD = 0.29$, $M = 3.78$, $SD = 0.35$, and $M = 3.64$, $SD = 0.32$, respectively). Staffing ($M = 2.42$, $SD = 0.84$) for 17 + years as a board member were also higher than those of 0-4 years, 5-8 years, 9-12 years, and 13-16 years ($M = 2.30$, $SD = 0.71$, $M = 2.34$, $SD = 0.76$, $M = 2.39$, $SD = 0.73$, and $M = 2.19$, $SD = 0.58$, respectively).

Perceptions of Years Residing in LEA

Summary and comparison statistics for ratings of years residing in LEA across categories and items are in Table 14. No statistically significant differences were indicated for individual or total items and the pattern of ratings observed in Table 14 was evident across years residing in LEA. Follow-up comparisons indicated that importance

ratings for board members residing for 17 + years in the LEA for reputation (*M* = 3.82, *SD* = 0.21) were higher than those of 0-4 years, 5-8 years, 9-12 years, and 13-16 years (*M* = 3.70, *SD* = 0.31, *M* = 3.76, *SD* = 0.29, *M* = 3.78, *SD* = 0.35, and *M* = 3.64, *SD* = 0.32, respectively). Staffing (*M* = 2.42, *SD* = 0.84) for board members residing 17 + years in the LEA were also higher than those of 0-4 years, 5-8 years, 9-12 years, and 13-16 years (*M* = 2.30, *SD* = 0.71, *M* = 2.34, *SD* = 0.76, *M* = 2.39, *SD* = 0.73, and *M* = 2.19, *SD* = 0.58, respectively). The *M* and *SD* for years as a school board member and years residing in LEA were identical across the range of years for each category.

Perceptions of Student Enrollment of LEA

Summary and comparison statistics for ratings of student enrollment of LEA across categories and items are in Table 15. No statistically significant differences were indicated in importance of reputation, cost, staffing, and location of firm; however, statistically significant differences were indicated for the superintendent recommendation item (*F* = 6.51, *p* = .000) and other total (*F* = 4.02, *p* = .003). Follow-up comparisons indicated that importance ratings for 4,000 - 9,999 student enrollment LEAs (*M* = 3.42, *SD* = 0.61) were higher than LEAs with < 3,999, 10,000 – 14,999, 15,000 – 23,999, and 24,000 + student enrollments (*M* = 3.03, *SD* = 0.85, *M* = 3.06, *SD* = 0.77, *M* = 2.65, *SD* = 0.88, and *M* = 3.27, *SD* = 0.94, respectively) on the superintendent recommendation of architectural firm item. Similar findings indicated the total other ratings for 4,000 - 9,999 student enrollment LEAs (*M* = 2.98, *SD* = 0.62) were higher than LEAs with < 3,999, 10,000 – 14,999, 15,000 – 23,999, and 24,000 + student enrollments (*M* = 2.68, *SD* = 0.70, *M* = 2.76, *SD* = 0.65, *M* = 2.47, *SD* = 0.58, and *M* = 2.80, *SD* = 0.74, respectively).

Perceptions of Assigned District Number

Summary and comparison statistics for ratings of assigned district number across categories and items are in Table 16. No statistically significant differences were indicated in importance of reputation, cost, staffing, location of firm and other; however, statistically significant differences were indicated for the superintendent recommendation item ($F = 3.73$, $p = .001$). Follow-up comparisons indicated that importance ratings for assigned district number 8 ($M = 3.63$, $SD = 0.50$) were higher than assigned district numbers 1 through 7 ($M = 2.85$, $SD = 0.90$, $M = 3.00$, $SD = 0.82$, $M = 3.16$, $SD = 0.94$, $M = 3.42$, $SD = 0.60$, $M = 2.86$, $SD = 0.76$, $M = 3.25$, $SD = 0.79$, and $M = 3.29$, $SD = 0.70$ respectively) on the superintendent recommendation of architectural firm item. Assigned district number 8 (LEAs in the western part of North Carolina) were higher ($M = 3.63$, $SD = 0.50$) and assigned district number 1 (LEAs in the eastern part of North Carolina) were the lowest ($M = 2.85$, $SD = 0.90$) for the superintendent recommendation of architectural firm item.

Perceptions by Personal Involvement in Selection of Architectural Firm in LEA

Summary and comparison statistics for ratings of personal involvement in selection of architectural firm in LEA across categories and items are in Table 17. No statistically significant differences were indicated in importance of reputation, fees for service, cost total, and location of firm items across personal involvement in selection of architectural firm in LEA; however, statistically significant differences were indicated for knowledge of local economy ($t = - 0.26$, $df = 267$), size of firm ($t = - 1.22$, $df = 269$), minority representation ($t = - 0.72$, $df = 269$), staffing total ($t = - 0.85$, $df = 268$), superintendent recommendation ($t = - 1.03$, $df = 268$), and other total ($t = - 0.81$, $df = 266$).

Follow-up comparisons indicated that importance ratings for reputation total (M = 3.77, SD = 0.28) and cost total (M = 3.42, SD = 0.56) were statistically significantly higher for board members with previous involvement in selection of architectural firm in their LEA.

Summary

This chapter reported and analyzed the results of the survey data of 279 board members in North Carolina. The researcher addressed factors that influence board members in the selection of an architectural firm for new school construction and/or renovation projects in North Carolina. The researcher analyzed data through descriptive statistics and follow up analyses using the Bonferroni post hoc criterion for significance. Perceptions of factors were determined based on importance, gender, race/ethnicity, age, years as a school board member, years residing in LEA, student enrollment of LEA, assigned district number, and personal involvement in the selection of architectural firms within the LEA. Summary data were presented in tables identifying the n, M, SD, t-statistic, and F-statistic for each factor identified in the survey.

Chapter One of the dissertation provided an introduction of the proposed need for the research study. Chapter Two of the dissertation provided a comprehensive review of literature of the topic. Chapter Three of the dissertation contained the methodology used for the research study including the research design, a description of the population, collection of data methods, and a summary of methods used to analyze data. Chapter Five of the dissertation contains summary findings, conclusions and recommendations for future research.

Table 9: Overall descriptive summary across survey categories and items

Category/Item	*n*	*M*	*SD*	*Minimum*	*Maximum*
Reputation					
Experience Designing Schools	277	3.81	0.42	2.00	4.00
Complete within Budget	275	3.86	0.38	2.00	4.00
Complete on Time	273	3.75	0.48	2.00	4.00
References	272	3.53	0.59	2.00	4.00
Reputation Total	270	3.74	0.30	2.25	4.00
Cost					
Fees for Service	279	3.57	0.60	1.00	4.00
Knowledge of Local Economy	275	3.24	0.79	1.00	4.00
Cost Total	275	3.40	0.57	1.50	4.00
Staffing					
Size of Firm	277	2.34	0.78	1.00	4.00
Minority Representation	277	2.33	0.97	1.00	4.00
Staffing Total	276	2.34	0.73	1.00	4.00
Other					
Location of Firm	276	2.41	0.83	1.00	4.00
Superintendent Recommendation	276	3.13	0.81	1.00	4.00
Other Total	274	2.77	0.68	1.00	4.00

Note. 1 = Not Very Important, 2 = Somewhat Important, 3 = Important, 4 = Very Important.

Table 10: Number of ratings, means, standard deviations, and comparison statistics by gender

	Gender						
	Female			Male			
Category/Item	*n*	*M*	*SD*	*n*	*M*	*SD*	*t*-statistic
Reputation							
Experience Designing Schools	116	3.83	0.40	154	3.79	0.44	0.68
Complete within Budget	116	3.89	0.34	152	3.84	0.40	0.99
Complete on Time	116	3.75	0.47	150	3.73	0.49	0.28
References	116	3.60	0.59	149	3.48	0.58	1.67
Reputation Total	115	3.77	0.31	148	3.72	0.29	1.13
Cost							
Fees for Service	117	3.68	0.49	155	3.50	0.64	2.64
Knowledge of Local Economy	114	3.25	0.75	155	3.25	0.82	0.01
Cost Total	114	3.46	0.51	155	3.37	0.61	1.28
Staffing							
Size of Firm	115	2.37	0.83	155	2.33	0.74	0.47
Minority Representation	115	2.46	1.04	155	2.23	0.91	1.98
Staffing Total	114	2.41	0.78	155	2.28	0.69	1.50
Other							
Location of Firm	114	2.46	0.85	155	2.37	0.79	0.96
Superintendent Recommendation	115	3.27	0.80	154	3.06	0.78	2.18
Other Total	113	2.87	0.69	154	2.71	0.65	1.88

Note. 1 = Not Very Important, 2 = Somewhat Important, 3 = Important, 4 = Very Important

Table 11: Number of ratings, means, standard deviations, and comparison statistics by race/ethnicity

	Race/Ethnicity															
	African-American			Asian			Caucasian			Hispanic			Other			
Category/Item	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*F*-statistic
Reputation																
Experience Designing Schools	63	3.79	0.45	4	4.00	0.00	197	3.81	0.40	1	4.00	-	3	3.33	1.16	1.22
Complete within Budget	62	3.73	0.55	4	4.00	0.00	196	3.90	0.30	1	4.00	-	3	3.67	0.58	3.05
Complete on Time	62	3.63	0.55	4	4.00	0.00	195	3.76	0.46	1	4.00	-	2	4.00	0.00	1.47
References	62	3.55	0.59	4	3.75	0.50	194	3.52	0.59	1	4.00	-	2	4.00	0.00	0.69
Reputation Total	60	3.68	0.40	4	3.94	0.13	194	3.75	0.26	1	4.00	-	2	4.00	0.00	1.77
Cost																
Fees for Service	65	3.72	0.48	4	3.50	1.00	197	3.52	0.60	1	4.00	-	3	3.67	0.58	1.62
Knowledge of Local Economy	62	3.34	0.77	4	3.75	0.50	197	3.19	0.80	1	4.00	-	3	3.67	0.58	1.30
Cost Total	62	3.52	0.52	4	3.63	0.75	197	3.36	0.58	1	4.00	-	3	3.67	0.58	1.61
Staffing																
Size of Firm	63	2.41	0.82	4	2.75	1.26	197	2.31	0.76	1	1.00	-	3	2.67	0.58	1.34

Table 11: (continued)

Minority Representation	64	3.19	0.75	4	2.00	0.82	196	2.05	0.88	1	1.00	-	3	2.67	0.58	22.69 *
Staffing Total	63	2.79	0.62	4	2.38	0.85	196	2.18	0.71	1	1.00	-	3	2.67	0.29	10.53 *
Location of Firm	62	2.50	0.88	4	2.00	0.82	197	2.38	0.79	1	1.00	-	3	2.67	0.58	1.33
Superintendent Recommendation	62	3.26	0.72	4	3.50	1.00	197	3.10	0.81	1	3.00	-	3	3.33	1.16	0.71
Other Total	60	2.88	0.69	4	2.75	0.65	197	2.74	0.67	1	2.00	-	3	3.00	0.87	0.87

Note. 1 = Not Very Important, 2 = Somewhat Important, 3 = Important, 4 = Very Important

Table 12: Number of ratings, means, standard deviations, and comparison statistics by age

	Age															
	18-29			30-39			40-49			50-59			60+			
Category/Item	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*F*-statistic
Reputation																
Experience Designing Schools	2	3.50	0.71	7	3.86	0.38	54	3.91	0.29	78	3.74	0.47	130	3.81	0.43	1.51
Complete within Budget	2	4.00	0.00	7	4.00	0.00	54	3.87	0.44	77	3.88	0.36	129	3.83	0.38	0.59
Complete on Time	2	4.00	0.00	7	3.14	0.69	54	3.67	0.51	77	3.83	0.41	127	3.75	0.47	4.06 *
References	2	4.00	0.00	7	3.14	0.69	54	3.43	0.63	77	3.53	0.62	126	3.60	0.52	1.94
Reputation Total	2	3.88	0.18	7	3.54	0.30	54	3.72	0.33	77	3.75	0.32	124	3.76	0.28	1.08
Cost																
Fees for Service	2	3.00	1.41	7	3.86	0.38	54	3.59	0.60	78	3.60	0.57	132	3.54	0.59	1.08
Knowledge of Local Economy	2	2.50	0.71	7	3.43	0.54	53	3.26	0.81	78	3.33	0.72	129	3.17	0.83	1.08
Cost Total	2	2.75	1.06	7	3.64	0.38	53	3.42	0.56	78	3.47	0.51	129	3.35	0.61	1.50
Staffing																
Size of Firm	2	1.50	0.71	7	1.71	0.76	54	2.31	0.77	78	2.38	0.67	130	2.38	0.84	1.87

Table 12: (continued)

Minority Representation	2	1.00	0.00	7	1.86	1.22	54	2.07	0.97	77	2.36	0.89	131	2.44	0.99	2.76
Staffing Total	2	1.25	0.35	7	1.79	0.91	54	2.19	0.71	77	2.38	0.64	130	2.40	0.76	2.98
Other																
Location of Firm	2	2.00	0.00	7	2.00	0.82	54	2.22	0.74	77	2.55	0.80	130	2.42	0.85	1.82
Superintendent Recommendation	2	2.50	0.71	7	2.71	1.11	54	3.13	0.87	77	3.23	0.74	130	3.12	0.79	1.10
Other Total	2	2.25	0.35	7	2.36	0.90	54	2.68	0.64	77	2.89	0.67	128	2.77	0.68	1.83

Note. 1 = Not Very Important, 2 = Somewhat Important, 3 = Important, 4 = Very Important

Table 13: Number of ratings, means, standard deviations, and comparison statistics by years as a school board member

	Years as a School Board Member															
	0 – 4 years			5 – 8 years			9 – 12 years			13 – 16 years			17 + years			
Category/Item	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*F*-statistic
Reputation																
Experience Designing Schools	96	3.82	0.38	81	3.78	0.42	36	3.89	0.40	26	3.69	0.55	33	3.85	0.44	1.03
Complete within Budget	95	3.84	0.42	80	3.89	0.32	37	3.84	0.44	25	3.72	0.46	33	3.94	0.24	1.38
Complete on Time	94	3.67	0.52	80	3.75	0.49	38	3.79	0.47	24	3.79	0.42	32	3.84	0.37	1.05
References	95	3.45	0.65	80	3.63	0.51	37	3.62	0.59	24	3.29	0.62	31	3.55	0.51	2.17
Reputation Total	94	3.70	0.31	80	3.76	0.29	36	3.78	0.35	24	3.64	0.32	31	3.82	0.21	2.05
Cost																
Fees for Service	96	3.57	0.65	81	3.59	0.57	38	3.63	0.49	26	3.42	0.70	33	3.48	0.62	0.66
Knowledge of Local Economy	95	3.24	0.80	79	3.16	0.78	38	3.26	0.72	26	3.31	0.93	32	3.34	0.79	0.37
Cost Total	95	3.41	0.55	79	3.37	0.56	38	3.45	0.50	26	3.37	0.76	32	3.42	0.61	0.14
Staffing																
Size of Firm	95	2.35	0.71	80	2.34	0.83	38	2.37	0.75	26	2.15	0.68	33	2.45	0.97	0.56

Table 13: (continued)

Minority Representation	96	2.27	0.97	80	2.34	1.02	37	2.41	0.93	26	2.23	0.77	33	2.39	1.09	0.24
Staffing Total	95	2.30	0.71	80	2.34	0.76	37	2.39	0.73	26	2.19	0.58	33	2.42	0.84	0.47
Other																
Location of Firm	95	2.35	0.71	81	2.40	0.89	36	2.50	0.78	26	2.31	1.05	33	2.48	0.80	0.40
Superintendent Recommendation	95	3.17	0.81	80	3.08	0.84	37	3.35	0.79	26	3.12	0.71	33	2.91	0.81	1.47
Other Total	94	2.75	0.63	80	2.74	0.73	36	2.92	0.64	26	2.71	0.78	33	2.70	0.62	0.61

Note. 1 = Not Very Important, 2 = Somewhat Important, 3 = Important, 4 = Very Important.

Table 14: Number of ratings, means, standard deviations, and comparison statistics by years residing in LEA

	Years Residing in LEA															
	0-4			5-8			9-12			13-16			17+			
Category/Item	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*t*-statistic
Reputation																
Experience Designing Schools	96	3.82	0.38	81	3.78	0.42	36	3.89	0.40	26	3.69	0.55	33	3.85	0.44	1.03
Complete within Budget	95	3.84	0.42	80	3.89	0.32	37	3.84	0.44	25	3.72	0.46	33	3.94	0.24	1.34
Complete on Time	94	3.67	0.52	80	3.75	0.49	38	3.79	0.47	24	3.79	0.42	32	3.84	0.37	1.05
References	95	3.45	0.65	80	3.63	0.51	37	3.62	0.59	24	3.29	0.62	31	3.55	0.51	2.17
Reputation Total	94	3.70	0.31	80	3.76	0.29	36	3.78	0.35	24	3.64	0.32	31	3.82	0.21	2.05
Cost																
Fees for Service	96	3.57	0.65	81	3.59	0.57	38	3.63	0.49	26	3.42	0.70	33	3.48	0.62	0.66
Knowledge of Local Economy	95	3.24	0.80	79	3.16	0.78	38	3.26	0.72	26	3.31	0.93	32	3.34	0.79	0.37
Cost Total	95	3.41	0.55	79	3.37	0.56	38	3.45	0.50	26	3.37	0.76	32	3.42	0.61	0.14
Staffing																
Size of Firm	95	2.35	0.71	80	2.34	0.83	38	2.37	0.75	26	2.15	0.68	33	2.45	0.97	0.56

Table 14: (continued)

Minority Representation	96	2.27	0.97	80	2.34	1.02	37	2.41	0.93	26	2.23	0.77	33	2.39	1.09	0.24
Staffing Total	95	2.30	0.71	80	2.34	0.76	37	2.39	0.73	26	2.19	0.58	33	2.42	0.84	0.47
Other																
Location of Firm	95	2.35	0.71	81	2.40	0.89	36	2.50	0.76	26	2.31	1.05	33	2.48	0.80	0.40
Superintendent Recommendation	95	3.17	0.81	80	3.08	0.84	37	3.35	0.79	26	3.12	0.71	33	2.91	0.81	1.47
Other Total	94	2.75	0.63	80	2.74	0.73	36	2.91	0.64	26	2.71	0.78	33	2.70	0.62	0.61

Note. 1 = Not Very Important, 2 = Somewhat Important, 3 = Important, 4 = Very Important.

Table 15: Number of ratings, means, standard deviations, and comparison statistics by student enrollment of LEA

	Student Enrollment of LEA															
	< 3,999			4,000 – 9,999			10,000 – 14,999			15,000 – 23,999			24,000 +			
Category/Item	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*F*-statistic
Reputation																
Experience Designing Schools	90	3.80	0.46	83	3.77	0.42	50	3.86	0.41	31	3.77	0.43	23	3.87	0.34	0.52
Complete within Budget	88	3.80	0.46	84	3.86	0.39	50	3.90	0.30	30	3.90	0.31	23	3.96	0.21	1.23
Complete on Time	87	3.74	0.49	84	3.68	0.50	49	3.78	0.47	30	3.80	0.48	23	3.91	0.29	1.290
References	87	3.52	0.59	83	3.53	0.57	49	3.53	0.62	30	3.40	0.62	23	3.74	0.54	1.11
Reputation Total	86	3.72	0.33	82	3.71	0.31	49	3.78	0.25	30	3.72	0.30	23	3.87	0.22	1.69
Cost																
Fees for Service	91	3.58	0.60	84	3.64	0.57	50	3.36	0.56	31	3.48	0.72	23	3.78	0.52	2.79
Knowledge of Local Economy	87	3.30	0.79	84	3.17	0.83	50	3.34	0.63	31	3.23	0.81	23	3.13	0.92	0.61
Cost Total	87	3.44	0.59	84	3.40	0.57	50	3.35	0.53	31	3.35	0.57	23	3.46	0.64	0.29
Staffing																
Size of Firm	90	2.31	0.83	84	2.42	0.81	50	2.36	0.72	30	2.27	0.64	23	2.26	0.81	0.36

Table 15: (continued)

Minority Representation	91	2.32	0.97	83	2.36	0.97	50	2.34	0.92	30	2.17	1.02	23	2.48	1.08	0.37
Staffing Total	90	2.31	0.77	83	2.39	0.71	50	2.35	0.72	30	2.22	0.74	23	2.37	0.71	0.37
Other																
Location of Firm	89	2.35	0.83	83	2.54	0.89	50	2.46	0.81	31	2.29	0.69	23	2.26	0.81	1.04
Superintendent Recommendation	89	3.03	0.85	84	3.42	0.61	50	3.06	0.77	31	2.65	0.88	22	3.27	0.94	6.51 *
Other Total	88	2.68	0.70	83	2.98	0.62	50	2.76	0.65	31	2.47	0.58	22	2.80	0.78	4.02 *

Note. 1 = Not Very Important, 2 = Somewhat Important, 3 = Important, 4 = Very Important.

Table 16: Number of ratings, means, standard deviations, and comparison statistics by assigned district number

	Assigned District Number											
	1			**2**			**3**			**4**		
Category/Item	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*
Reputation												
Experience Designing Schools	61	3.77	0.50	38	3.79	0.41	26	3.92	0.27	36	3.75	0.44
Complete within Budget	60	3.80	0.48	38	3.79	0.47	26	3.92	0.27	36	3.86	0.35
Complete on Time	59	3.73	0.49	38	3.68	0.53	26	3.88	0.33	36	3.72	0.45
References	59	3.47	0.60	38	3.55	0.60	26	3.73	0.53	35	3.34	0.68
Reputation Total	57	3.70	0.35	38	3.70	0.33	26	3.87	0.23	35	3.67	0.30
Cost												
Fees for Service	63	3.56	0.64	38	3.55	0.69	26	3.62	0.57	36	3.61	0.49
Knowledge of Local Economy	61	3.25	0.81	38	3.16	0.92	26	3.23	0.86	35	3.40	0.74
Cost Total	61	3.40	0.54	38	3.36	0.69	26	3.42	0.64	35	3.50	0.54

Table 16: (continued)

Staffing												
Size of Firm	62	2.26	0.79	38	2.50	0.83	26	2.19	0.90	36	2.42	0.73
Minority Representation	62	2.35	0.99	38	2.55	1.01	26	2.62	1.10	36	2.42	0.94
Staffing Total	61	2.30	0.73	38	2.53	0.80	26	2.40	0.77	36	2.42	0.67
Other												
Location of Firm	60	2.43	0.85	38	2.47	0.73	26	2.19	0.80	36	2.53	0.94
Superintendent Recommendation	62	2.85	0.90	37	3.00	0.82	25	3.16	0.94	36	3.42	0.60
Other Total	60	2.63	0.72	37	2.73	0.67	25	2.70	0.74	36	2.97	0.61

Table 16: (continued)

	Assigned District Number												
	5			**6**			**7**			**8**			
Category/Item	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*F*-statistic
Reputation													
Experience Designing Schools	28	3.82	0.48	20	3.70	0.47	51	3.86	0.35	16	3.88	0.34	0.82
Complete within Budget	28	3.82	0.39	19	3.95	0.23	51	3.90	0.30	16	3.94	0.25	0.87
Complete on Time	27	3.85	0.36	19	3.95	0.23	51	3.67	0.52	16	3.63	0.72	1.47
References	27	3.48	0.51	19	3.68	0.58	51	3.53	0.58	16	3.69	0.48	1.41
Reputation Total	27	3.77	0.23	19	3.82	0.25	51	3.74	0.29	16	3.78	0.30	1.39
Cost													
Fees for Service	28	3.54	0.64	20	3.75	0.44	51	3.39	0.60	16	3.81	0.54	1.34
Knowledge of Local Economy	28	3.18	0.82	19	3.16	0.60	51	3.24	0.74	16	3.31	0.79	0.33
Cost Total	28	3.36	0.61	19	3.45	0.40	51	3.31	0.55	16	3.56	0.57	0.58

Table 16: (continued)

Staffing													
Size of Firm	28	2.29	0.66	19	2.53	0.77	51	2.35	0.74	16	2.31	0.87	0.68
Minority Representation	28	2.14	1.04	19	2.42	0.84	51	2.16	0.86	16	1.88	0.89	1.58
Staffing Total	28	2.21	0.70	19	2.47	0.68	51	2.25	0.71	16	2.09	0.78	1.04
Other													
Location of Firm	28	2.25	0.80	20	2.25	0.97	51	2.55	0.76	16	2.44	0.81	0.86
Superintendent Recommendation	28	2.86	0.76	20	3.25	0.79	51	3.29	0.70	16	3.63	0.50	3.73 *
Other Total	28	2.55	0.66	20	2.75	0.73	51	2.92	0.63	16	3.03	0.50	2.09

Note. 1 = Not Very Important, 2 = Somewhat Important, 3 = Important, 4 = Very Important.

Table 17: Number of ratings, means, standard deviations, and comparison statistics by personal involvement in selection of architectural firm in LEA

	Personal Involvement in Selection of Firm in LEA						
	Yes			No			
Category/Item	*n*	*M*	*SD*	*n*	*M*	*SD*	*t*-statistic
Reputation							
Experience Designing Schools	179	3.84	0.38	92	3.74	0.49	1.82
Complete within Budget	178	3.89	0.31	91	3.80	0.48	1.89
Complete on Time	178	3.80	0.43	89	3.64	0.55	2.56
References	176	3.55	0.59	90	3.49	0.59	0.81
Reputation Total	175	3.77	0.28	89	3.68	0.34	2.47
Cost							
Fees for Service	181	3.59	0.58	92	3.54	0.64	0.62
Knowledge of Local Economy	179	3.24	0.80	90	3.27	0.78	-0.26 *
Cost Total	179	3.42	0.56	90	3.40	0.59	0.22
Staffing							
Size of Firm	180	2.31	0.76	91	2.43	0.82	-1.22 *
Minority Representation	179	2.29	0.97	92	2.38	0.97	-0.72 *
Staffing Total	179	2.30	0.73	91	2.40	0.74	-1.03 *
Other							
Location of Firm	180	2.43	0.83	90	2.38	0.82	0.52
Superintendent Recommendation	180	3.11	0.78	90	3.20	0.86	-0.85 *
Other Total	179	2.77	0.65	89	2.78	0.73	-0.81 *

Note. 1 = Not Very Important, 2 = Somewhat Important, 3 = Important, 4 = Very Important

CHAPTER 5: DISCUSSION

The purpose of this research study was to document the extent to which specific factors were perceived as important to K-12 public education school board members in the selection of architectural firms for new school construction and/or renovation projects in North Carolina schools. This chapter includes a summary of the findings in relation to prior research, implications drawn from the data collected, future research recommendations, limitations, and conclusions from the study.

The researcher's interest with school facilities is grounded in his daily work as a school superintendent. Throughout my career, school facilities have been an interest. The need for building relationships with architectural firms, general contractors, sub-contractors, community members, and school personnel is necessary to ensure a well-planned and well-executed construction project. School facilities influence student learning from facility design to external areas where students assemble for instruction (Schneider, 2002). A well designed facility will eliminate safety concerns and assist school personnel with their daily instructional activities. As a school superintendent, there are many decisions that one will make that will define the success of the school system. Recommendations from a school superintendent to board members about building new schools and/or renovating existing ones will define the continued success of the superintendent and will impact on a long term nature the image of a community. Communities are uniquely differently and these differences influence school construction

projects. The researcher's interest in identifying factors that board members believe are important and his professional experience as a superintendent was a driving force in the research study. The researcher set out to determine if his experience with school construction projects from the ground level aligned with the factors elected board members viewed as important. From the researcher's perspective reputation of an architectural firm is important. The reputation of the architectural firm will allow school level administrators to enter a project with a high level of confidence. An architect's knowledge of building codes and specifications are irrelevant if the architect's reputation for successfully completing a project is inadequate. In addition to the reputation of the architectural firm, the researcher believes it is vital to understand the complexities of a community. The historical perspective of a community and traditions established within a community, define its future. School board members are one component of the many complexities within a community. In North Carolina, local board of commissioners are fiscally responsible for funding school facilities (Erection of School Buildings, 2013). This factor in itself will affect the outcome of new school construction and/or renovation projects. The working relationship between commissioners and school board members is extremely important. Additionally, schools play a vital role in cultivating the creative potential in each child (Erickson, 2014). This cultivation should not be taken lightly. Decisions of locally elected board members will impact the ability of students to learn effectively. The selection of an architectural firm by board members is merely one aspect of cultivating the potential in each student. Poor selection decisions could result in poor learning environments and potential cost overruns thus creating a potentially harmful impact of the learning outcomes of the students served within the walls of the facility.

This research study is a result of an interest in improving the relationships between school superintendents and school board members with relation to new school construction and/or renovation projects in North Carolina. Decisions are made within a political environment where power relationships are constantly being negotiated within the unique context of the situation (Mast, 2012). School board members are a part of a political structure that influence decisions that promote successful student learning, daily operational functions, and/or school construction projects. Local knowledge--individual, group, prior, and working--and unique contextual constructs in a process where decision actors are constantly negotiating political realities and unique social interactions to form meaning and actions (Mast, 2012).

Through this research study, the researcher set out to provide data to minimize confusion and/or mistrust between superintendents and board members by gaining a better understanding of what board members view as important factors in selecting an architectural firm. By understanding the factors board members in North Carolina view as important, superintendents can assist in the successful completion of new school construction and/or renovation projects. The need to establish a positive relationship between the architectural firm and school system personnel is extremely important (Yearwood, 1984). The emotional connection people in a community have with their schools and the political nature of public service create a difficult and complicated process (Mast, 2012). The inability of a superintendent to understand the perspective of the elected board members who employ them and the political nature of the community could result in poor decisions and poor working relationships.

Summary of Study and Findings

Perceptions of factors were determined based on importance, gender, race/ethnicity, age, years as a school board member, years residing in LEA, student enrollment of LEA, assigned district number, and personal involvement in the selection of architectural firms within the LEA. The survey completed by board members was divided into four categories: 1) reputation, 2) cost, 3) staffing, and 4) other. A repeated measures analysis of variance showed that the overall ratings were significantly different. Follow-up analyses using the Bonferroni post hoc criterion for significance indicated that total ratings for reputation were highest, followed by those for the cost and other categories of items, and lowest for staffing. No statistically significant differences were indicated for individual or total items and the pattern of ratings observed was evident for gender, years as a school board member, and years residing in LEA. Follow-up analyses using the Bonferroni post hoc criterion for significance indicated that total ratings for reputation were highest, followed by those for the cost and other categories of items, and lowest for staffing for females and males. Follow-up comparisons indicated that importance ratings for board members with 17 + years as a board member for reputation and staffing were higher than those of 0-4 years, 5-8 years, 9-12 years, and 13-16 years. Follow-up comparisons indicated that importance ratings for board members residing for 17 + years in the LEA for reputation and staffing were higher than those of 0-4 years, 5-8 years, 9-12 years, and 13-16 years. The *M* and *SD* for years as a school board member and years residing in LEA were identical across the range of years for each category.

Statistically significant differences were indicated for minority representation and staffing total across race/ethnicity, complete on time item across age of board members,

superintendent recommendation item and total other category across student enrollment of LEA, superintendent recommendation item across assigned district number, and knowledge of local economy, size of, minority representation, staffing total, superintendent recommendation, and other total across personal involvement in the selection of an architectural firm in LEA. Follow-up comparisons indicated that importance ratings for minority (i.e., Asian, African-American, Hispanic, and Other) board members were statistically significantly higher than those for non-minority board members on the minority representation of architectural firm item and staffing total. Follow-up analyses using the Bonferroni post hoc criterion for significance indicated that ratings for board members in the 30-39 year old age group were lower than those for board members in older (50-59 and 60 +) age groups. Follow-up comparisons indicated that importance ratings for 4,000 - 9,999 student enrollment LEAs were higher than LEAs with < 3,999, 10,000 – 14,999, 15,000 – 23,999, and 24,000 + student enrollments on the superintendent recommendation of architectural firm item and total other category. Follow-up comparisons indicated that importance ratings for assigned district number 8 were higher than assigned district numbers 1 through 7 on the superintendent recommendation of architectural firm item. Follow-up comparisons indicated that importance ratings for reputation total and cost total were statistically significantly higher for board members with previous involvement in selection of architectural firm in their LEA.

Implications for Improvement of Research and Practice

This research study only provides data from board members in North Carolina. The researcher identifies the following as potential topics for future research:

1. implications for school construction due to changes in lottery funding in North Carolina,
2. specifics factors deemed important to school board members from other states to determine if factors in North Carolina are typical,
3. qualitative study of minority board members would provide a greater understanding of the insights into the selection of architectural firms by minority board members,
4. specific factors deemed important by senior level school administrators,
5. study of high growth school districts and the impact school facilities have on the processes used in architectural firm selection
6. implications of decreasing state level funding for construction projects, and
7. implications for local board of commissioners due to decreasing funding for construction projects.

This research provides superintendents and board members with specific factors deemed important by board members. By knowing and understanding these factors, superintendents can assist their school system (and more specifically board members) with the successful selection of an architectural firm for construction needs. In addition, superintendents can utilize the data from this study to illustrate the need for a well-defined selection process based on factors deemed important by board members in North Carolina. Superintendents of larger school districts in North Carolina may utilize staff members for the initial selection of architectural firms or may use staff architects to design school facilities. Understanding the factors perceived as important to board

members may assist these staff members in the selection process. Although, staff members may provide the behind the scenes work, the superintendent remains responsible for communicating the facility needs and/or recommendations to the school board.

Limitations

This research study only identified specific factors perceived as important to board members in North Carolina. New school construction and renovation projects involve a variety of individuals within the school system and within a community. The study does not provide the perceptions of importance of others involved in the process of new school construction and/or renovation projects in North Carolina. The survey contained specific factors and was cross-sectional in nature which did not provide an opportunity for in-depth analysis of perceptions of importance or factors to consider in the selection process. Most school board members are elected to four year terms on a two-year staggered election schedule, therefore, the results of this research study are only representative of board members currently serving in North Carolina. Although the study captured a representative group of board members across the state, the race/ethnicity of board members in North Carolina is not evenly distributed across race/ethnicity categories (Miller, 2014).

Conclusions

Research has documented generic characteristics school boards should look for during the selection process of an architectural firm (e.g, knowledge of school construction, success with previous projects, and budgetary responsibility). School officials are required to employ an architect (Certain Buildings Involving Public Funds to

be Designed, etc., by Architect or Engineer, 2007). This requirement necessitates the need for careful and thoughtful consideration of the selection process of an architect by a local school board. Based on survey responses from 279 board members, reputation is the most important factor in selecting an architectural firm for new school construction and/or renovation projects in North Carolina. The reputation category consisted of experience with designing schools, completing projects within budget, completing projects on time, and references of previous clients of the architectural firm. School officials should compile a list of potential architectural firms from several sources. One source is architects previously employed by the school corporation while recent school construction projects provide another pool of possible candidates (Nixon, 2002). The staffing category was rated of least importance in selecting an architectural firm for new school construction and/or renovation projects in North Carolina. The staffing category consisted of size of firm and the minority representation of the architectural firm's staff. The superintendent recommendation item was more important to board members representing LEAs in the western part of North Carolina as compared to board members representing LEAs in the eastern part of the state. The personal involvement in selection of an architectural firm in LEA was the most varied. The following items within this factor were statistically significantly different: 1) knowledge of local economy, 2) size of firm, 3) minority representation, 4) superintendent recommendation, and 5) other total.

New school construction and/or renovation projects in North Carolina will remain a focal point for board members. Watson and Driscoll (2012) identified increasing population trends for North Carolina and this trend identifies the need for additional school buildings to accommodate the growth in student population. Every five years

local boards of education in North Carolina are required by G.S.115C-521(a) to submit their Facility Needs Assessment (long-range plans) to the State Board of Education. The School Capital Construction Study Commission, which is charged to conduct a statewide survey of school facility needs released a survey report in March 2011 as a part of this requirement. The results of the study identified total facility needs, over a five-year period, of nearly $8.2 billion (North Carolina Department of Public Instruction, 2011). Table 18 illustrates the projected costs for facility needs in North Carolina. The facility needs coupled with the projected student growth of North Carolina public schools reinforces the need to identify the factors perceived as important to board members in the selection of an architectural firm for new school construction and/or renovation projects in North Carolina. Table 19 illustrates the projected growth in student population over a ten year period (North Carolina Department of Public Instruction, 2011). School districts must plan for growth and dealing with aging facilities (Mast, 2012). The opportunity to gain a better perspective of factors that are important to elected board members in the selection of an architectural firm may assist school districts in obtaining a greater level of trust among the members of the larger community when construction projects are necessary. The need to maintain school facilities in good working condition are ultimately the responsibility of local school boards. The superintendent should provide leadership in this area and knowing the factors that are perceived as important to board members is crucial in developing short and long range plans for facilities within a school district.

Table 18: 2011 North Carolina projected facility needs and cost

	Cost
New construction	$1,814,328,286
Additions	$1,684,746,985
Renovations	$3,031,579,800
Furnishings/Equipment	$526,116,103
Land	$112,538,602
Total	$8,169,309,776

Table 19: Projected student membership over 10 year period

	Projected student membership
2011-2012	1,416,288
2012-2013	1,421,948
2013-2014	1,429,595
2014-2015	1,437,790
2015-2016	1,449,592
2016-2017	1,461,043
2017-2018	1,473,270
2018-2019	1,484,646
2019-2020	1,500,546
2020-2021	1,520,888

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APPENDIX A: SURVEY

School Board Member Survey

Directions: Please read each statement below and indicate ***how important*** each item is when selecting an architectural firm for school construction and/or school renovation projects.
Please fill in the bubbles completely. Bubbles that are not filled in completely will not be scored accurately. Please use the following rating scale when selecting your answers:

1 – not very important 2 – somewhat important 3 – important 4 – very important

	1	2	3	4
Reputation:				
1. Experience of architectural firm with designing schools				
2. Reputation of architectural firm for completing projects within budget				
3. Reputation of architectural firm for completing projects on time				
4. References from previous clients of the architectural firm				
Cost:				
5. Architectural fees				
6. Architect's knowledge of local economy				
Staffing:				
7. Size of architectural firm				
8. Minority representation of architectural firm staff				
Other:				
9. Architectural firm location				
10. Superintendent or designee's recommendation				

Directions: Please complete the information below and fill in the bubbles completely. Bubbles that are not filled in completely will not be scored accurately.

11. Gender: Female Male

12. Ethnicity: African-American Asian Caucasian Hispanic Other

13. Age: 18-29 30-39 40-49 50-59 60 +

14. How many years have you served as a school board member? 0-4 5-8 9-12 13-16 17+

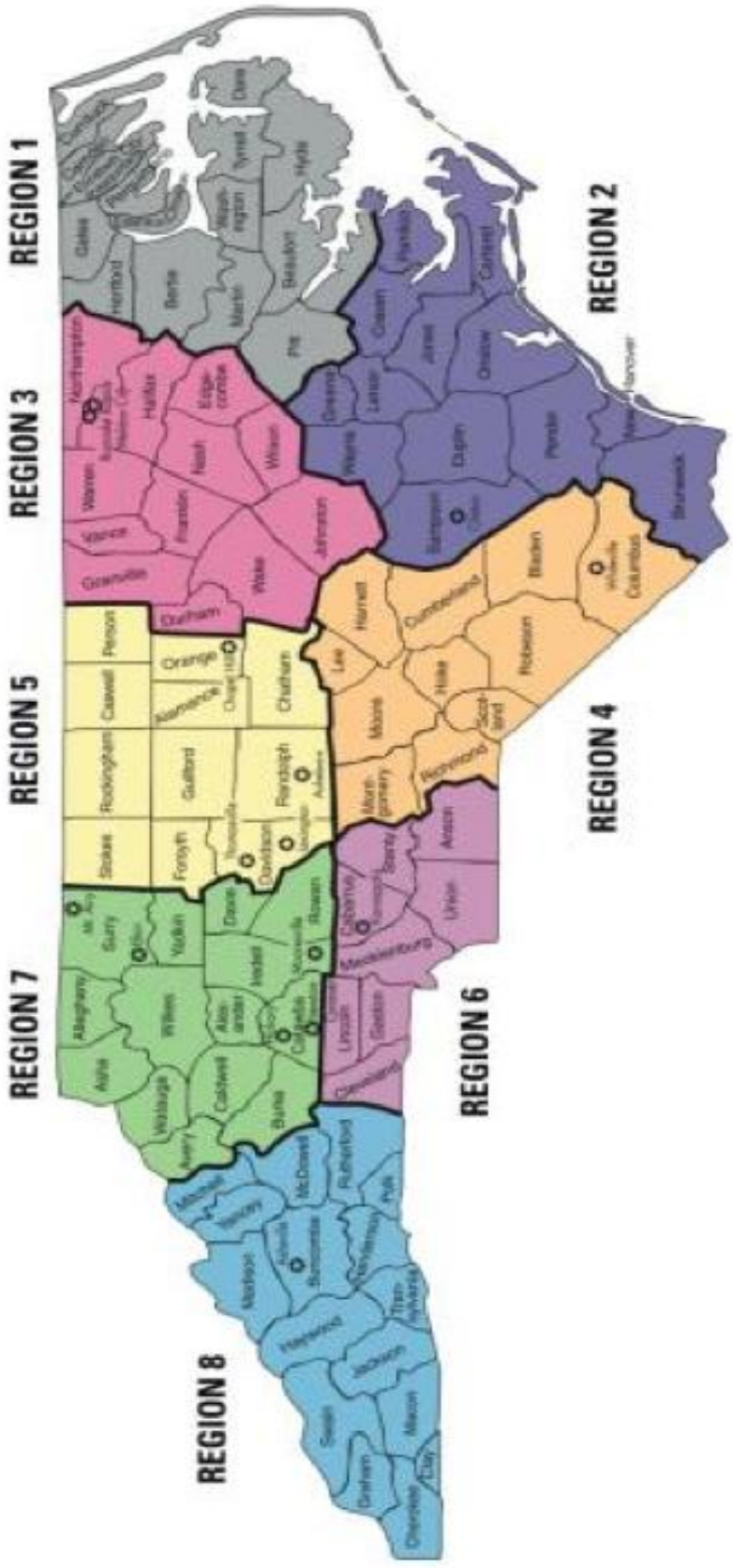
15. How many years have you resided in your LEA? 0-4 5-8 9-12 13-16 17 +

16. Student enrollment of your LEA?
less than 3,999 4,000 – 9,999 10,000 – 14,999 15,000 – 23,999 24,000 +

17. What district are you assigned to by the North Carolina School Boards Association?
1 2 3 4 5 6 7 8

18. Have you been involved in the selection of an architectural firm for your LEA? Yes No

APPENDIX B: NORTH CAROLINA STATE BOARD OF EDUCATION DISTRICTS



APPENDIX C: E-MAIL TO NORTH CAROLINA SUPERINTENDENTS

E-mail script being sent to North Carolina superintendents requesting permission to assist with the distribution of the survey to be completed by their school board members:

Good Morning-

My name is Stuart Blount and I serve as the superintendent of Clinton City Schools in Clinton, NC. I am completing my doctoral degree in Educational Leadership from the University of North Carolina at Charlotte. My dissertation/research study title is: *Factors that Influence Board Members in the Selection of an Architectural Firm for School Construction and/or Renovation Projects in North Carolina.*

I am e-mailing you to ask if you would be willing to distribute a short anonymous survey to your school board members. This survey will provide the information necessary to complete my research study. **Please respond via e-mail if you are willing to distribute the survey to your school board members.** The survey should take no longer than 10-15 minutes to complete. **Additional instructions will be mailed to those agreeing to assist with this request.**

Thank you in advance for your help and I am looking forward to receiving your e-mail response indicating your willingness to distribute the survey to your school board members.

Stuart

APPENDIX D: FOLLOW-UP E-MAIL TO NORTH CAROLINA SUPERINTENDENTS

Follow-up e-mail script being sent to North Carolina superintendents requesting permission to assist with the distribution of the survey to be completed by their school board members:

Good Morning-

This is a follow up to an e-mail previously sent to you on Tuesday, October 21, 2014. My name is Stuart Blount and I serve as the superintendent of Clinton City School in Clinton, NC. I am completing my doctoral degree in Educational Leadership from the University of North Carolina at Charlotte. My dissertation/research study title is: *Factors that Influence Board Members in the Selection of an Architectural Firm for School Construction and/or Renovation Projects in North Carolina.*

I am e-mailing you this morning to ask if you would be willing to distribute a short anonymous survey to your school board members. This survey will provide the information necessary to complete my research study**. Please respond via e-mail if you are willing to distribute the survey to your school board members.** The survey should take no longer than 10-15 minutes to complete. **Additional instructions will follow to those agreeing to assist with this request.**

Thank you in advance for your help and I am looking forward to receiving your e-mail response indicating your willingness to distribute the survey to your school board members.

Stuart

APPENDIX E: LETTER TO NORTH CAROLINA SUPERINTENDENTS

Letter being mailed to the superintendents who have agreed to distribute the survey to their board members.

October 29, 2014

Dear _____,

Thank you for agreeing to distribute the enclosed survey to your school board members. The enclosed survey is part of my research study for my doctoral degree at the University of North Carolina at Charlotte.

Please distribute one survey to each of your school board members and inform them that completion of this anonymous survey is strictly voluntary. Once they have completed the survey:

1) please collect all surveys,
2) place all surveys in the enclosed self-addressed stamped envelope and,
3) place in the mail.

To allow me to complete the analysis of data in a timely manner, ***please mail the completed surveys back to me by November 26, 2014***. Again, thank you for assisting me with the distribution and collection of the surveys. I am looking forward to analyzing the data from the surveys.

Sincerely,

Stuart Blount