TEACHER AND PRINCIPAL SATISFACTION WITH THE PUBLIC/PRIVATE PARTNERSHIP PROCESS IN BUILDING SCHOOL FACILITIES

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ABSTRACT

The purpose of this study was to determine if the instructional and organizational needs of educators were fully met in school buildings constructed through the provision of a public/private partnership and the degree of satisfaction in the completed facility. This study examined the implementation of the Public/Private Education Facilities and Infrastructure Act of 2002 (PPEA) in the Commonwealth of Virginia to construct public school facilities.

School divisions that entered into a school construction project using the provisions of a public/private partnership between 2002 and 2013 were identified by the Virginia Department of Education. An electronic survey was created to solicit feedback from participants regarding their level of input and engagement during the planning and design stages of development and teacher and principal satisfaction with the completed school facility. The survey instrument had 33 items. Descriptive statistics were used to analyze the data. The frequency and percentage from each category, mean, and mode were also reported for each quantitative survey item. Qualitative data were examined by response categories according to the experiences teachers and principals.

The Public/Private Partnership Survey was sent to the administrators and teachers of 14 public schools throughout the Commonwealth of Virginia. There were 131 participants from 14 schools that completed and returned the survey.

The findings indicated that while some participants had an ideal experience throughout the construction project, the majority of the participants did not feel that they had significant engagement or input during the planning stages prior to the public/private partnership school construction project. Additionally, while thankful for an improved school facility, teachers and principals consistently responded that if their feedback had been valued, they would be working in a completed school facility better suited to meet the needs of all stakeholders. Principals and teachers who were the most satisfied with their school facility had high levels of engagement during the planning stages, the input they provided was valued, and translated into the educational specification documents and into the completed school facility.

DEDICATION

Throughout the coursework and the dissertation process, my wife, Meredith, and my children, Madeline and Colin, have been sources of constant support, love, and encouragement. This study is dedicated to them. Meredith, you make me a better person and I am lucky to call you my wife. Thank you for pushing me when I needed it and always providing me opportunities to study, write, and spend time in class. Madeline and Colin, you have always been patient when daddy was working on this "paper." I look forward to spending more time with you. I love you all.

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Chapter 1

Introduction

Introduction

Educationally adequate school facilities are a necessity to a positive school experience for stakeholders in school communities. Since about twenty percent of Americans spend time in a school building each day, the condition of the facility is critical to the lived experience of a substantial amount of the American population (Schneider, 2002). Educators deal with a myriad of problems in securing modern and adequate facilities, one of which is the increasing costs.

Even though school leaders understand the importance of high quality school facilities, they are often confronted with shrinking budgets. In Virginia, during fiscal year 2011, $700 million in K-12 education funding cuts for the biennium include the state share of an array of school district operating and capital expenses, and funding for class-size reduction in kindergarten through third grade (Johnson, Oliff, & Williams, 2011). The demand for school facilities continues to grow as a result of aging buildings, increasing enrollment, and community desire for dynamic learning environments. With shrinking budgets, school leaders are cautious when undertaking school construction projects because debt service payments for school construction are required payments that potentially could lead to a reduction in funding for schools to implement the educational program. Such compromises in proprieties regarding the educational program are viewed as a negative decision, yet students need to be educated in educationally adequate facilities.

One idea to mitigate against the possibility of compromises in educational program demands and facility demands was to implement a program of utilization of private capital funds for the construction of new public facilities and the renovation of existing facilities. An alternative funding stream for school construction or renovation is the public/private partnership. The public/private partnership has long been utilized to finance public infrastructure projects such as highways, libraries, and bridges. The application of public/private partnerships to the public school construction arena has only recently been allowed by law in Virginia (Public/Private Education Facilities and Infrastructure Act, 2002).

Public/private partnerships were permitted for public infrastructure projects of Virginia in 2002 under The Public/Private Education Facilities and Infrastructure Act of 2002 (PPEA). The PPEA allows public institutions, such as school divisions, to develop and operate projects using a

public/private partnership agreement for a variety of projects deemed necessary to meet the needs of the public body. With private involvement in the public project, the completion of the project may be more timely or cost-effective, lead to more efficient delivery of services by the public entity, distribute the burden of risk, and provide a dedicated revenue source that would otherwise not be available (Stainback & Donahue, 2005). Public/private partnerships allow school divisions to renovate existing or build new school facilities while keeping exorbitant amounts of debt off the balance sheet.

There are some studies detailing the effectiveness of public/private partnerships in infrastructure projects resulting in capital projects being completed on time and within the stipulated budget. However, school buildings require specialized physical areas within the building with more refinement than what is required by a minimum construction standard. School administrators need to know if the public/private partnership is a viable funding strategy to provide the needed facilities. Since the private entity is independent from the public partner, there is an opportunity to deviate from the exact requirements educators need in school facilities.

Statement of the Problem

The PPEA permits users of the building to provide input into the educational specification documents the school division provides the architect, but the private partner also has great latitude in decision making regarding the design independent of the users. The question then becomes do the users of the building have sufficient input into the writing of the educational specifications by the school division and the design decisions of the private partners to produce a satisfactory building.

Research is needed to determine if the public/private partnership yielded a school facility that meets the needs of the teachers charged with providing a dynamic educational experience for the students enrolled. Additionally, research is needed to determine the level of input and engagement from teachers and principals during the planning stages of the construction project.

Purpose of the Study

The purpose of this study was to determine if the instructional and organizational needs of educators were fully met in school buildings constructed through the provision of a public/private partnership and if the users of the building had engagement and input into the planning and design development of the project. The school planning process, design

development processes, and the eventual product were factors explored when assessing whether the educator needs were met.

Research Question

  The research question guiding this study was: Were the instructional and organizational needs of educators fully met in a building constructed through the provisions of a public/private partnership and was there user engagement and input into the planning and design development processes? The following sub-research questions provided additional data for this study:

  a. What was the level of engagement and input by teachers and principals into the educational specifications their school division developed in compliance with the provisions of the public/private partnership agreement?

  b. What was the level of satisfaction teachers and principals had with their engagement and input into the design of the school building developed in compliance with the provisions of the public/private partnership agreement?

  c. What was the level of satisfaction teachers and principals had with the product at the completion of the public/private partnership process?

Significance of the Study

  The data from this study could be used to provide insight into the viability of public/private partnerships for educational leaders charged with financing new or renovation public school construction projects. There is a gap in the literature regarding the application of public/private partnerships in public school construction projects and this study begins to fill the gap. Also, this study could be used to highlight the importance of input of the users of a facility during all stages of construction or renovation. Finally, this study underscores previous research findings about the importance of high quality school facilities for a successful educational experience of students, teachers, and administrators.

Definitions

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

  1. Public/private partnership- A business relationship between a private-sector company and a government agency for the purpose of completing a project that will serve the public. The agreement can be used to finance, build and operate projects such as

public transportation networks, parks, convention centers, and school facilities (Stainback and Donahue, 2005).

2. Public/Private Education Facilities and Infrastructure Act of 2002 (PPEA) - The legislative framework allowing public institutions, such as school divisions, to develop and operate capital improvement projects using a public/private partnership agreement (§56-575.9 of the Code of Virginia; §56-575.9:1 of the Code of Virginia). The PPEA grants authority to public entities to create public/private partnerships for a variety of projects deemed necessary to meet the needs of the public body.

3. Product- The culmination of the planning efforts leading to the actual physical structure completed (Earthman, 2013).

4. Product evaluation- An assessment of the adequacy of the building for the type of program to be carried on, how the building operates, the cost of the building, and whether or not the school division acquired what it needs at the best price (Earthman, 2013).

5. Process- The planning prior to the construction or renovation of a school facility completed by stakeholders of the school community (Earthman, 2013).

6. Process evaluation- An assessment of the adequacy of the planning stages from the perspective of the stakeholders of the school community. Often, the assessment informs the school division with data to use to improve the process in the future (Earthman, 2013).

7. Level of input and engagement- This was measured via electronic survey principals and teachers completed using a Likert-type scale in response to statements about their experiences during the planning stages prior to the school facility construction, renovation, or addition financed through a public/private partnership.

8. Level of principal and teacher satisfaction- This was measured via electronic survey principals and teachers completed using a Likert-type scale in response to statements about their experiences with the school facility financed through a public/private partnership after the construction process was completed.

9. Design/Build Delivery- The contracting agency identifies the end result parameters and establishes the design criteria minimums; the project design is tailored to the

contractor's advantage and provides flexibility to compensate for cost increases in one area through efficiencies in another (Stainback and Donahue, 2005).

10. No-excuse bonus- A concept intended to shorten the construction time that would normally be required to perform the work by providing the contractor with a substantial bonus to complete a project within a specified time frame regardless of any problems or unforeseen condition that might arise (Stainback and Donahue, 2005).

11. A+B bidding- A cost-plus-time bidding procedure; the low bidder is selected based on a combination of the traditional contract unit price items based bid (A) and the time component proposed by the bidder to complete the project or a critical portion of the project (B) (Stainback and Donahue, 2005).

Delimitations

The study was delimited to school divisions in the Commonwealth of Virginia that utilized a public/private partnership to build a new public school facility, renovate an existing public school facility, or build an addition to an existing school facility. The study is further delimited to only include projects completed from the 2002-03 school year to the 2012-13 school year. There were no public/private partnership provisions in place to build school facilities in the Commonwealth of Virginia prior to the 2002-03 school year. Also, the data provided by the Virginia Department of Education Office of School Facility Services includes data through the 2012-13 school year. Data were not available from the Virginia Department of Education for school construction projects completed during the 2013-14 school year.

Limitations

Since only twenty-eight schools in the Commonwealth of Virginia were built, renovated, or added to through the provisions of a public/private partnership from school years 2002-03 to 2012-13, this study may not be transferable beyond the schools and school divisions represented in this study due to the small population. Also, within these school divisions, there are similarly small numbers of schools affected and a limited number of teachers and principals who actually participated during the planning stages of the public/private partnership school construction project. Due to policy restrictions, political reasons, or personal choice, school personnel may be unwilling to participate in a study evaluating the result of a financial arrangement with a private

partner. Additionally, some of the school divisions may not maintain up to date and user friendly websites to gather teacher and principal email addresses. Also, there could be as many as twelve years between the construction of the school facility and the completion of the electronic survey. Over the years, memories fail and school staff change. There is the potential for lower participation because of attrition over the years. Finally, a possible limitation is the complexity of the different types of public/private partnership agreements that may or may not have impacted the actual building that was constructed or renovated. Public/private partnerships use innovative funding methods such as A+B bidding, Design-Build Delivery, implementation of "no-excuses" bonuses, and savings resulting from reduced long-term maintenance and warranty, as described in Chapter 2 that the majority of stakeholders are unaware of as they use the school facility, but may have had a significant impact on the specifications used to build the facility.

Organization of the Study

This study examining public/private partnerships and the application of this type of agreement to public school facilities is divided into five chapters. Chapter 1 includes an introduction, a statement of the problem, research questions, significance of the study, definitions, and the organization of the study. Chapter 2 includes a review of the literature related to public/private partnerships and how teacher attitudes are impacted by a school facility. Chapter 3 contains a description of the research methodology, population, instrumentation, consent, data gathering, and the method of data analysis. Chapter 4 describes the data and results of the surveys and provides an analysis of the data relating to the research question. Chapter 5 contains the summary of findings, discussion, conclusions, implications, and recommendations for further study.

Chapter 2
Review of Literature

Introduction

      School districts and municipal governments are often confronted with the dilemma of how to maintain a quality educational system when faced with budget deficits, growing student populations, and obsolete facilities. Failing to come up with a solution to the problem only leads to the flight of homeowners and a downward spiral on property value. While traditional funding sources are options for many school districts, increasingly school districts are relying on public/private partnerships as an alternative.

Context of the Study

      A public/private partnership is defined as a business relationship between a private-sector company and a government agency for the purpose of completing a project that will serve the public. The agreement can be used to finance, build and operate projects such as public transportation networks, parks, convention centers, and school facilities (Stainback & Donahue, 2005). In the Commonwealth of Virginia, a public/private partnership is considered an alternative funding strategy to build, renovate, or add to school facilities. Since 2001 when the Public/Private Education Facilities and Infrastructure Act was enacted, only twenty-eight schools have been built, renovated, or added to utilizing the provisions of a public/private partnership as documented in Appendix A (Virginia Department of Education, 2014). In the majority of school construction projects in the Commonwealth of Virginia, the following funding options are more commonly utilized:

- Cash- Use current local revenues (cash) to fund all or a portion of the capital projects (Virginia Public School Authority, 2008);
- Bonds- Borrow funds directly in the debt market or with a Literary Fund direct loan, through the Virginia Public School Authority or through an Industrial Development Authority (Virginia Public School Authority, 2008); or,
- Bank loan- Borrow funds via a direct bank loan (Virginia Public School Authority, 2008).

Purpose of Section One of the Literature Review

The purpose of this section of the literature review is to examine studies in which public/private partnerships were used to build, renovate, or add to school facilities. The following search terms were used in electronic databases to conduct a systematic review of the literature: public/private partnerships and school facilities and school building condition and building user satisfaction and attitude.

Public/Private Partnerships

Bridges, dams, roads, parks, convention centers, power plants, and even entire redevelopment projects have been completed using public/private partnerships throughout the world. Proponents of public/private partnerships argue by utilizing private capital, public interest in improvement, and combined risk and responsibility that a public entity is able to make more projects a reality (Stainback & Donahue, 2005). While a gap exists in the research regarding application of a public/private partnership to the school facilities, Bradley-Levine (2008) and Clark (2002) documented the public/private partnership experience for two school communities.

Public/Private Partnership in the United Kingdom

Prior to the 1990s, public/private partnerships were not permitted in most cases by the Government of the United Kingdom and the laws governing the treasury. However, circa 1990, the laws were relaxed in an attempt to privatize the public sector. The public finance initiatives in place in the United Kingdom are relevant to the widening scope of public/private partnerships agreements in the United States. However, in the United Kingdom, there are significant differences in the way public/private partnerships are managed.

The most common arrangement in the United Kingdom is the "build-own-transfer contract (Bradley-Levine, 2008, p. 76)." Under this type of agreement, the private company retains ownership of the facility for typically twenty-five to thirty years. As owner, the private company has the authority and responsibility to design the facility, make construction decisions, and manage the facility for the duration of the contract. The facility must meet minimum requirements defined by school administrators, but the private company decides how the requirements will be met. Also, during non-school hours, the private partner has the right to rent the facility to other groups with non-educational purposes. Under provisions in the contract, the

public agency pays rent to the private partner for the duration of the contact. When the contract expires, the public partner assumes ownership of the facility. Research has documented the problematic nature of this type of arrangement. The Secondary Heads Association (2007), supported by Earthman (2002) and Schneider (2002), pointed out that private facility management can be problematic given that the physical environment affects teaching and learning. In addition, nonteaching staff, such as cafeteria workers, custodians, and maintenance staff are usually employees of the private company.

Bradley-Levine (2008) conducted a study examining the benefits and drawbacks from the perspective of teachers who teach in a school building constructed under a public/private partnership. The school examined in the Bradley-Levine study was a secondary comprehensive school in London comprised of students in grades six through eight. Approximately one thousand students attend the school. In London, compulsory attendance is only to age sixteen, so the eleventh and twelfth grades have fewer students because attendance is voluntary. The student population was highly diverse and approximately sixty percent of the students received some type of special education support. In addition, many students were English-Language-Learners and some students never attended school before coming to the United Kingdom.

Bradley-Levine (2008) employed qualitative data collection to answer the following research question, "How has the public finance initiative (PFI) arrangement affected staff and teachers' perceptions of personal efficacy and job satisfaction, as well as overall staff morale" (2008, p. 77)? In order to gather data, Bradley-Levine conducted semi-structured personal interviews with teachers and staff at a school site and unstructured observations were conducted in common areas of the school. The observations were used to corroborate the perceptions the teachers and staff shared during their interviews. A preliminary interview protocol was constructed before arriving on-site. The protocol examined the two domains of teacher efficacy and teacher retention. The interview questions about teacher efficacy explored what was happening during lessons in the new school and establishing comparisons between the old and new facilities. The latter domain of teacher retention was explored through the interview protocol as well. The interviewer focused on teacher satisfaction in relation to their experience before and after moving to the new facility. After the few first interviews, questions were added pertaining to the PFI management arrangement because the subjects interviewed consistently raised the issue.

Bradley-Levine (2008) spent a day recruiting participants for interviews. The study was based on 20 teachers and staff who had been at the school for at least three years. The teachers and staff were from the United Kingdom and nine other countries. As a result, the prior experience of the subjects was dissimilar before being employed at the school in question. Bradley-Levine conducted the interviews and transcribed the interviews using critical ethnography methods identified by Carspecken (1996) to code the interviews.

Bradley-Levine (2008) identified three themes relevant to the public/private partnership after the interview data were analyzed. First, the teachers identified the physical separation of the administrative office from the classrooms in the new facility to a symbolic separation between the administrators and the teaching staff. The physical separation led to the identification of the second theme of lack of support from the school administrators. The school administrators had to spend an exorbitant amount of time negotiating with the private partners and the management company. Finally, the last theme that emerged was the observation that staff and student morale had been negatively affected because the school community was forced to share the school with outsiders.

The teachers and staff attributed the physical and symbolic separation between administrators to the design of the school building funded through the public/private partnership agreement. The new facility was comprised of two buildings connected by a covered walkway. All of the instructional services, except for the library and gymnasium were located in one building, while the administrative functions of the school were located in another building separated by the covered walkway. The teachers perceived a disconnect from the administration because of the building design. The design isolated the administration so much so that there was unawareness on the part of school administrators about the daily experience in the building where the majority of instruction was taking place. Also, the staff room was not centrally located and contributed to a sense of isolation among the staff because the location was too far for some staff members to get to.

Participants interviewed also identified a lack of administrative support for teachers and staff since moving into the new facility. The perception existed that administrators had a significant voice in the design of the school facility while the teachers and staff had little input into the design. As a result, beliefs emerged that the administration was trying to separate itself from the teaching staff. While the teachers and staff may have been correct in their perceptions,

unless the public partner was clear about the requirements about the school facility, the private partner had the freedom to determine how the requirements were met. Unless the public partner was clear that the administrative offices needed to be incorporated into the areas where teachers and students were learning, the private partner was under no obligation to make it a priority. In addition, teacher and staff recognized the tremendous amount of time required by the administration negotiating with the owners and building managers. The lack of focus on the teaching, learning, and daily experience of teachers, students, and staff and more focus on the daily operations of the building led to the feeling of lack of support by administration. School administrators lost some control over the building when they were owned and managed by private partners and that loss of control affected the experience of teachers and staff who worked in the school.

Finally, the findings in Bradley-Levine (2008) indicated a negative impact on staff morale and satisfaction as a result of the public/private partnership. Issues were raised during interviews relating to building maintenance and upkeep. Teachers mentioned problems with the water, electrical fixtures, cleanliness of the facilities, and a lack of resources, as basic as toilet paper. The teachers and staff were also disgusted with the community use of the school facility for other purposes, especially when it causes an inconvenience to them. Teachers mentioned during their interviews about the requirement to reserve their classroom after hours or the classroom was open for community use. Also, when the space was used by an outside community group, teachers were frustrated when furniture was moved and not replaced. One teacher expressed the sentiment conveyed by others, "We are tenants here, and the place needs to be vacated by 6:30, full stop, and sometimes I need to work later than that, and I'll come out, and the building is full of strangers. The building is there, but our human community no longer belongs after half past six every evening and on weekends" (p. 86). Teachers also expressed their perception that the students felt less valued once they realized that the school was not theirs but belonged to a company that was trying to turn a profit at their expense. "These feelings of disappointment and regret showed a real sense of loss. The teachers, the staff, and even the students felt as if their domain was no longer theirs" (p. 86).

Bradley-Levine (2008) noted that the school community examined had many of the everyday challenges that confront school personnel and students. As a result, the perceived effects of the physical environment on teachers and students were significant. Regardless of

whether the perceptions and attitudes were warranted, they were real and affected the overall performance of the school.

As educational administrators, lawmakers, public, and private partners explore additional public/private partnerships agreements in the United States, there are notions that Bradley-Levine raised that should be considered. "Specifically, allowing private corporations to control construction design appears to be a flawed idea, especially when it includes their making interpretations regarding how the needs of educators will be met (p. 89)." Limitations in the design of a facility often are not apparent until the school is operational. As a result, design decisions should be made on the basis of best practice and not solely on the basic of economic reasons that private partners promote. "As policy in the United States moves toward greater citizen involvement and cost controls, educators must take a leading role to ensure that educational programming is the most important criterion influencing design and operational decisions" (p. 89).

The qualitative methodology was sound and the analysis of the data was logical. However, several limitations of the study should be considered. First, the study was limited by the atypical demographic profile of the student body and school faculty. The transferability of results could be challenging due to the unique demographic profile. In addition, a potential limitation of the study was the change in the interview protocol after the first few interviews. The data gathered was different from each participant because different questions were asked. The semi-structured nature of the interview provided Bradley-Levine the opportunity to identify new themes and ask questions about them.

The Bradley-Levine (2008) study provided a perspective of the public/private partnership experience of one school in London. In doing so, the data gathered clarified the importance of an educational facilities design and the ramifications of entering into a public/private partnership. While the facility may be new or renovated, the design may not be appropriate or adequate to meet the educational needs of students and the professional needs of the staff charged with educating the students. The financial incentives that arise from a public/private partnership may, in turn, hinder the actual educational experience of the students by creating limits on building design, management of the facility, and in the United Kingdom, the building use by groups not affiliated with the educational mission of the school. The Bradley-Levine study expanded the knowledge base about the practice of utilizing private funding streams to build or renovate public

facilities. The study identified unintended consequences of the public/private partnership. When private corporations are allowed to control construction design for school facilities, educators' needs are not necessarily met in a way that allows the most dynamic instruction or positive interactions with the school facility. In summary, the participants interviewed felt the public/private partnership to build their new school was detrimental to the educational experience of administrators, teachers, and most importantly, students.

Public/Private Partnerships in the State of California

While Bradley-Levine (2008) documented a negative experience resulting from a private/partnership agreement, the purpose of a study by Clark (2002) was to describe components of successful public/private partnerships used to build a subset of new school facilities in California. The partnerships discussed refer to the close collaboration of public entities and a private entity, or a team of entities, to structure, negotiate, and implement the finance, design, development, construction, and operation of a new school. The research questions Clark attempted to answer were:

1.   What were the components of public/private partnerships undertaken to build new schools in selected California school districts including, but not limited to:
    a.   Common vision;
    b.   Sense of community;
    c.   Collaboration;
    d.   Reduction of construction cost;
    e.   Leadership of the project;
    f.   Agreements to share completed facilities; and,
    g.   Other?
2.   What barriers were identified by the public and private sector partners in this study that prevented them from achieving a successful completion of the partnership project to build a school?
3.   What other components not listed in research question one were identified by the partners in this study that helped them achieve the successful construction of the project?

UCLA's Institute for Democracy, Education, and Access (2003) states, "California's dilapidated, overcrowded schools expose students to unsafe and unsanitary conditions, limit their learning, and disrespect communities" (p. 1). Often, two problems arise. The population of school-age children is growing in communities and the public entity cannot build school facilities at a fast enough rate or the school facilities are in disrepair and unfit learning environments. At the same time, localities have scarce financial resources in order to correct the situation. Some localities have explored public/private partnership agreements in order to build new school facilities.

Clark (2002) defined successful public/private partnerships as those that can produce a final product of agreed-upon quality, meet the time schedule, and the projected budget. The research questions explored components of successful public/private partnerships, such as common vision, sense of community, collaboration, reduction of construction cost, leadership of the project, and agreement to share completed facilities. Also, barriers to successful completion of the public/private partnership agreement were identified and explored in Clark's study.

In the Clark (2002) study, a total of six public partners and five private sector partners composed the sample for this study (N= 11). California does not maintain a centralized listing of public/private partnerships at the California Department of Education so it was difficult for Clark to identify the population in question and in turn have a larger sample size. Clark utilized snowball sampling, a non-probability method used when the desired sample characteristics are rare, inaccessible, or hard to find. When using snowball sampling, the researcher identifies an individual meeting the criteria for inclusion in the study. Then, that individual recommends others who they may know who also meet the criteria. Clark contacted members of the population and determined if the school district had either completed construction or was in the process of constructing of a new school through a public/private partnership. Since Clark investigated components of successful public/private partnerships, the following were utilized as the selection criteria:

- A completed school or a school under construction built within a public/private partnership agreement;
- The completion of the school within the allocated budget and deadline established; and,
- Satisfaction between both partners about the quality of the final product.

Clark (2002) interviewed participants, which was followed by a questionnaire completed immediately following the interview. The interview schedule included questions created to identify components the participants felt facilitated the partnership's successful completion of the construction project. Finally, participants were asked if there was anything that could have been changed regarding the experience working within a public/private partnership or anything they would like to add about the experience.

The questionnaire was developed by Clark based on the six components of successful public/private partnerships identified from the literature review. The questionnaire allowed for a statistical analysis of the data using quantitative methods. The questionnaire contained fifty-one questions, and took seven to ten minutes for each respondent to complete using a Likert-type scale with a 1 to 6 rating, ranging from strongly disagree to strongly agree. The respondents were asked to rate items that they perceived to be successes or barriers to a successful public/private partnership.

The data were gathered during appointments Clark (2002) scheduled with participants. The interviews and questionnaire completion took, on average, forty-five minutes. The questionnaire data were sent to a statistician to determine the mean and standard deviation for each questionnaire item and for each group of respondents. A more complex statistical analysis was not conducted due to the limited sample size.

Clark (2002) identified key findings that emerged from the research on successful public/private partnerships in California. The data were clear that an agreement about the vision of a project was critical to the success of the public/private partnership. The successful partnerships all involved open lines of communication and at the end of the partnership, the new schools promoted a sense of community among the participants. Also, respondents noted that the quality of the new school was more important than whether the project remained within the allocated budget or the projected time line. In addition, a positive for the school districts involved was that four districts reduced their total contribution to the total cost of the construction projects. The partnerships explored also used a shared leadership model throughout construction, but did not establish agreements for shared usage at the completion of the construction phase.

The Clark (2002) study is limited by the small sample size and the difficulty the researcher had in identifying all of the population of the study. With such a small sample size,

more complex statistical methods were not completed and therefore reduced the transferability of the findings to other public/private partnership studies. Also, since the questionnaire was completed immediately following the interview, the respondents may have felt pressured to complete the questionnaire and in turn invalidated the results. However, Clark's study does provide ideas that help frame the understandings of how public/private partnerships are implemented in California.

Public/Private Partnerships in the Commonwealth of Virginia

As in the State of California, the Commonwealth of Virginia has state law detailing the steps that must be taken to establish a public/private partnership agreement in the Commonwealth. The Public/Private Education Facilities and Infrastructure Act of 2002, as amended in October 2009, or the PPEA, is the legislative framework allowing public institutions, such as school divisions, to develop and operate projects using a public/private partnership agreement (§56-575.9 of the Code of Virginia; §56-575.9:1 of the Code of Virginia). The PPEA grants authority to public entities to create public/private partnerships for a variety of projects deemed necessary to meet the needs of the public body. In addition, with private involvement in the public project, the completion of the project may be more timely or cost-effective, lead to more efficient delivery of services by the public entity, distribute the burden of risk, and provide a dedicated revenue source that would otherwise not be available.

The PPEA (2002) delineates the broad definition of a qualifying project as any public building and public facilities of all types.   Furthermore, certain infrastructure and services are permitted under the PPEA. The following are examples of projects that are eligible for a public/private partnership agreement:

- Educational facilities, either operated by a school division or an institution of higher education;
- Any building or facility that meets a public purpose;
- Improvements to a public building to enhance public safety and security;
- Telecommunications and other communications infrastructure;
- Recreational facilities;
- Technology infrastructure and services;

- Technology equipment or infrastructure to employ wireless broadband service to schools, businesses, or residential areas;

- Any improvements necessary or desirable to any unimproved locally or state-owned real estate; and,

- A solid waste facility that produces electricity by using the solid waste.

The PPEA is designed to encourage innovative partnerships between public and private entities. The intent of the law is foster dialogue between public and private agencies so infrastructure projects can be advanced for the common good.

Proposals for a public/private partnership agreement can be initiated either through a solicited or unsolicited process. In either case, a two-part submission process is required. The first phase consists of the conceptual stage, which includes an explanation of private partner qualifications, experience, project details, project financing, public support or opposition, and finally, a project benefit analysis. The second phase of the proposal must detail the project scope, budget estimates, and identify deliverables. The private entity shall be held accountable for representations regarding their qualifications, experience, and the assertions made about all aspects of work to be performed.

Once a proposal has advanced through the vetting process, the PPEA defines "responsible public entity" (RPE) to include any public entity that "has the power to develop or operate the applicable qualifying project" (The Public/Private Education Facilities and Infrastructure Act, 2002, p. 10). Individually negotiated interim or comprehensive agreements between a private entity and an RPE define the respective rights and obligations of the RPE and the private entity. It is in the best interests of both the RPE and the private entity to have an interim or comprehensive agreement that sufficiently lays out the rights and obligations of the parties. The PPEA provides a list of required provisions for comprehensive agreements (§56-575.9 of the Code of Virginia) and interim agreements (§56-575.9:1 of the Code of Virginia). The agreements must be fully vetted by advisory committees from the public body and private entities. In addition, the law details the requirements of public hearings to provide a community an opportunity for comment. Overall, the PPEA model guidelines detail the process required to establish a public/private partnership and the procedures that must be followed by the RPE in order to enter into an agreement to build public facilities with a public/private partnership.

Public/Private Partnerships Prototype Model

Stainback & Donahue (2005), proponents of public/private partnerships, noted while the school district maintains ownership of the facility the private party is given additional decision rights in determining how the project or task will be completed. The public and private partners work together to negotiate the roles and responsibilities of each party. The public entity often structures and implements the public/private finance and development of the needed school facilities. The design, finance, and development of the real estate are left to the private entity. Within this type of arrangement, is there a point when the need of the private entity to turn a profit outweighs the need of the school district and municipal government to provide the type of school facility that best meets the needs of the community? Elementary and secondary school construction spending accounts for about 63% of all educational construction spending (Stainback & Donahue, 2005). With the slowing of the United States economy in recent years, school districts were approached by private partners willing to assume risk in order to move forward with construction projects when usually the projects would have been delayed because of a lack of resources. Did public school districts fill the gap in funding that normally would have been filled by more traditional school finance methods with public/private partnerships agreements that may or may not have resulted in an outcome that benefited the school district?

Stainback and Donahue (2005) described a prototypical model of a public/private partnership. The following describes the roles of both entities:

1. Public partner actions:

    • Assemble the land required for: 1. The school, 2. Possibly shared community facilities, and 3. Possibly a related commercial development that can generate nontax income and   tax revenue for the public partners;

    • Provide investment, development and/or operational incentives;

    • Increase allowed density of the related commercial development;

    • Reduce parking requirements for the related commercial development;

    • Cover the cost of needed infrastructure improvements: these costs are often covered by the nontax income land lease payments and/or tax revenue generated by the commercial development component;

    • Consolidate public input from public entities and the community into a single point of responsibility to interface efficiently with the private partner; and,

- Structure and negotiate "public-public" partnerships between the school district and other government, community, or religious partners.

2. Private partner actions:

  - Assemble the multidisciplinary team required to finance, design, develop, construct, and possibly operate the facilities and commercial development;
  - Structure creative public/private finance plans;
  - Provide and/or obtain private at-risk equity and debt;
  - Manage construction, market, interest rate, inflation, and other project risks;
  - Manage the design, finance, development, and construction process to achieve significant cost reductions; and,
  - Accelerate the predevelopment and development processes to reduce interest cost during construction (Stainback & Donahue, 2005).

Stainback and Donahue (2005) claimed multiple benefits of these types of agreements. Significant project cost savings (between 6% and 40% reduction), expedited delivery times, distribution of the financial risk, the use of innovative contracting methods, such as A+B bidding, Design-Build Delivery, implementation of "no-excuses" bonuses, and savings resulting from reduced long-term maintenance and warranty are some of the benefits cited.

A+B bidding is a cost-plus-time bidding procedure. The low bidder is selected based on a combination of the traditional contract unit price items based bid (A) and the time component proposed by the bidder to complete the project or a critical portion of the project (B). The time to complete the project (B) is assigned a monetary value and combined with the contract items based bid (A) to select the contractor. The bidder with the lowest overall combined bid (A+B) is awarded the contract. In the actual contract, the contractor will only be reimbursed for unit items (A). The time allowed to complete the project is set at the bidders' time component (B) (WSDOT, 2013).

Stainback and Donahue (2005) also cited Design/Build Delivery as a benefit of public/private partnerships. The design/build concept allows the contractor maximum flexibility for innovation in the selection of design, materials and construction methods. Under the design/build concept, the contracting agency identifies the end result parameters and establishes the design criteria minimums. The prospective bidders then develop proposals which optimize their construction capabilities. Design/build opens up a new degree of flexibility for innovation.

Allowing the project design to be tailored to a contractor's advantage provides flexibility to compensate for cost increases in one area through efficiencies in another. This concept allows the contractor to optimize his work force, equipment and scheduling.

Stainback and Donahue (2005) also cited the no excuse bonus as a benefit of the public/private partnership. The no excuse bonus concept is intended to shorten the construction time that would normally be required to perform the work by providing the contractor with a substantial bonus to complete a project within a specified time frame regardless of any problems or unforeseen condition that might arise. An additional advantage of the use of this technique is that it serves as a tool to motivate efficient construction as it encourages the contractor to keep projects on schedule. Bonuses are intended to reward a contractor for early completion, thereby reducing disruption and inconvenience to the public.

Conversely, there are no guarantees of cost savings or expedited time to delivery. In addition, there is some inherent financial risk when working with the private partner because insolvency is always a possibility. Also, public/private partnerships tend to exclude smaller contractors and designers because the projects often are larger than small firms can handle.

Stainback and Donahue (2005) estimate that a majority of the nation's municipal governments and public service authorities are actively using the public/private partnerships approach. The writers advocate that school district officials should explore this approach to develop new school facilities for growing populations and to repair existing facilities.

Summary of Literature on Public/Private Partnerships

As educational leaders consider any of the routes to funding the construction or renovation of school facilities, the importance of high-quality school facilities on teacher satisfaction and attitude must also be considered. Teachers and staff spend a considerable amount of time within their classroom and when that space is inadequate, teachers develop negative attitudes and in turn, their level of satisfaction and student achievement is impacted. When private corporations, intent on making a profit, are tasked with building school facilities, the public partner may reduce financial liabilities, but also may end up with a facility that does not meet the needs of the staff and students, as documented in the Bradley-Levine study, mentioned earlier. "Flattering phrases, such as public/private partnerships, cannot disguise the fact that there are no authentic partnerships between the powerful and those who go to them on bended knee" (Kozol, 1997).

Purpose of Section Two of the Literature Review

A recurring theme in Bradley-Levine (2008) and Clark (2002) was the importance of the satisfaction and attitude of the users of a school facility to the success of a school community. As a result, this section of the literature review will also detail studies regarding teacher and principal satisfaction and attitude in relation to school facility condition.

Relationship Between School Facility Condition and Teacher Attitudes

Leigh (2012) explored the relationship between school facility condition and teacher attitudes. Leigh believed that teacher attitudes have a relationship to school facility conditions and that school divisions must look more closely at school facility management and its impact on teachers. The understanding of teacher attitudes and the relationship to school facilities is even more important as teachers are being held more accountable for student performance. In order to determine whether there is a significant relationship between school facility conditions and teacher attitudes, Leigh asked two research questions and analyzed the data collected. First, "Does the condition of the teacher's classroom affect their attitude towards their job as measured by the My Classroom Assessment Protocol (MCAP)" (p. 3) and "Is there a significant relationship between school building conditions and teacher's attitudes about how classroom conditions affect student learning as measured by the My Classroom Assessment Protocol (MCAP)" (p. 3)?

Leigh (2012) supported his study by examining relevant literature on school facility conditions and its relationship to teacher attitudes. Since about 20 percent of Americans spend time in a school building each day, the condition of the facility is critical to the lived experience of a substantial amount of the American population (Schneider, 2002). Regardless of building condition, teachers are mandated to implement a variety of teaching strategies and to provide instruction that is responsive to different learning styles. At the same time, school districts are challenged to meet the increasing demand to upgrade or modernize obsolete school facilities. Also, school districts are mandated to increase the opportunities for preschool education, implement technology innovations, and improve science laboratories when the school facilities were already sorely inadequate prior to the additional mandates (Filardo, 2008). A disconnect exists between the demands of reformers and the ability of school districts to modify school facilities in a way that is appropriate to meet the demands of changing community needs. As a

result, teacher attitudes are negatively affected by the struggle to deliver high-quality instruction in inadequate facilities.

Earthman (2002) documented that not only are teacher attitudes negatively affected by inadequate school facilities, their effectiveness is impacted, as well. Teachers in buildings in poor condition stated that the design and appearance of the facility had a negative impact upon the learning climate. The size, organization, maintenance, and appearance of the building, according to teachers, seemed to impact the learning climate. Unfortunately, even the best teachers reported that their intention to remain in the teaching profession was impacted negatively by the condition of the school facility (Johnson, 1990). The problem of poor student achievement is compounded by high teacher turnover and the inability to attract and retain the teachers because of the condition of the school facility. The teachers who decided to stay in rundown school facilities were absent more often, had a decreased level of effort, had a lower effectiveness in the classroom, suffered from low morale, and reduced job satisfaction (Corcoran, Walker, & White, 1988).

Unfortunately, school facility problems may worsen since buildings in the United States, on average, are over forty-years-old, just the time when rapid deterioration typically begins (Buckley, Schneider, & Shang, 2004). When a school is 20 to 30 years old, equipment frequently needs to be replaced. Between 30 and 40 years old, the original equipment should have been replaced, including the roof and electrical equipment. However, after 40 years, a school building begins rapid deterioration, and after 60 years most schools are abandoned (Ornstein, 1994). When older school buildings are not maintained, there is a lack of control of key components necessary for a dynamic learning environment. Older buildings generally do not have control over other variables such as the thermal environment, lighting, acoustical control, support facilities, laboratory conditions, and aesthetics of the environment (Earthman, 2004).

Leigh (2012) used a model that Cash (1993) developed to explain the relationship between building conditions, student achievement, and behavior. Cash suggested that school building conditions could influence the attitudes of faculty. The impact on attitude could be positive or negative. Faculty members expect to be able to instruct in well-maintained, adequate facilities and when that expectation is not met, building conditions may directly or indirectly influence teacher satisfaction about their job.

Leigh (2012) conducted his study in a school district in southeastern Virginia with a student population of over 10,000 students. The school division provided instruction aligned to the Virginia Standards of Learning in a six hour instructional day, 180 days per year. Two elementary schools in the school district were selected because of similarities in demographics, physical size of the facilities, and school locations. The only major difference between School A and B was the age of the building and size of the instructional staff. School A had a licensed classroom teaching staff of 25 teachers, while School B had a licensed classroom teaching staff of 63 teachers. Demographically both schools were similar in race, gender, and years of experience the teacher has.

The schools in question were vastly different in building age and condition. School A, built in 1968, was located in a rural setting on 9.7 acres of land. The building was originally a K-5 elementary school, but at the time of the study served 379 students in a 2 through 5 grade configuration. The facility was 64,100 square feet and had a roof top HVAC system. In 2008, School A was retrofitted for high speed internet use, projection televisions, and wall speakers in each classroom. School B, on the other hand, was built in 2006 and located in a suburban setting on 18.5 acres of land. The facility was 96,000 square feet and had a Chiller-Boiler HVAC system. The building served 957 students in grades K-5 and had three mobile units on campus to address severe overcrowding. The overcrowding was such a factor that several teachers were sharing classrooms within the building. Leigh (2012) excluded teachers who taught in mobile units because of the potential for skewed perceptions of the physical differences between mobile units and permanent classrooms.

Leigh (2012) needed to gather data on building condition and teacher attitudes to determine if a relationship between the two factors existed. In order to do so, The Commonwealth Assessment of Physical Environments (CAPE) was completed by both building principals and was used to determine the condition of the school. The My Classroom Appraisal Protocol (MCAP) was completed by classroom teachers. The instrument produced the data necessary to measure teacher attitudes in their classrooms.

The CAPE was divided into two sections – structural and cosmetic. "Structural conditions are defined as building age, external and internal noise, lighting, windows, heating and air, roof leaks, and electrical outlets. Cosmetic conditions are defined as painting, graffiti, landscaping, and how often floors are swept and mopped" (Leigh, 2012, p. 29). The CAPE was

administered to both principals at the two schools in question. Since principals had the best knowledge of the conditions of the school building the data compiled revealed an accurate assessment of building condition (Brannon, 2000).

The MCAP was developed by Earthman in 2004. "The MCAP instrument consists of 48 items covering seven building components and conditions, such as thermal control, lighting, acoustics, conditions of the furniture and equipment, space, science equipment, and the presence of graffiti" (Leigh, 2012, p. 30). The instrument was divided in five sections: Classroom Assessment; Attitudinal Assessments; Student Learning; Building Assessments; and Demographic Data. The MCAP was the instrument used to measure teacher attitudes in their classrooms. The Classroom Assessment section of the MCAP assessed teacher attitudes about the physical classroom environment. Teachers were asked to rate items about their classroom environment as strongly disagree, disagree, agree, and strongly agree. The section contained items such as, I can control the temperature in my classroom, and the ceiling in my classroom leaks during a rain storm. The MCAP continued with an Attitudinal Assessment measuring teacher attitudes about the condition of the classroom. The section contained questions such as, the condition of my classroom makes me want to leave teaching as a career, and the condition of my classroom causes me some periodic health problems. The Student Learning Assessment measured how teachers feel about the impact of their physical classroom on student learning. The fourth section of the MCAP, entitled Building Assessment, documented how teachers feel about the condition of their school building. The teachers responded to questions by marking Satisfactory or Unsatisfactory. The data allowed Leigh to explore the differences in attitudes of teachers who rated their building as being satisfactory or unsatisfactory. Finally, the MCAP asked teachers Demographic Data. The questions documented gender, highest level of academic achievement, number of years teaching, what grade level taught, and how long have they been employed in their present school division. Leigh (2012) modified the MCAP to assess the presence of pests in the classroom.

Leigh (2012) analyzed the data gathered from 46 teachers and 2 principals using an independent sample t-test. Each variable was analyzed to determine if there was a significant difference in the mean scores of teachers between School A and School B. SPSS was used to analyze the responses on the CAPE from the two principals interviewed. A similar process was used to analyze the teacher responses on the MCAP.

The results extracted from the CAPE questionnaires the principals completed indicated a higher mean score for School B (the newer school building) than School A. A higher mean score for School B indicated more favorable building conditions. School A had a mean score of 2.1111 and School B had a mean score of 3.0370. Leigh (2012) determined the p value on the independent sample t-test indicated the null hypothesis should be rejected because the findings were significant at the .05 level. The School A principal rated the school as "Needs Improvement" and the principal of School B rated the school "Very Good" when asked, "How would you rate the overall condition of your school?"

The results extracted from the MCAP questionnaires the teachers completed regarding their attitudes in relation to their school building indicated a Total Composite Score of 1522 for School A, with a mean of 84.5556 and a Total Composite Score of 3363 for School B, with a mean of 120.1071. An independent sample t-test was conducted to analyze the Total Composite and the null hypothesis is rejected because the two means differ significantly at the .05 level. School B had a higher mean score for teacher attitude when compared to School A, which indicated that the teachers in School B have a better overall attitude about their classroom physical environment and its impact on student learning than do teacher in School A. In addition, on all of the components of the MCAP, teachers in the newer school building, School B, had a better attitude about their classroom physical condition that did teachers within the eight variables in School A, the older school building.

The results of the Leigh (2012) study indicated a significant relationship between school building conditions and teachers' attitudes about how those conditions affect student learning. The findings supported previous research, even though the study was limited in several ways. The Leigh study investigated teacher attitudes in two elementary schools in southeastern Virginia so the study is not generalizable. Also, the researcher detailed political tensions and budget cuts that may have affected the results of the surveys which might have skewed the results. Also, one of the schools was extremely overcrowded which may have been a factor when teachers rated their physical environment. Also, there may be significant bias on the part of Leigh since he was the principal of one of the schools studied. However, Leigh employed appropriate quantitative methods that contrasted an older school building with a newer school building and the teacher attitudes about the physical environment.

Principal/Teacher Satisfaction in Relation to School Facility Support of Teaching

While Leigh (2012) focused on two school buildings in southeastern Virginia, Schneider (2002) focused on a larger scale at the school facilities in Washington, D.C. and Chicago, IL. Schneider examined teacher perceptions of how their school building supported teaching and learning. Schneider conducted the study as part of an initiative by the 21st Century School Fund. The study was funded by the Ford Foundation and the goal was to document the condition of educational facilities as experienced by teachers in Chicago, IL and Washington, D.C. Furthermore, Schneider explored how these conditions affect the ability to teach. Schneider argued that, "If school facilities are inadequate or inappropriate then the educational enterprise will likely fall short, despite any other efforts at school reform" (p. 4).

The population studied by Schneider (2002) varied because the selection criteria between Chicago, IL and Washington, DC were different. In Chicago, a random sample of teachers from the members of the Chicago Teachers Union was selected for participation in the study. In May and June of 2002, 688 Chicago teachers were interviewed by phone. In Washington, D.C., a paper version of the survey was distributed to all teachers in all district schools by the building representatives of the Washington Teachers Union. In all, 1,273 surveys were returned from the 4,821 teachers in Washington, D.C. who received a survey.

Both school districts studied by Schneider (2002) operated schools in urban environments. During the 2001-02 school year, Chicago Public Schools had 600 schools, with an average age of 61 years. In Chicago, there were 437,618 students enrolled and 26,700 teachers during the 2001-02 school year. At the same time, District of Columbia Public Schools had 150 schools, with an average age of 67 years. In Washington, D.C., there were 68,000 students enrolled and 5,000 teachers during the 2001-02 school year.

Educational administrators and politicians in Chicago and Washington, D.C. recognized the need for improvements to school facilities. Schneider (2002) noted that since 1995 Chicago Public Schools spent more than 2.4 billion dollars for construction, additions, and renovations to school facilities. At the same time, since 1995, District of Columbia Public Schools spent approximately 500 million dollars on design and construction of new schools and health, safety, and component replacement projects through the district. However, these improvements are nowhere near the estimated need for 2 billion additional dollars in Chicago and the estimated

need for 848 million additional dollars in Washington, D.C. to provide high-quality educational facilities for teachers and students.

Schneider (2002) created a survey to document the condition of educational facilities as experienced by teachers in Chicago, IL and Washington, D.C. Subjects were asked to evaluate the design and condition of their schools. The design questions referred to aspects such as the adequacy of lighting, the availability and adequacy of specialized facilities, such as science labs and music rooms, and the size of the school. The condition questions referred to aspects such as indoor air quality, noise levels, and thermal comfort. After the survey results were gathered, the data were merged with objective measures of the school environment, including school demographics, data on building conditions, and school test performance. Schneider attempted to assess the relationship between objective school characteristics and school quality. In turn, the effect of facilities on academic achievement can be assessed.

The data gathered by Schneider (2002) indicated "while most teachers may not have read the extensive literature linking facilities to educational outcomes, their day-to-day experiences confirm what research has found: Teachers understand that good facilities are important to their classroom success" (p. 5). Subjects in both cities were asked to assign a letter grade (using the A-F scale) to assess the condition of their school facilities. Few subjects assigned the grade of A to their schools, which is not surprising given the average age of the facilities in each district. Teachers were most critical in Washington, D.C., where the average score was a D, compared to an average score of C+ in Chicago. In Washington, D.C. over half of the subjects surveyed indicated that they were highly dissatisfied with their school facility, compared to a third of the subjects surveyed in Chicago. Schneider noted that teacher dissatisfaction did not necessarily mean that a school facility was educationally inadequate for effective teaching. As a result, subjects were asked about the educational adequacy of their school facility. Over 40% of the subjects surveyed in Washington, D.C. believed that their students were not being taught in a facility that was educationally adequate, almost twice as high as the percentage of Chicago teachers who reported inadequate facilities.

Schneider (2002) then analyzed problems with the design of school facilities. Subjects in Washington, D.C. and Chicago reported concerns about the number of students being served in their school and the number of students in their classrooms. The dissatisfaction documented in Chicago with school and class size in consistent is a growing city, even though there was a

strong citywide program to reduce class size. While concerns about school and class size existed in Washington, D.C., the student population was in decline and the issue was not as prevalent. In addition to concern about school size, another design concern was the lack of or inadequacy of specialized classrooms. Approximately 60% of teachers in Chicago and Washington, D.C. assessed the science labs in their schools as somewhat or very inadequate to meet curricula standards, or that they had no science labs at all. Also, over one-third of Chicago teachers and one-half of Washington, D.C. subjects judged the art and music rooms as somewhat or very inadequate. Similarly, subjects rated physical education and recreational facilities as not appropriate for the needs of their students 30% of the time in Chicago and 40% of the time in Washington, D.C. Also, subjects in both cities expressed concerns about their classroom teaching space. Over 40% of subjects in each city indicated that their classroom was the wrong size for the type of education they were trying to deliver. Also, 25% of the respondents surveyed indicated that they had taught in a space that was not a classroom. The final design questions involved the availability and adequacy of professional space. Approximately a third of Chicago teachers reported they did not have adequate professional space, compared to about 30% of Washington teachers who reported the same. Even when professional space was provided, one-fifth of the teachers reported that they thought the space was inadequate.

Additionally, Schneider (2002) then analyzed problems with the condition of school facilities. School facilities may be designed well, but they are often not well maintained. At the same time, school facilities are often designed poorly and not well maintained. One of the most significant concerns raised by subjects in both cities studied was poor indoor air quality. Approximately two-thirds of teachers in Washington, D.C. reported poor indoor air quality, compared to over half of the subjects in Chicago who reported poor indoor air quality. Respondents also reported health concerns because of the poor indoor air quality. Over one-quarter of subjects in Chicago reported asthma, respiratory problems, and sinus infections. In both cities studied, teachers were out of work because of such medical problems on average slightly more than 4 days over the course of the school year. In addition to poor indoor air quality, thermal comfort was problematic for 30% of subjects in Chicago and 40% of subjects in Washington. Also, the noise level in classrooms and hallways was so distracting that it impacted the ability to teach for 40% of subjects from Chicago and 70% of subjects from Washington, D.C. Inadequate lighting was also reported to be a concern for 20% of subjects in Washington,

D.C. and 10% of subjects in Chicago. Even something as basic as electrical outlets were reported as problematic for 40% of the respondents in Washington, D.C. and 30% of respondents in Chicago. With the increasing need for teachers to access multimedia devices, the placement and number of electrical outlets is important to the effectiveness and impact of a lesson. In addition, a substantial number of subjects also reported inadequate lunchroom facilities and that their restrooms were dirty and poorly maintained. Finally, Schneider documented the lack of natural daylight in classrooms. Subjects reported that they could not see through the window at a 20% rate in Washington, D.C. and a 10% rate in Chicago. Also, 40% of subjects in Washington reported they could not open their classroom windows, compared to 20% of subjects in Chicago, which might contribute to the poor indoor air quality.

The concerns raised by teachers in Washington, D.C. and Chicago affected the ability of the school districts to retain teachers. "Among teachers who rated their facilities C or below, over 40% said that these poor conditions have led them to consider leaving their school and almost 30% of these teachers are thinking about leaving the profession entirely" (p. 12). High teacher turnover is problematic because it requires states, districts, and schools to devote attention, time, and financial resources to initiatives designed to attract additional candidates to the district. Also, successful school reform requires a sustained and shared commitment by school staff. When turnover happens because of the poorly designed or poorly maintained school facility the faculty and students suffer.

Schneider (2002) attempted to determine the relationship between the quality of the school facilities and the demographic makeup of the school. Schneider relied on existing research that showed that the relationship between the quality of facilities and educational outcomes is particularly strong in schools serving low income or minority students. If there were better facilities in schools serving low income or minority students the result might be increased positive educational outcomes.

Schneider (2002) used scale scores as an overall indicator of the quality of the school facility. The higher the scale score, the more problems with the facility were apparent in the data. Schneider completed a regression analysis with the facility score based on teacher reports against five measures of the school demographics for each school. They were:

- the percent of the student body that were English Language Learners;
- the percent of low income students;

- the school enrollment;
- the percent of the student body that were African-American; and,
- the percent of students that were Hispanic (p. 13).

Schneider utilized quantitative methods and analyzed the data based on the assumption that coefficients need to be roughly twice the size of its standard error to achieve statistical significance at the .05 level. Schneider determined that there was no strong relationship between school demographics and the conditions of schools as reported by teachers. However, Schneider noted that in areas of Chicago and Washington, D.C. with higher concentrations of English Language Learners and African-American students that the condition of the school facilities was rated worse than schools with less of a concentration of these minority groups.

In an effort to determine if there was a linear relationship between school demographics and problems with school facilities, Schneider (2002) analyzed scores from the schools in the best and worst condition as reported by respondents. Similar to the previous analysis, Schneider determined the schools in Washington, D.C. in the worst condition had high concentrations of English Language Learners, while there were no statistically significant differences in quality when the data for African-Americans was analyzed. For Chicago, Schneider concluded that there were no statistically significant differences in the student demographics in the best and worst schools. While problems existed with poor design and maintenance in Chicago and Washington, D.C., problems with social justice and equity did not emerge as issues in these two cities.

Schneider (2002) continued his analysis by examining the relationship between teacher evaluations of school facilities and standardized test results from the 2001-02 school year. The challenge when one is trying to complete this type of analysis is that there are a number of factors that are attributed to standardized test performance. Compounding the problem is the fact that Chicago and Washington, D.C. used a different achievement tests. Chicago used the Iowa Test of Basic Skills (ITBS) and Washington, D.C. used the Stanford Achievement Test (SAT-9) to assess achievement of students. The indicators of performance were reported differently for each city as necessitated by the different assessments given to the students. A number of variables were included in the analysis, including, 1) percent of school enrollment that is African-American, percent Hispanic, and percent English Language Learners, 2) school size, and

in Chicago, 3) the percent of the student body that is low income. Schneider determined that when school demographics were controlled, there is an independent effect of facilities on both math and reading test performance. When test scores from the best rated school facilities are compared to test scores from the worst rated school facilities the percentage of students scoring the top performance category is 3% lower in the worst rated school facilities. A similar finding emerged when school size was compared in the best rated and worst rated school facilities. Therefore, improving facilities may be just as helpful as reducing school size. However, Schneider was surprised by the data from Chicago related to school size and facility condition. School size did not have the anticipated effect on test scores as it did in Washington, D.C.

Finally, Schneider (2002) analyzed teacher assessment of design and condition of their school facility compared to objective measures of school facilities. Total capital expenditures per square foot, building age, and square feet per student were incorporated in coefficients controlling for student body demographics to further understand the teacher ratings. In regards to school design, Schneider concluded that space does matter. In both Chicago and Washington, D.C., as square footage per student decreased, the perception of design problems increased. In addition, in Chicago, teachers teaching in the oldest schools facilities also perceived design problems significantly higher than teachers teaching in newer school facilities. In regards to school condition, teachers in Washington, D.C. perceived as capital expenditures increased there were fewer problems with school condition. The negative relationship was not present in Chicago as it was in Washington, D.C. Schneider also concluded that teachers teaching in older buildings in Washington, D.C. perceived fewer problems in the condition of their school. Just the opposite finding was uncovered in Chicago. Chicago teachers who taught in newer school facilities perceived more problems with their school conditions. In both cities, more space alleviated design problems, but, not surprisingly, more space does not affect the way in which perceive the condition of their school building.

The analysis Schneider (2002) completed clearly identifies shortcomings in the facilities that are essential to delivering a high quality education. Unfortunately, many teachers rated their school facility as educationally inadequate for teaching and learning to take place. Schneider (2002) confirmed that "poor facilities contribute to the high turnover rates endemic to central urban school districts; in turn, high teacher turnover leads to increased recruitment and training efforts that drain schools of financial and human capital, both of which are essential to

educational success" (p. 21). In addition, teachers reported design and condition problems that hindered the learning process and on average led to four sick days per school year because of asthma, respiratory problems, or sinus infections. Good school facilities are critical for other educational reforms to be successful. Efforts to improve the American public education system are undermined by educationally inadequate facilities, such as reported by far too many teachers in Chicago and Washington, D.C.

Schneider utilized appropriate quantitative analysis methods to determine significance of teacher perceptions of school facility design and condition, while controlling, when necessary, for school demographics. However, there are limitations to the study. The student populations, while both in urban environments, are different in significant ways. In Washington, D.C., there are more students considered low-income, so much so that Schneider had to remove that part of the analysis for Washington, D.C. In addition, Chicago had a growing school division, while Washington, D.C. had declining enrollment. What other factors were driving the enrollment changes? The number of teachers and students who were employed or attended the school districts was another significant difference between the populations. Also, Schneider (2002) attempted to analyze student achievement using assessment results from different standardized tests. Finally, a limitation is the way in which teachers were included in the study. In Chicago, a randomized sample of the population was completed and in Washington, D.C. paper copies of the survey were given to every teacher by union building representatives. Did the sample in each city represent the demographic profile and average teaching experience of all of the teachers who taught in the school district? In all, the study illuminated the importance of school design and condition on teacher perceptions of school facility quality. The study supported the conclusions Bradley-Levine (2008) made about the importance of school design and the actual maintenance of the school facility. In London, as in Washington, D.C. and Chicago, teachers perceived their school negatively and were less satisfied when it was designed poorly or was not maintained sufficiently in order for them to provide an appropriate level of education for their students.

Building Renovations and Teacher Satisfaction

American public school facilities have been examined numerous times by researchers and approximately half have been found to be lacking, obsolete, or even environmentally hazardous. Interestingly, while there has been a significant focus on school improvement, there has been little attention paid to the need for high-quality school facilities. Dawson and Parker (1998)

hypothesized several potential reasons for the lack of enthusiasm to address the problem of run-down schools. As often is the case in the public sector, funding is a driving force and too many communities struggle to meet even the basic needs of the citizenry. In addition, community leaders and the public sector may not fully comprehend the impact of the physical environment on teaching and learning.

Similar to Leigh (2012), Dawson and Parker (1998) conducted a case study detailing the renovation process that took place at Neville High School, in Monroe City, Louisiana. In 1994, the Monroe City School System, attempted to get the public to pass a bond referendum by educating the citizenry about the needs for renovated school facilities, the cost of the renovations, and the benefits the renovated facilities would accrue to the public. Dawson and Parker (1998) studied the renovation process that occurred at Neville High School, a Monroe City School. Since the importance of high-quality school facilities is well documented, the following research question was examined, "If run-down school environments negatively affect morale, does renovation positively affect it" (p. 4)?

Dawson and Parker (1998) identified 10 participants from the 67 teachers employed at Neville High School for their qualitative case study of the renovation process at the school. Neville High School was a considered a college preparatory school until the 1960s and the tradition of preparing students with a varied curriculum have continued. Dawson and Parker conducted oral interviews, direct observations, participant-observations, and document reviews to collect data for the study. Purposeful sampling was used to select the ten participants for the oral interviews. The interviews were conducted at a time convenient for the participant. Seven of the interviews were conducted in the classroom where the participant taught. The researchers were able to observe the condition of the classrooms, decorations used to enhance the surroundings, and the sizes of rooms. Snowball sampling was also used in the data collection process. Direct observations of students and their behavior in relation to the school facility were completed during class changes. In addition, observations of teacher behaviors during class changes were conducted to determine how well teachers monitored the halls to protect the facility. The researchers conducted member checks following the interviews and allowed participants to make changes that more accurately reflected their ideas.

Dawson and Parker (1998) documented the disrepair of Neville High School before the 1996-97 school year. "The paint was peeling, the roof leaked, at least half of the lockers were

unusable, the ceiling tiles were hanging from the ceiling (sometimes falling); the list goes on and on" (p. 10). The interviews indicated the distress the teachers felt having to work in such a run-down facility and the embarrassment about how the facility had declined over the years. The researchers believed that if poor working conditions negatively affect people, then good conditions should positively affect them. To get to the improved conditions for teachers and students, there was discomfort during the spring of the 1995-96 school year for everyone on campus.

During the renovation, the air conditioning system was shut down. The temperatures soared into the eighties and nineties and several people interviewed felt that the students could not pay attention to instruction because of the extreme heat and noise while the building was being renovated. Several participants interviewed felt that nine weeks of education was lost and that the students were negatively impacted educationally during the renovation. Teachers had to be more flexible in their instruction, but the sentiment felt by the participants was that the spring of 1995-96 was a catastrophic disruption for everyone and everything on campus. However, while the researchers believed that all of the teachers were pleased with the newly renovated facility, they were surprised when all of the participants interviewed were not pleased with all of the decisions that were made.

Several participants interviewed were concerned with the size of the classrooms in the renovated facility and that students were not considered in the process. Also, there was a sentiment that not all of the teachers had a voice during the process and that the final plans did not even reflect the input of the teachers who did have a voice during the planning process. Some participants expressed that there should have been more restoration of the school and less renovation. Frustration also arose from the lack of adequate furnishing in the renovated facility. One teacher mentioned the lack of a television and the poor quality of workmanship. Teachers were concerned about the ineffective paint job, holes in walls, electrical issues, storage issues, lighting issues, flooring issues, and sprinkler issues. One issue that was mentioned several times by participants was the changing of "The Colors." Neville High School had a historical color scheme reflected in the paint colors. Participants were offended and angry that the school was not more restored, than renovated.

While there were many aspects of the renovation of Neville High School that participants did not care for, there was a general feeling that in the end it was a good thing. The spirit around

Neville High School was renewed. The beautiful auditorium was praised for the detailed workmanship, impressive size, and detailed plaster walls. Also, one participant felt the renovation was motivating to the teachers who received new classrooms and that the new environment was inspiring. The gym, along with the new bathrooms and the cafeteria were praised, as well. The renovation also moved teachers into departments and workspaces and collegiality has improved. Teachers are talking about their students and how to help them. Participants who had negative comments about the process also recognized a change in attitude of the teachers. The students have recognized how the teachers have a positive attitude and that has been reflected in their behavior.

Dawson and Parker (1998) concluded that while Neville High School teachers were not completely in favor of the outcome or the renovation process, they did have a more positive morale and outlook about their learning environment. While there were comments made about the lack of renovation to the annexed facility on the Neville High School campus, there were few complaints about the main building and the results of the renovation. Observations were made by the researchers that indicated a higher morale since the renovation. Teachers chatted as they entered the building each morning, laughed and talked in the halls, assisted students in the halls and classrooms, monitored hall areas, and decorated their rooms. The researcher perceived a sense of pride from the teachers as they interacted with their renovated facility.

Dawson and Parker (1998) identified limitations of their qualitative case study. One limitation was the length of time of the study. The researchers conducted their study just before renovations began and then only interacted with the school community shortly after the new school year began when renovations were almost completed. A more longitudinal case study may have yielded a more accurate understanding of the lived experience of the participants. The results also cannot be transferable to other schools or school divisions since the experience at Neville High School is unique. To strengthen the Neville High School study, the researchers might have considered a mixed-method study by adding a survey to gather feedback from the entire staff. Several participants were described as especially vocal and opinionated. The opinions of a few vocal participants could skew the data. By incorporating a survey of the entire staff, the data becomes more reliable.

Influence of Teacher Physical Environment on Teacher Behaviors

Lang (2002) conducted a case study at a secondary school, similar to the work that Dawson and Parker (1998) conducted at Neville High School. The purpose of the study was to determine how teachers change their physical environment or work plans because of the design of their classroom. Lang defined "designed physical environments" (DPE) as the classroom spaces where teachers teach (p. 6).

Lang (2002) focused the study on 31 regular, substitute, and intern secondary teachers on one school site towards the end of the school term. The teachers were relocated to a temporary site while their permanent school site was undergoing major changes and renovations. Lang asked the following questions to measure the six DPE indicators, 1) "In what ways do teachers change or rearrange their individual designed physical environments so that they may have a sense of well-being," 2) "In what ways do teachers adapt their behavior within individual designed physical environments so that they may have a sense of well-being," 3) "What are teachers' perceptions of the overall designed physical environment's social or cultural value with respect to accomplishing their teaching goals," and, 4) "What features or characteristics of designed physical environments do teachers perceive and identify as most important" (p. 11)?

Lang examined teacher perceptions of their DPE based on six different measures, including, size and layout, light and glare, noise and acoustics, temperature and ventilation, finishes and furnishings, and tools and communication. Each of the six DPE measures contained three to four questions each. The survey included questions assessed with a Likert-type scale, true and false questions, and a question that required participants to choose the most important quality of the six DPE measures. The participants agreed to an observation for a period from 30 to 50 minutes. Also, Lang fully photographed each classroom environment. In order to triangulate the data, Lang conducted open-ended personal interviews with 19 participants. The clinical interview questions focused on teacher mediation of six measures of the individual teaching space.

The following is an adaptation of the six DPE measures used in the Lang (2002) study and the results for each measure:

Table 1

Six DPE Measures/Descriptions Lang Utilized and Survey/Interview Results

Measure	Description of Measure	Study Results
Size and Layout	A popular secondary classroom size is normally 800 to 1,000 square feet, with a minimum width of 25 feet, a minimum length of 32 feet, and usually a minimum height of 10 feet.	- The majority of teachers (68%) felt they were able to move student desks around to meet their needs. - Only 50% of the teachers were satisfied with their room flexibility because of an inability to move student desks or fixed countertops that inhibited rearrangement of the classroom. - The questionnaires the teachers completed repeatedly documented the need for adequate area within their room more times (147 total) than any of the other criteria.
Illumination and Orientation	The unit of lighting is a "foot candle" or the amount of light perceived from a candle one foot away. An average recommended level of illumination within a classroom DPE ranges are 30-70 foot candles.	- Teachers were most pleased with the lighting in their classrooms. - There was a strong negative response from teachers because they were unable to control the electrical lighting and some teachers could not reduce the glare from the natural light because of inoperable horizontal blinds.
Sound quality	Classroom spaces should be constructed of materials that filter background noise to a maximum of 45 decibels. The optimum amount of echo within the classroom is about 0.5 seconds.	- The teachers mostly responded positively. - Observation and interview data suggested that opening doors and windows to allow fresh air into rooms resulted in unwanted noise from corridors and the exterior. - Teacher had to make the choice between stuffy quiet rooms or freshly ventilated noisy ones.

Table 1 (*continued*)

Measure	Description of Measure	Study Results
Ventilation and temperature	Mandatory minimum air volume changes of all DPE are required by building codes. These changes are either accomplished mechanically or with exterior windows. The air is usually mechanically tempered even though a teacher may not be able to control the thermostat.	• Mixed responses regarding temperature and ventilation were gathered. • In some of the classrooms, teachers were unable to ventilate or adjust the temperature so they brought in electric fans for cooling and ventilation during the warm spring and summer afternoons. • Teachers without individual temperature control expressed concern. • The most negative reactions came from teachers with south facing rooms. • The most positive responses were from teachers in portable classrooms with individual temperature controls.
Furnishings and Finishes	Budget and taste are often driving forces when school furnishings and finishes are chosen. District maintenance policies also guide purchases that are meant to enhance the learning environment.	• A small amount of teachers preferred vinyl flooring to carpeting. The custodial budget had been reduced and teachers felt the vinyl flooring was easier to keep clean. • Some teachers had older chalkboards and covered them with paper for displays and used newly mounted marker boards for instruction.
Technological Capability and Connectivity	A classroom that is connected to a full range of technological capability allows teachers and students greater opportunities for a wider range of teaching and learning opportunities.	• The majority of teachers (54%) were moderately or very satisfied with electrical outlets and data and cable ports. • 54% of teachers were moderately or very unsatisfied with the areas available to them to display instructional materials. • Teachers rated the communication capability as favorable. The interim classrooms were upgraded and properly outfitted with adequate outlets the summer before they arrived. • The lack of a centrally located office led to a loss of interaction with the administrative staff. • The lounge was small and located near a noisy workroom.

Lang (2002) demonstrated through the study, as previously discussed, that the classroom environment does impact teacher behaviors and attitudes. The study was limited by the greater

awareness of the physical environment the interim location created. Also, as in any school situation, there are variables such as classroom group dynamics, curriculum changes, individual teaching styles, and school schedule that may have impacted the results of the study. Even so, Lang triangulated data indicating that teachers felt that the size and layout of a classroom was most critical to their teaching experience than the other categories measured.

Principal Level of Satisfaction with School Facility Conditions

Leithwood (2009) furthered the Lang (2002) and Schneider (2002) studies by examining principal satisfaction with school facility conditions. Leithwood investigated the relationship between school facility quality and the impact on teacher instruction as measured by principal perceptions across the United States of America. The conceptual framework of the study recognized the role of school facilities as physical capital that functions with human and social capital development to improve educational outcomes. Leithwood believed that human, social, and physical capital of the educational program are integral in the production of outcomes. By identifying the same physical capital components as Schneider (2002), Leithwood measured principals' satisfaction with each facility condition and satisfaction with all of the conditions combined.

Leithwood (2009) used survey data from one thousand thirty-seven public school principals across the United States to determine their level of satisfaction with their facility condition to quantify their perceived quality of existing school facilities. The satisfaction/quality scales ranged from 1, "very satisfactory," to 4, "very unsatisfactory." Additionally, Leithwood measured the impact of facility conditions on a school's ability to deliver instruction. Similarly, a four-point scale was used to measure the impact of facility interferences to instruction where 1 was "not at all" and 4 was "major extent." Leithwood controlled for covariates or extraneous variables including: school size, instructional level, locale, poverty level, and minority student population. Leithwood hypothesized that when school principals rated their satisfaction with the school facility positively, the level of delivery of instruction was also rated positively. Descriptive and multivariate statistics were conducted to test the research hypothesis.

Leithwood (2009) utilized a Fall 2005 data source entitled, "FRSS 88: Public School Principals' Perceptions of Their Facilities" (p. 10). The 2005 survey included 1,205 regular public elementary and secondary/combined schools in the fifty states and the District of Columbia. Leithwood delimited the study to include data from schools with permanent buildings

(n = 1,037). The arithmetic average of the eight facility conditions ranged from 1.68 to 1.98 on a four-point scale. The result indicates that principals had a moderately low level of satisfaction with all of the facility conditions considered. Artificial lighting, air conditioning, and cleanliness and maintenance of student restrooms were particularly unsatisfactory. Additionally, six of the eight facility conditions contributed to the level of delivery of instruction as rated by principals. Facility conditions such as air conditioning, the condition of floors, walls, ceilings, and doors, indoor air quality, natural lighting and acoustics/noise control all impacted the delivery of instruction. There was a medium sized effect (43% variance) for each of these facility conditions measured by Cohen's D. The remaining variance of 57% is assumed by Leithwood to account for the human and social capitals of the education process that takes place in schools.

The findings of the Leithwood (2009) study supported the literature that "recognizes the role of school facilities as physical capital that functions with human and social capital development to improve student outcomes" (p. 16). The level of satisfaction in school facilities from the perspective of school principals is low in this national sample. Findings in the Leithwood study affirmed other literature in the field about the importance of school facilities to the delivery of instruction. Additionally, the importance of relatively low cost cosmetic repairs compared to high cost structural conditions was noted. By addressing the cosmetic concerns, Leithwood found that a significant impact on principal and teacher satisfaction is evident. Even though the study adds to the knowledge base of the importance of school facilities, it does have limitations. First, the level of subjectivity could be high because principals were asked to self-report their perceptions and may not reflect the opinions of teachers. Also, the study assumed that all principals had minimum qualifications as evidenced by their principal licensure. Finally, the study addressed only cosmetic and maintenance aspects of the school facility. The structural components of the school were not studied.

Leithwood's (2009) study confirmed the findings of the other studies reviewed in this chapter. High-quality school facilities matter to principals, teachers, and students. The school facility can positively or negatively impact the experience of the users of the building. The low mean satisfaction scores in the Leithwood study underscored the urgency of the problem of school facilities that are educationally inadequate, in disrepair, or obsolete. Leithwood documented the importance of cosmetic features, rather than structural features, the impact on the delivery of instruction, and how facility conditions are relatively more influential than some

school or even student attributes. School facilities matter and school administrators must be in tune with the learning environments American teachers are challenged to provide dynamic instruction within.

Summary

One of the main reasons there are so many obsolete school facilities is because there is a lack of funding for school leaders to maintain high-quality learning environments. As the literature review has detailed, public/private partnerships are an alternative to traditional school building finance routes allowing buildings to be built with virtually no financial liability for the school division other than a regular lease payments over the term of the agreement. However, by allowing private corporations to control construction design, educators relinquish control of decisions that impact the educational experience for staff and students. Schools need specialized areas that require more refinement than what is required by a minimum construction standard. When a school division relies on a private partner to understand, interpret, and then execute an educational philosophy in a building project, the potential for a disconnect is highly likely, as demonstrated in the Bradley-Levine research. As a result, teachers are forced to implement educational reforms and initiatives in classroom spaces that are inadequate and create a hindrance to the reforms they desperately want to succeed. Educators must take a leading role to ensure that educational programming is the most important criterion when making design and operational decisions. As Clark (2002) demonstrated, when a common vision and open lines of communication exist between the public and private partners, a high quality school facility can result.

While there are documented public/private partnerships success stories, especially with infrastructure projects, there are few empirical studies that document success in a school construction project. Unfortunately, as the literature has documented, teacher morale, attitude, and level of satisfaction are negatively affected by the inadequacy of the classroom space and in turn, student achievement and outcomes suffer. Principal and teacher perceptions must be considered when planning school facilities. The input they can provide is probably more important in a public/private partnership project because of the latitude that the private partner has to make design decisions to save money. When challenged to provide dynamic instruction, teachers are more concerned with having the tools and appropriate facility to do so, rather than the overall budget for the construction project. While the facility may be brand new or renovated

through the public/private partnership, the risk exists that budgetary decisions to cut costs might get in the way of the vision of educators. As demonstrated in this literature review, the ability to retain dynamic teachers and provide instruction free of hindrances from the facility, as well as overall teacher and principal satisfaction, is directly related to the school facility and the ability to effectively carry out their role as professionals in it.

       For reforms to be most effective, an evaluation of a school building is critical because, as the literature noted, buildings influence people. Earthman (2013) defined the product evaluation as "the adequacy of the building for the type of program to be carried on, how the building operates, the cost of the building, and whether or not the school system acquired what it needs at the best price" (p. 223). Equally important are process evaluations as described by Earthman. When a school division spends a considerable amount on a building project, more knowledge about the process from the planning stage all the way to completion is beneficial when planning new projects. Product and process evaluations are critical components for educational administrators when preparing to build, in the midst of building, or when the building is complete.

Chapter 3
Methodology

Introduction

The purpose of this study was to determine if the instructional and organizational needs of educators were fully met in school buildings constructed through the provision of a public/private partnership and the degree of satisfaction in the completed facility. The school construction design process and the eventual product were factors explored when assessing whether the educator needs were met. The purpose of this chapter is to detail the methodology for the research study. The chapter is separated into seven sections. The first section describes the population. The second section describes what data were needed in order to conduct the research and answer the research questions. The third section describes the instrument that was utilized in gathering the data needed for the research study. The fourth section describes how the instrument used was validated for reliability. The fifth section describes how the data was analyzed in order to answer the research questions. The final section provides a detailed analysis of the research questions and items in the survey instrument.

Population

The population of the study included all of the teachers and principals employed at the time of this study in a school in the Commonwealth of Virginia constructed, renovated, or added to under the provisions of a public/private partnership from school years 2002-03 to 2012-13. The schools represented in this study were identified using a report provided by the Virginia Department of Education Office of School Facility Services. A list of the twenty-eight schools can be found in Appendix A.

Data Needed

In order to answer the research question, two components of data were needed for this study. The first component of data needed was the perceptions of principals and teachers regarding their engagement and input into the process prior to the construction, renovation, or addition to the school facility. The second component of data needed described teacher and principal level of satisfaction in the school facility in question. An electronic survey instrument was administered to determine the level of engagement and input of teachers and principals into both the school division educational specification documents provided to the architect and in the

design of the school facility built with a public/private partnership agreement.   The same electronic survey instrument was administered to determine the level of satisfaction of teachers and principals with the completed school construction project built with a public/private partnership agreement. Quantitative and qualitative data were gathered using the survey instrument with closed and open-ended questions. Teachers and principals provided data about their experience in Commonwealth of Virginia planning the construction of and working in a school facility built using the provisions of a public/private partnership.

Instrument Design

The survey, designed by this researcher, collected descriptive data about teacher and principal perceptions of their engagement and input in the planning of school facilities built using public/private partnership in the Commonwealth of Virginia. Additionally, descriptive data about teacher and principal level of satisfaction in the final product that was built was collected. A copy of the instrument that was used to gather the data needed is found in Appendix B. Table 2 below describes the correlation between the research questions and the questions on the instrument. The first column lists the research questions and the second column identifies the question numbers that yielded data to answer the corresponding question.

Table 2

Correlation Between Sub-Research Questions and Instrument Questions

Sub-research question	Instrument question numbers
A. What was the level of engagement and input by teachers and principals into the educational specifications their school division developed in compliance with the provisions of the public/private partnership agreement?	5, 6, 7, 8, 12, 13, 16, 18
B. What was the level of satisfaction teachers and principals had with their engagement and input into the design of the school building developed in compliance with the provisions of the public/private partnership agreement?	9, 10, 11, 14, 15, 17
C. What was the level of satisfaction teachers and principals had with the product at the completion of the public/private partnership process?	19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32

The electronic survey instrument had 33 items. Twenty-eight of the items gathered information related to the sub-research questions. Three of the questions gathered demographic

data. One question was a general question to gather any other information the participant would like to share about the public/private partnership experience. Of the 28 items that gathered data related to the research questions, six of the items were open-ended and 22 items were multiple choice.

Instrument Validation and Reliability

The survey instrument was tested for content validity and ease of administration from three sources: a Director of School Facilities for a metropolitan school division, a school principal, and a certified educational facility planner. Each examiner was asked to review the research questions of the study and the survey instrument to determine whether or not the survey items related to the research questions or assisted in describing the study population. The survey examiners were asked if they feel the questions are appropriately phrased for clarity so the instrument measured what it intended to measure and assisted in gathering data accurately. Any questions needing revision were revised based on recommendations of the survey reviewers.

Consent

Prior to gathering data, a request was made for approval by the Institutional Review Board (IRB). No research activity began until the approval was received from the IRB. The researcher requested approval to conduct research from each school division in the Commonwealth of Virginia that had a school or schools constructed, renovated, or added to through the provisions of a public/private partnership. The copy of the letter to superintendents requesting school division participation is included as Appendix C. Upon school division approval to conduct research, principals from the identified schools were contacted via email to request their participation and to invite the teachers from their school to participate in the study. The email that was sent to principals and teachers of the schools identified in the study is included in Appendix D. Follow up contact was made via phone for the principals who did not respond to the initial email request. A telephone script used when these principals were contacted is included in Appendix E . Once consent for participation was confirmed, principals were sent an email including information regarding the purpose of the study, consent time line for completing the survey, and the internet link to the electronic survey (Appendix F). The electronic survey included information regarding informed consent and provided participants a prompt to agree to consent prior to the completion of the survey. A copy of the informed

consent form is found in Appendix G. Both teachers and principals were required to give their electronic consent before the survey instrument was available to them to complete. The Virginia Tech Institutional Review Board Approval Letter is found in Appendix H.

Data Gathering

Data was gathered using an electronic survey on the internet. The electronic survey provider was eSurvey. eSurvey was an online electronic survey provider that offered a quick and easy way to create and automatically evaluate web surveys on any possible topic. The participants included teachers and principals who worked in a school in the Commonwealth of Virginia built, renovated, or added to using the provisions of a public/private partnership agreement. The researcher contacted the school division superintendents in the Commonwealth of Virginia who represented the school divisions that utilized a public/private partnership to build school facilities. A request for approval to conduct research was made to the superintendents (Appendix C). Once approval was received, the principals of all of the schools built utilizing a public/private partnership were contacted via email (Appendix D). In the email to principals, a description of the study, a link to the eSurvey, and instructions to forward it to teachers was included. Prior to beginning the eSurvey instrument, teachers and principals saw the informed consent documentation and had a choice to proceed with the survey or end their participation.

All data from the eSurvey instrument were submitted anonymously. Descriptive data such as school, position, and subject matter taught were collected in order to describe the characteristics of the population for this study. Specific school data were not disaggregated.

Data Analysis

Responses from the eSurvey instrument were entered into a matrix using an excel spreadsheet and sorted by survey item. The first part of the eSurvey documented the level of engagement and input into the educational specification documents submitted by the school division and the level of engagement and input into the actual design of the school facility. The second part of the eSurvey documented teacher and principal satisfaction with building features that were desirable and may or may not be included in the completed school facility. Building features such as classroom size, specialized facilities, and the adequacy of common areas were explored.

A five point Likert-type scale served as the quantitative data for the research study. The scale ranged from 1 which indicated the participant "strongly disagreed" to 5 which indicated the participant "strongly agreed." The quantitative data were reported using descriptive statistics to provide parameters about the sample population. Data were reported by category and the frequency and percentage for each category, mean, and mode were reported for each survey item. The qualitative data were coded by each survey item and examined for common responses in regards to the level of input and engagement in the planning stages of the school construction project and in the assessment of the overall ability of the school building to meet teacher and principal needs.

Summary

Principals and teachers in the Commonwealth of Virginia who worked in a school facility constructed under the provisions of a public/private partnership between 2002 and 2013 were surveyed to gather data relevant to the planning stages of the construction project and their level of satisfaction with the completed project. An electronic survey transmitted over the internet was sent to principals and teachers once the division superintendent had given approval for the study to take place. The survey was designed to yield quantitative and qualitative data to answer the research question. The level of engagement and input by principals and teachers into the educational specification documents and design features of the school facility during the planning stage were a focus of the eSurvey. Additionally, the level of principal and teacher satisfaction in the completed school facility was assessed utilizing the eSurvey. The data were analyzed using descriptive statistics to provide insight into the research questions.

Chapter 4
Findings

Introduction

   The implementation of the Public/Private Education Facilities and Infrastructure Act of 2002 (PPEA) in Virginia public schools was examined in this study. For this study, the PPEA was defined as the legislative framework allowing public institutions, such as school divisions, to develop and operate capital improvement projects using a public/private partnership agreement (§56-575.9 of the Code of Virginia; §56-575.9:1 of the Code of Virginia). The PPEA granted authority to public entities to create public/private partnerships for a variety of projects deemed necessary to meet the needs of the public body. The purpose of this study was to determine if the instructional and organizational needs of educators were fully met in school buildings constructed through the provision of a public/private partnership and if the users of the building had engagement and input into the planning and design development of the project. The school planning process, design development processes, and the eventual product were factors explored. The study examined the following main research question:

Were the instructional and organizational needs of educators fully met in a building constructed through the provisions of a public/private partnership and was there user engagement and input into the planning and design development processes? The following sub-research questions provided additional data for this study:

  a. What was the level of engagement and input by teachers and principals into the educational specifications their school division developed in compliance with the provisions of the public/private partnership agreement?

  b. What was the level of satisfaction teachers and principals had with their engagement and input into the design of the school building developed in compliance with the provisions of the public/private partnership agreement?

  c. What was the level of satisfaction teachers and principals had with the product at the completion of the public/private partnership process?

   For the purposes of this study, school divisions which implemented a public/private partnership between 2002 and 2013 were identified by the Virginia Department of Education (Appendix A). Between 2002 and 2013, there were 18 school divisions in the Commonwealth of

Virginia that built a school or schools utilizing the provisions of a public/private partnership. Of the 18 school divisions, eight agreed to participate by allowing the researcher to contact the principal of the schools in question for approval to send the eSurvey to the administrators and teachers of the school. The researcher contacted 15 principals and received approval to send the eSurvey to the administrators and staff of 14 schools. Even though permission was received by the division superintendent, one principal did not grant permission to contact the staff of the school.

Findings

  Description of the population. The Public/Private Partnership Survey was sent to the administrators and teachers of 14 public schools throughout the Commonwealth of Virginia. The eSurvey was sent after receiving permission from the school division superintendent and the school principal to invite participants to complete the survey. All participants were provided a four week window to complete the eSurvey. After the data collection window closed, there were 131 participants from 14 schools that completed and returned the survey. The data collected from the survey instrument were categorized as they related to each sub-question of the study. The first two questions from the survey instrument were used to gather descriptive data about the population of the study.

  The participants in the study included 14 principals, 113 teachers, and four participants who completed the survey but did not indicate whether they were a principal or a teacher. The majority of the participants, which consisted of 57 participants, were from the high school level. There were 55 participants from the elementary school level, 13 participants from the middle school level, and six participants who completed the survey but did not indicate whether they worked in an elementary, middle, or high school. Refer to Figures 1 and 2 for a description of the participants by position and school level, respectively.
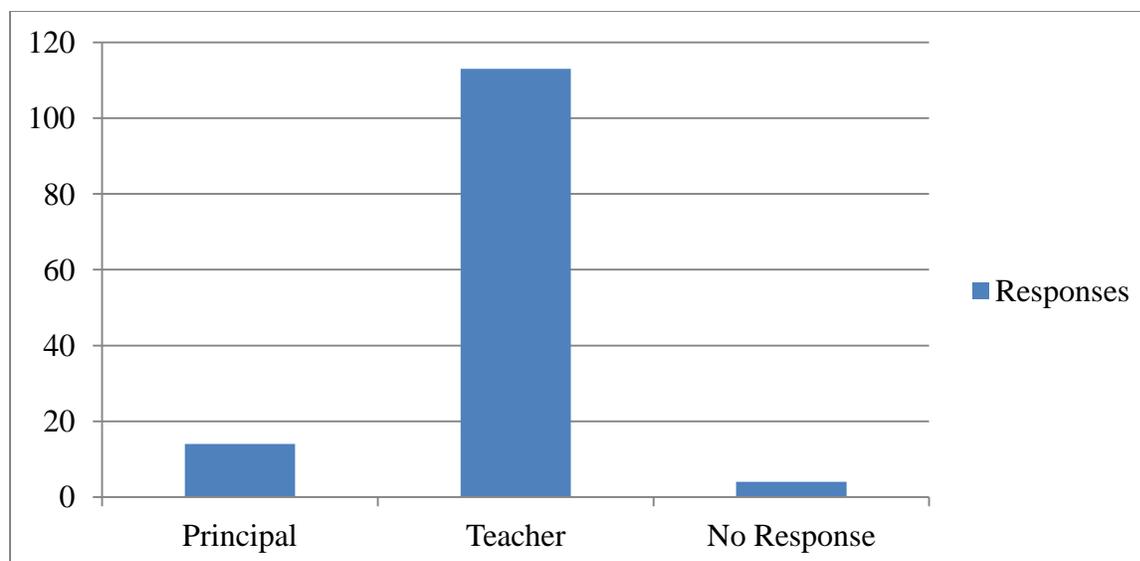
Figure 1. Participation by position.
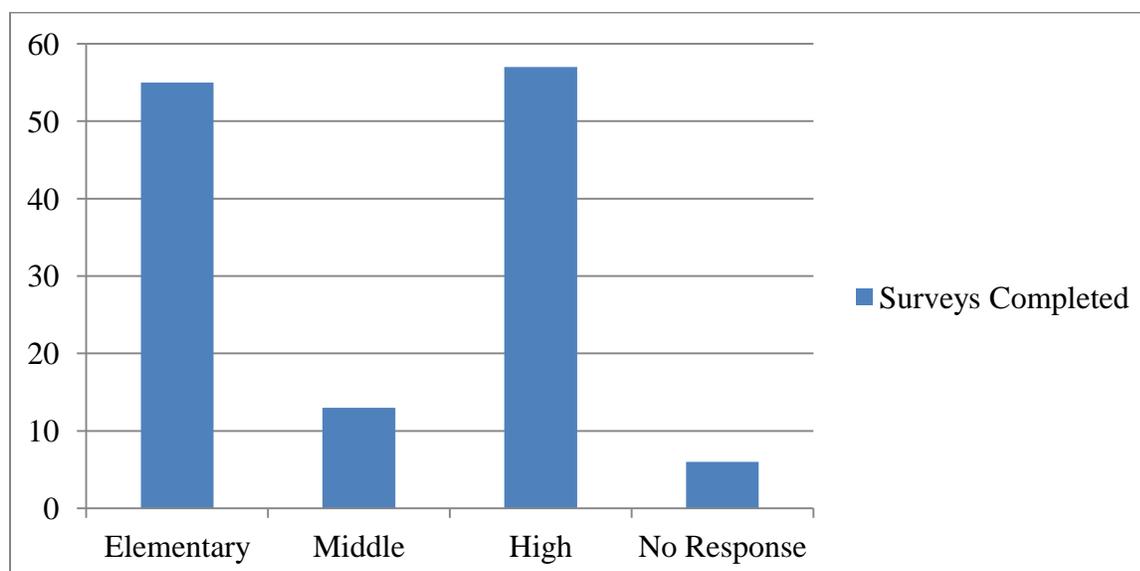
Figure 2. Participation by school level.

Participants were asked to identify the school year which best represented when the school in question was constructed, renovated, or added to during the period between the 2002-03 and 2012-13 school year utilizing a public/private partnership. Figure 3 displays the number of participants who identified a particular school year within the range. The majority of the participants, 64, indicated 2012-13 was the school year of the construction project. There were no responses for the 2010-11 school year.
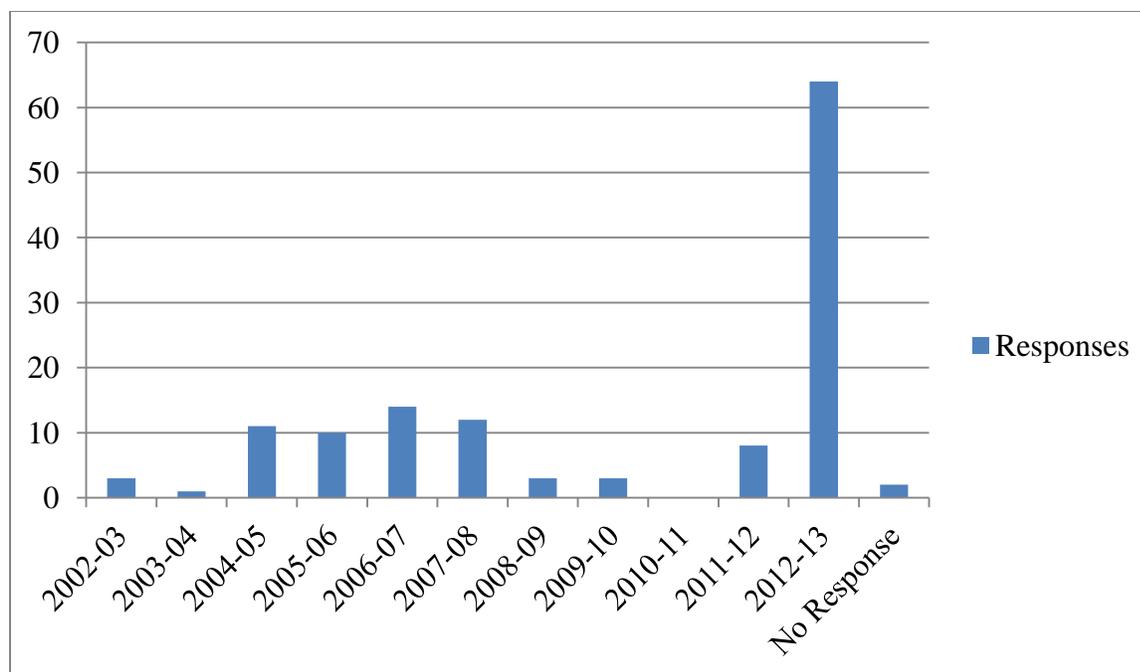
Figure 3. School year of the PPEA construction project.

In order to provide context to answer the research question about the planning stages of the public/private partnership, participants were asked if they were employed at the current school during the planning stages prior to construction, renovation, or addition. The participants were also asked if their school was an entirely new building and if they were working in the school division during the planning stages prior to construction. The researcher sought to delineate between participants who could have been engaged during the planning stages of the PPEA project and those who did not have the opportunity because they were not employed by the school division yet. Eighty-seven of the participants were employed at their current school or the school division during the planning stages of construction. Conversely, 44 of the participants were not employed in the school division during the planning stages of the construction project and were directed to the eSurvey questions regarding the completed school facility. Refer to Figure 4 for a representation of the above data.
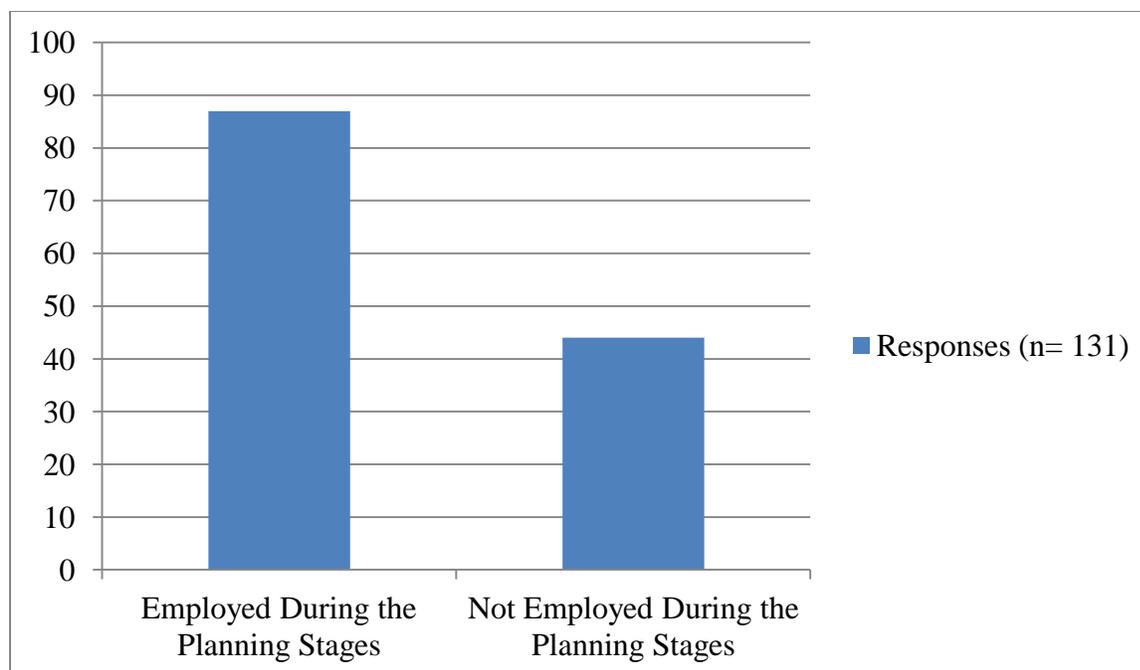
Figure 4. Participant employment status during the construction planning stage.

Research question a. What was the level of engagement and input by teachers and principals into the educational specifications their school division developed in compliance with the provisions of the public/private partnership agreement? The responses to items 5, 6, 7, 8, 12, 13, and 16 yielded quantitative data related to the study sub-question: a. What was the level of engagement and input by teachers and principals into the educational specifications their school division developed in compliance with the provisions of the public/private partnership agreement? Participants employed in the school division during the planning stages prior to construction were asked if they participated in school division sponsored planning meetings to discuss the needs of principals and teachers. Of the 87 principals and teachers who were employed during the planning stages prior to construction, only 38 indicated they participated in planning meetings, while 49 indicated that they had not participated in even one planning meeting. Refer to Figure 5 for a graphical representation of the data above.
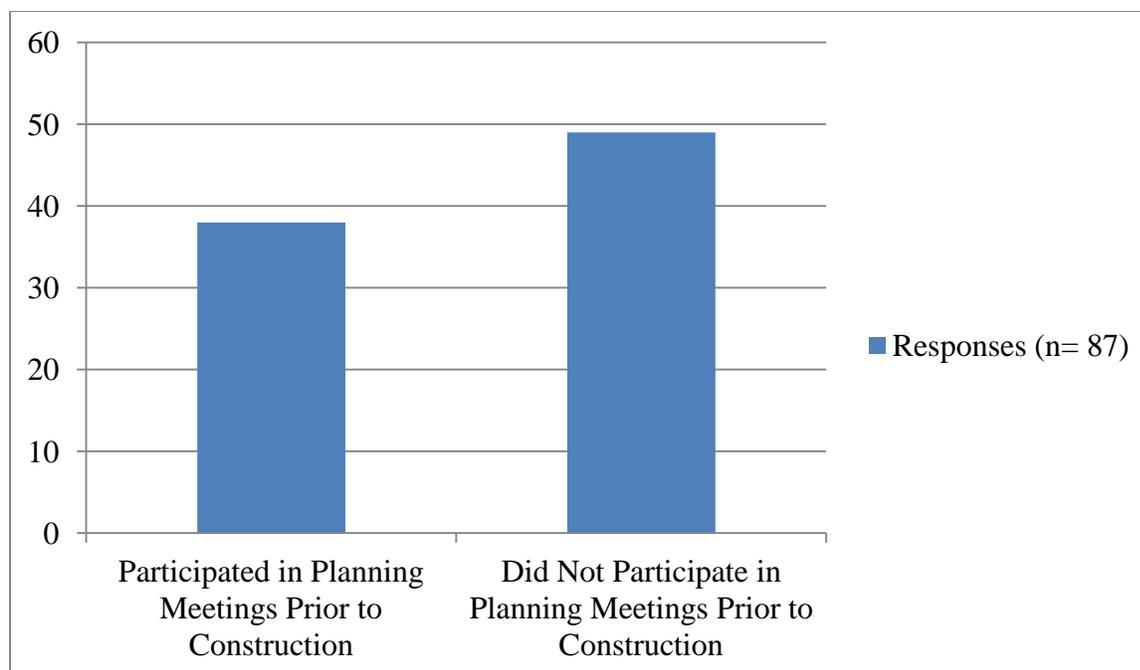
Figure 5. Participation status in planning meetings.

When the responses of the participants were analyzed by percentage, the data were as follows: Of the 87 participants who were employed by the school division during the planning stages prior to the public/private partnership project, less than half (44%) of the participants responded that they participated in planning meetings sponsored by the school division. Over half (56%) of the participants responded that they did not participate in any planning meetings prior to the public/private partnership school construction project. Refer to Table 3 for the percent from participants.

Table 3

Participation Status in Planning Meetings by Percentage

Response	Percent
Participated in a Planning Meetings Prior to Construction	44
Did not Participate in Planning Meetings Prior to Construction	56

The 38 participants who indicated they participated in school division sponsored planning meetings prior to the construction, renovation, or addition to their school were asked about their knowledge of the number of school division sponsored meetings scheduled and the number of school division sponsored meetings they actually attended. When asked how many meetings

were scheduled, 22 of the participants indicated that five or more planning meetings were scheduled. Four participants indicated that one meeting was scheduled, one participant indicated that two meetings were scheduled, one participant indicated that three meetings were scheduled, two participants indicated that four meetings were scheduled, and eight participants chose "unknown" for the number of meetings that were scheduled. Refer to Figure 6 for a graphical representation of the data above.
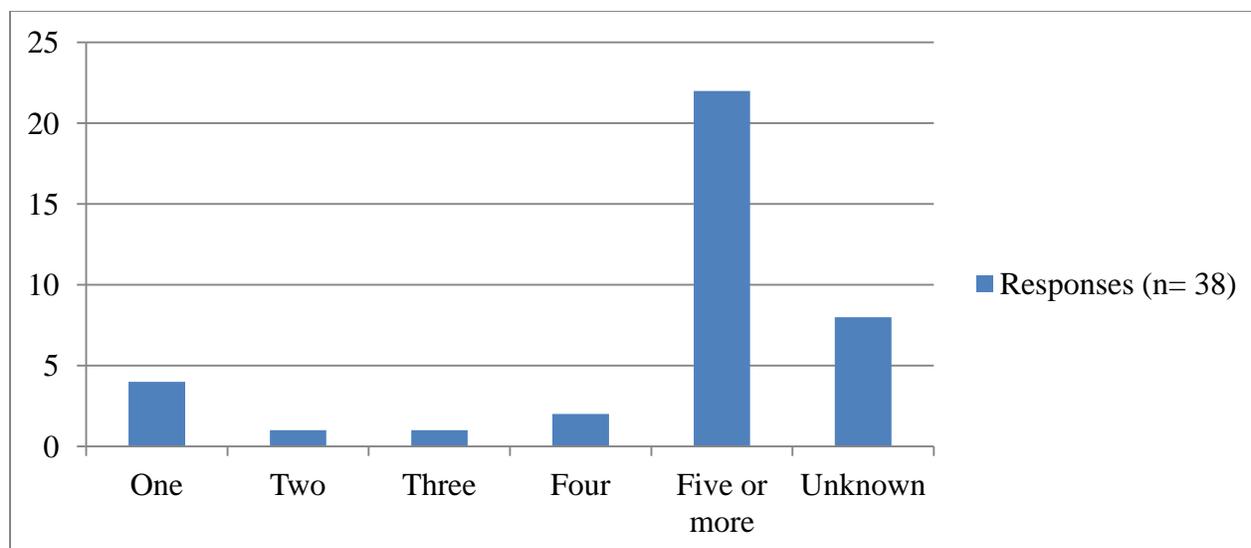
Figure 6. Number of construction planning meetings scheduled by the school division.

When the responses of the participants were analyzed by percentage, the data were as follows: Over half (57%) of the participants responded that five or more meetings were scheduled. Over one-tenth (11%) of the participants responded that one meeting was scheduled. Three percent (3%) of the participants responded that two meetings were scheduled. Three percent (3%) of the participants responded that three meetings were scheduled. Five percent (5%) of the participants responded that four meetings were scheduled. Twenty-one percent (21%) of the participants chose unknown when asked how many meetings were scheduled by the school division. Refer to Table 4 for the percent from participants.

Table 4

Participants Who Chose a Scheduled Meeting Frequency

Response	Percent
Five or More Meetings Scheduled	57
Four Meetings Scheduled	5
Three Meetings Scheduled	3
Two Meetings Scheduled	3
One Meeting Scheduled	11
Unknown Number of Meetings Scheduled	21

Of the 38 participants who attended school division sponsored planning meetings prior to the beginning of the public/private partnership construction project, the level of engagement in the planning process needed to be assessed. Participants were asked how many planning meetings they attended. The majority of the participants, 19, attended five or more planning meetings. Four of the participants attended one meeting, four attended two meetings, seven attended three meetings, and four participants attended four meetings. Refer to Figure 7 for a graphical representation of the data above.
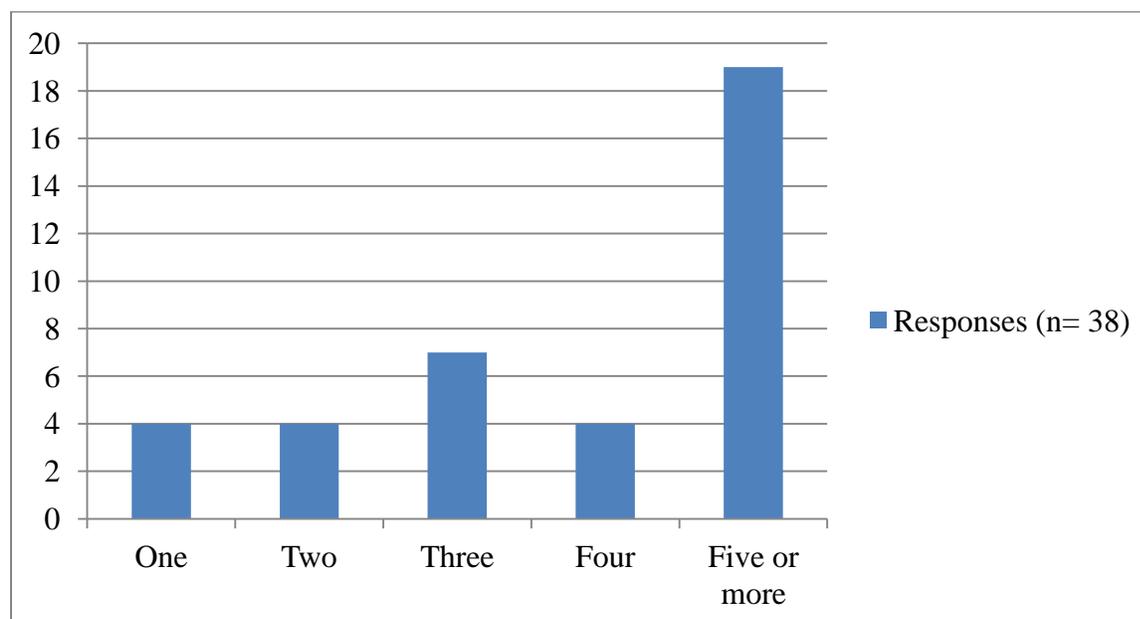
Figure 7. Number of school division meetings participants actually attended.

When the responses of the participants were analyzed by percentage, the data were as follows: Half (50%) of the participants responded that they attended five or more planning meetings. Over one-tenth (10.5%) of the participants responded that they attended one, two, and

four meetings, respectively. Over eighteen percent (18.5%) of the participants responded that they attended three meetings. While the majority of participants attended five or more meetings, 51% of participants attended one, two, three, or four meetings. Refer to Table 5 for the percent from participants.

Table 5

Participants Who Attended Meetings at a Particular Frequency

Response	Percent
Five or More Meetings Attended	50
Four Meetings Attended	10.5
Three Meetings Attended	18.5
Two Meetings Attended	10.5
One Meeting Attended	10.5

In order to gather more information to answer sub-research question a, survey items using a five point Likert-type scale provided more quantitative data for the research study. The scale ranged from 1 which indicated the participant "strongly disagrees" to 5 which indicated the participant "strongly agrees." When asked if teacher and principal input was valued and considered the mean score was 3.71 and the mode value was 4. The frequencies of each response for this survey item were: four participants chose 1 or strongly disagree, three participants chose 2 or disagree, four participants chose 3 or neutral, 16 participants chose 4 or agree, and 11 participants chose 5 or strongly agree. When asked if a common vision was evident during the planning the mean score was 3.79 and the mode value was 4. The frequencies of each response for this survey item were: three participants chose 1 or strongly disagree, two participants chose 2 or disagree, 10 participants chose 3 or neutral, 12 participants chose 4 or agree, and seven participants chose 5 or strongly agree. Four participants chose not applicable for this survey item. When asked if the educational specification documents submitted to the architect were agreed to by the participants the mean score was 3.39 and the mode value was 4. The frequencies of each response for this survey item were: five participants chose 1 or strongly disagree, four participants chose 2 or disagree, 10 participants chose 3 or neutral, 12 participants chose 4 or agree, and four participants chose 5 or strongly agree. Three participants chose not applicable for this survey item. When asked if the private partner provided feedback during the planning meetings that helped the team make decisions the mean score was 3.87 and the bimodal

value was 4 and 5. The frequencies of each response for this survey item were: two participants chose 1 or strongly disagree, five participants chose 2 or disagree, seven participants chose 3 or neutral, 10 participants chose 4 or agree, and 10 participants chose 5 or strongly agree. Four participants chose not applicable for this survey item. Refer to Figure 8 for a graphical representation of the data above.
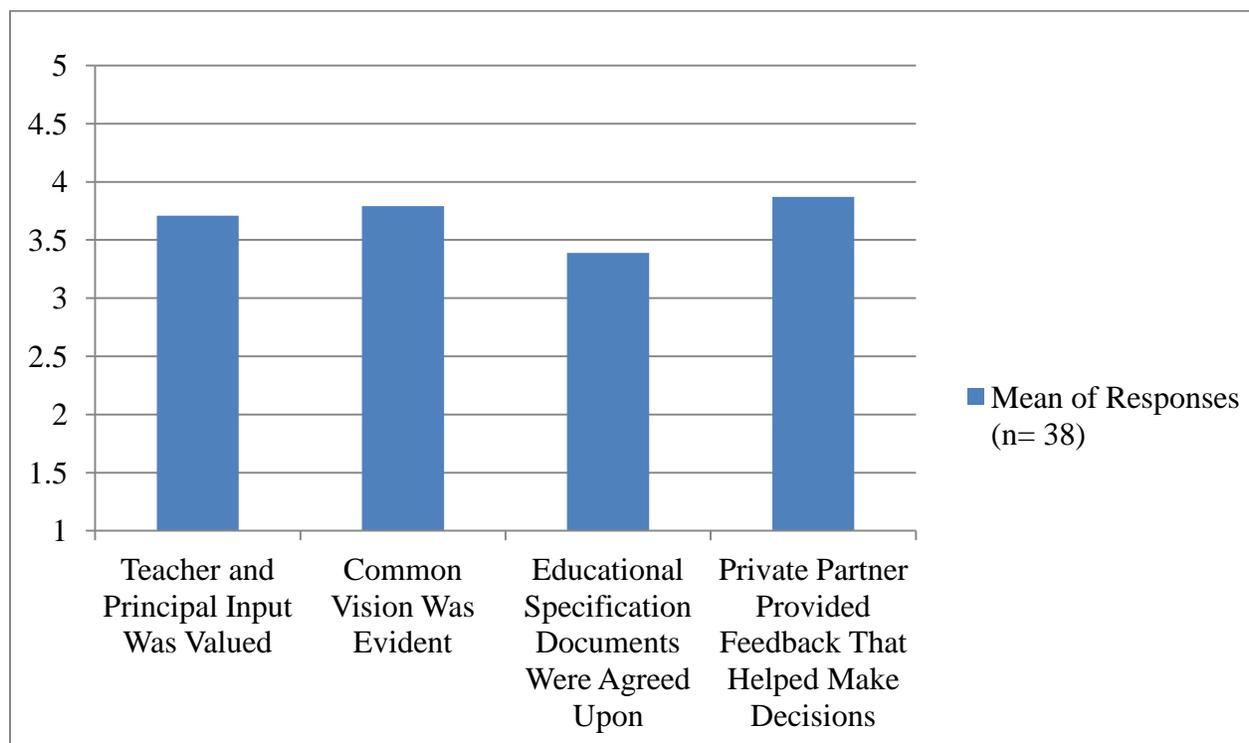
Figure 8. Mean of responses regarding level of input and engagement by teachers and principals in the educational specification document.

When asked if teacher and principal input was valued during the planning stages nearly one-third (29%) indicated that they strongly agreed that their input was valued during the planning stages. Forty-two (42%) of the participants agreed that their input was valued during the planning stages, over one-tenth (10.5%) of the participants neither agreed or disagreed that their input was valued during the planning stages, while eight percent (8%) disagreed and over one-tenth (10.5%) strongly disagreed that their input was valued during the planning stages. Seventy-one percent (71%) of participants strongly agreed or agreed that their input was valued during the planning stages. Refer to Table 6 for the percent from participants.

Table 6

Participants Who Indicated Their Input was Valued During the Planning Meetings

Response	Percent
Strongly agree	29
Agree	42
Neutral	10.5
Disagree	8
Strongly disagree	10.5

When asked if teachers and principals felt a common vision was evident during the planning stages, eighteen percent (18%) indicated that they strongly agreed that there was a common vision during the planning stages. Thirty-two (32%) of the participants agreed that there was a common vision during the planning stages, over a quarter of participants (26%) neither agreed or disagreed that there was a common vision during the planning stages, while five percent (5%) disagreed and eight percent (8%) strongly disagreed that there was a common vision during the planning stages. Eleven percent (11%) of participants chose not applicable for this question. Only 50% percent of participants indicated they strongly agreed or agreed there was a common vision during the planning stages. Refer to Table 7 for the percent from participants.

Table 7

Participants Who Indicated There was a Common Vision During the Planning Meetings

Response	Percent
Strongly agree	18
Agree	32
Neutral	26
Disagree	5
Strongly disagree	8
Not applicable	11

When asked if the educational specification documents submitted to the architect were agreed to by the participants of the planning meetings, over a tenth (10.5%) indicated that they strongly agreed that the educational specification documents submitted to the architect were agreed to by the participants. Thirty-two (32%) of the participants agreed the educational specification documents submitted to the architect were agreed to by the participants. Over a quarter of participants (26%) neither agreed or disagreed that the educational specification

documents submitted to the architect were agreed to by the participants, while over one-tenth (10.5%) disagreed and thirteen percent (13%) strongly disagreed that the educational specification documents submitted to the architect were agreed to by the participants. Eight percent (8%) of participants chose not applicable for this question. Almost one-quarter (24%) of the participants disagreed or strongly disagreed that the educational specification documents submitted to the architect were agreed to by the participants. Refer to Table 8 for the percent from participants.

Table 8

Participants Who Indicated the Educational Specification Documents Submitted to the Architect were Agreed Upon

Response	Percent
Strongly agree	10.5
Agree	32
Neutral	26
Disagree	10.5
Strongly disagree	13
Not applicable	8

When asked if the private partner provided feedback during the planning meetings that helped the team make decisions, over a quarter (26%) indicated that they strongly agreed that the private partner provided feedback during the planning meetings that helped the team make decisions. The same percentage (26%) of the participants agreed that the private partner provided feedback during the planning meetings that helped the team make decisions. Nearly one-fifth of participants (19%) neither agreed nor disagreed that the private partner provided feedback during the planning meetings that helped the team make decisions. Thirteen percent (13%) disagreed and five percent (5%) strongly disagreed that the private partner provided feedback during the planning meetings that helped the team make decisions. Eleven percent (11%) of participants chose not applicable for this question. Refer to Table 9 for the percent from participants.

Table 9

Participants Who Indicated the Private Partner Provided Feedback During the Planning Meeting(s) that Helped the Team Make Decisions

Response	Percent
Strongly agree	26
Agree	26
Neutral	19
Disagree	13
Strongly disagree	5
Not applicable	11

The responses to item 18 yielded qualitative data related to the study sub-question a. What was the level of engagement and input by teachers and principals into the educational specifications their school division developed in compliance with the provisions of the public/private partnership agreement? Participants employed in the school division during the planning stages prior to construction were asked, "Did all teachers and principals have an opportunity to share input during the planning stages? If so, how was that accomplished?" The following matrix in Table 10 illustrates the responses organized by the category. "R" refers to the respondent number given by the researcher.

Table 10

Matrix of Responses to Survey Question 18 by Category

Category	Responses
Teachers and Principals Who Were Engaged in the Planning Process	• "Yes, at most all meetings." (R1) • "Yes, there was a meeting where they could give input. They were able to see the architect's drawings to give input too." (R3) • "Yes, direct communication." (R4) • "The school district put together a Planning Committee that was made up of different stake holders (teachers, staff, admin, parents, etc.). Along the way plans were shown to each grade level team. Those teams provided feedback, questions or concerns to the planning committee. The committee got answers to questions and proposed changes. If possible the changes were made to the plans." (R6) • "Teachers shared their input to Building Leadership Team (BLT) members. The BLT then met as a team to present a plan to the Principal, who in turn, presented the school plan to our Central Office Team." (R33)

(table continued)

Table 10 *(continued)*

Category	Responses
Teachers and Principals Who Were Engaged in the Planning Process *(continued)*	"Yes. Open meetings." (R12) "Yes, usually through a survey." (R13) "Yes. There were many meetings where the opportunity to share ideas and concerns were noted." (R14) "Several years prior to construction the school system had a series of meetings one night a month over several months to do vision planning with members of the school system and community. After renovations & expansions were approved there were other meetings teacher were invited to attend. Emails were sent to request teacher input on items like color, tiles, and carpet." (R15) "Because meetings were scheduled by departments, it gave them an opportunity to have a voice pertaining to their specific teaching area." (R16) "Faculty meetings were used to discuss much of the information. Coaches met with builders and principals to discuss athletic facilities." (R17) "Yes, teachers submitted ideas and concerns to principals. Principals had meetings with Central Office staff to discuss ideas and concerns." (R18) "Yes. Full faculty meetings and specific department meetings." (R19) "Departmental meetings took place with architects and administrators to consider needs and options in our areas." (R22) "Yes, through teacher rep or directly (website and public meetings)." (R24) "Yes, through actual pieces of paper- need surveys, requests, and meetings. But most important was the teacher on the committee who gave us constant feedback as to what was going on." (R25) "Yes, subcommittees were formed by department to talk about specific department needs in the design of classrooms and open spaces." (R26) "Yes. Groups meetings." (R27) "I believe everyone in the school was invited to participate in the meeting with the architects." (R28) "If you attended the open meetings you had a chance to speak." (R30) "Yes - meetings with architect." (R32)

(table continued)

Table 10 *(continued)*

Category	Responses
Teachers and Principals Who Were Not Engaged in the Planning Process	• "No." (R10) • "No." (R11) • "Classroom teachers, outside sciences and vocational were not provided an opportunity to give feedback on classroom design. They did get some input on furniture for the room." (R20) • "No, not at initial planning. Only very late on for teachers." (R21) • "Principals had final decision making in all planning. Teachers could say what they wanted but it ultimately came down to his decision. They put a spin on it and try to make others think they are active participants, but ultimately it's higher ups who decide. Your questions should be split into principal category and teacher category." (R23)
Teachers and Principals Who Were Engaged, But With Limitations	• "Not always. Teachers were given input through their department chairs." (R5) • "Teachers could send emails to the department chair which were then forwarded to the principal." (R7) • "We were allowed to provide our vision and desires for the building design to the architects. The school system purchased a set design for the building with some input from us as a faculty." (R8) • "Yes. There was open dialogue throughout the process. Teachers were able to give input, but again, I do not know if the input that was given was actually looked at and used." (R9) • "All were offered the opportunity to give input. Finances limited our decision." (R34) • "There were a limited number of faculty meetings during which input was sought." (R31) • "The circumstances are not as clear cut as it may seem. Two schools were built. One school was a brand new building and meets much of the input given by staff during meetings. Staff was given a schedule and attended meetings during the time specified for specific departments." (R29) • "Yes, during this ONE meeting." (R2)

The following matrix in Table 11 illustrates the percentage of responses by category.

Table 11

Opportunities for Input During the Planning Stages

Response	Survey Response Percent
Teachers and Principals Who Were Engaged in the Planning Process	58
Teachers and Principals Who Were Not Engaged in the Planning Process	16
Teachers and Principals Who Were Engaged in the Planning Process, But with Limitations	26

Among those participants who responded that they were engaged in the planning process, there was some variety in the way that engagement occurred. One participant stated; "Teachers shared their input to Building Leadership Team (BLT) members. The BLT then met as a team to present a plan to the principal, who in turn, presented the school plan to our Central Office Team." (R33). Another participant mentioned; "Because meetings were scheduled by departments, it gave them an opportunity to have a voice pertaining to their specific teaching area." (R16). Also, another participant mentioned; "Yes, through actual pieces of paper- need surveys, requests, and meetings. But most important was the teacher on the committee who gave us constant feedback as to what was going on." (R25). The responses indicated that there was some variance in the method and the formality of teacher and principal engagement, but that these participants felt as if they had an opportunity to share their ideas and feedback.

Conversely, some participants responded that they were not given the opportunity to provide input and feedback during the planning stages of the public/private partnership school construction project. One participant stated; "Classroom teachers, outside sciences and vocational, were not provided an opportunity to give feedback on classroom design. They did get some input on furniture for the room." (R20). Similarly, one participant stated;

> Principals had final decision making in all planning. Teachers could say what they
> wanted but it ultimately came down to his decision. They put a spin on it and try to make
> others think they are active participants, but ultimately it's higher ups who decide. (R23)

Obviously, these participants felt disconnected during the planning stages of the school construction project and that disconnect marginalized their opinions about the proposed school facility.

Additionally, the responses to item 18 indicated that while some teachers and principals were engaged during the planning stages of the school construction project, there were some limitations that hindered the impact of their input. One participant stated; "We were allowed to provide our vision and desires for the building design to the architects. The school system purchased a set design for the building with some input from us as a faculty." (R8). Additionally, participant (R9) stated; "Yes. There was open dialogue throughout the process. Teachers were able to give input, but again, I do not know if the input that was given was actually looked at and used." Also, one participant affirmed that while given an opportunity to provide input, there were not enough opportunities to do so. Participant (R2) stated; "Yes, during this ONE meeting."

Research question b. What was the level of satisfaction teachers and principals had with their engagement and input into the design of the school building developed in compliance with the provisions of the public/private partnership agreement? In order gather information to answer sub-research question b, survey items using a five point Likert-type scale provided quantitative data for the research study for questions 9, 10, 11, 14, and 15. The 38 participants who participated in the school division sponsored planning meetings prior to construction were asked to record their feedback using a scale which ranged from 1 which indicated the participant "strongly disagrees" to 5 which indicated the participant "strongly agrees." When asked if teacher and principal input was valued and considered in the educational specification documents submitted to the architect the mean score was 3.97 and the mode value was 4. The frequencies of each response for this survey item were: one participant chose 1 or strongly disagree, two participants chose 2 or disagree, 10 participants chose 3 or neutral, 12 participants chose 4 or agree, and 10 participants chose 5 or strongly agree. Three participants chose "not applicable" for the question. When asked if teacher and principal input was valued and considered in the actual design of the school facility the mean score was 3.53 and the mode value was 4. The frequencies of each response for this survey item were: four participants chose 1 or strongly disagree, five participants chose 2 or disagree, seven participants chose 3 or neutral, 14 participants chose 4 or agree, and five participants chose 5 or strongly agree. Three participants chose not applicable for this survey item. When asked if teachers and principals were active participants during the planning meetings the mean score was 4.03 and the mode value was 5. The frequencies of each response for this survey item were: two participants chose

1 or strongly disagree, one participants chose 2 or disagree, eight participants chose 3 or neutral, 12 participants chose 4 or agree, and 13 participants chose 5 or strongly agree. Two participants chose not applicable for this survey item. When asked if the proposed educational specifications were communicated to the stakeholders in the school the mean score was 3.92 and the mode value was 3. The frequencies of each response for this survey item were: one participant chose 1 or strongly disagree, one participant chose 2 or disagree, 14 participants chose 3 or neutral, nine participants chose 4 or agree, and 10 participants chose 5 or strongly agree. Three participants chose not applicable for this survey item. When asked if the private partner or representative was present during the planning meetings the mean score was 4.11 and the mode value was 4. The frequencies of each response for this survey item were: two participants chose 1 or strongly disagree, four participants chose 2 or disagree, five participants chose 3 or neutral, 11 participants chose 4 or agree, and 9 participants chose 5 or strongly agree. Seven participants chose not applicable for this survey item. Refer to Figure 9 for a graphical representation of the data above.
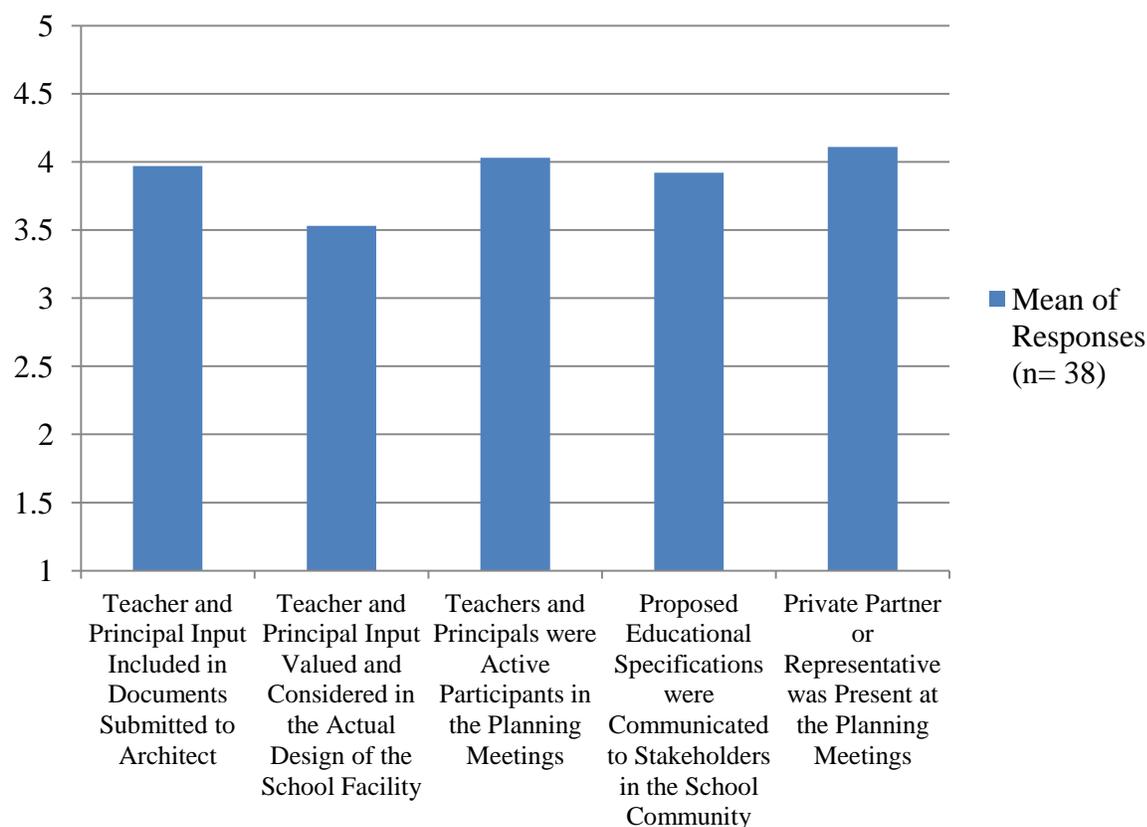
Figure 9. Level of input and engagement into the proposed design of the school facility

When asked if teacher and principal input was valued and considered in the educational specification documents submitted to the architect over one-quarter (26%) indicated that they strongly agreed that teacher and principal input was valued and considered in the educational specification documents submitted to the architect. Almost one-third (32%) of the participants agreed that teacher and principal input was valued and considered in the educational specification documents submitted to the architect. Over one-quarter of participants (26%) neither agreed nor disagreed that teacher and principal input was valued and considered in the educational specification documents submitted to the architect. Five percent (5%) disagreed and three percent (3%) strongly disagreed that teacher and principal input was valued and considered in the educational specification documents submitted to the architect. Eight percent (8%) of participants chose not applicable for this question. Refer to Table 12 for the percent from participants.

Table 12

Participants Who Indicated that Their Input was Valued and Considered in the Educational Specification Documents Submitted to the Architect

Response	Percent
Strongly agree	26
Agree	32
Neutral	26
Disagree	5
Strongly disagree	3
Not applicable	8

When asked if teacher and principal input was valued and considered in the actual design of the school facility nearly one-tenth (13%) indicated that they strongly agreed that teacher and principal input was valued and considered in the actual design of the school facility. Slightly more than one-third (37%) of the participants agreed that teacher and principal input was valued and considered in the in the actual design of the school facility. Eighteen percent (18%) neither agreed nor disagreed that teacher and principal input was valued and considered in the in the actual design of the school facility. Thirteen percent (13%) disagreed and eleven percent (11%) strongly disagreed that teacher and principal input was valued and considered in the in the actual design of the school facility. Eight percent (8%) of participants chose not applicable for this question. Almost one-quarter (24%) of the participants responded that they disagreed or strongly

disagreed that teacher and principal input was valued and considered in the actual design of the school facility. Refer to Table 13 for the percent from participants.

Table 13

Participants Who Indicated that Their Input was Valued and Considered in the Actual Design of the School Facility

Response	Percent
Strongly agree	13
Agree	37
Neutral	18
Disagree	13
Strongly disagree	11
Not applicable	8

When asked if teachers and principals were active participants during the planning meetings nearly one-third (34%) indicated that they strongly agreed that teachers and principals were active participants during the planning meetings. Nearly one-third (32%) of the participants agreed that teachers and principals were active participants during the planning meetings. Twenty-one percent (21%) neither agreed nor disagreed that teachers and principals were active participants during the planning meetings. Three percent (3%) disagreed and five percent (5%) strongly disagreed that teachers and principals were active participants during the planning meetings. Five percent (5%) of participants chose not applicable for this question. The majority of participants (66%) responded that they were active participants during the planning meetings. Refer to Table 14 for the percent from participants.

Table 14

Participants Who Indicated that They were Active Participants During the Planning Meetings

Response	Percent
Strongly agree	34
Agree	32
Neutral	21
Disagree	3
Strongly disagree	5
Not applicable	5

When asked if the proposed educational specification documents were communicated to the stakeholders of the school nearly one-quarter (26%) indicated that they strongly agreed that

the proposed educational specification documents were communicated to the stakeholders of the school. Nearly one-quarter (24%) of the participants agreed that the proposed educational specification documents were communicated to the stakeholders of the school. Thirty-seven percent (37%) neither agreed nor disagreed that the proposed educational specification documents were communicated to the stakeholders of the school. Slightly less than three percent (3%) disagreed and slightly less than three percent (3%) strongly disagreed that the proposed educational specification documents were communicated to the stakeholders of the school. Eight percent (8%) of participants chose not applicable for this question. One-half (50%) of participants indicated that they strongly agreed or agreed that the educational specification documents were communicated to the stakeholders of the school. Refer to Table 15 for the percent from participants.

Table 15

Participants Who Indicated that the Proposed Educational Specification Documents were Communicated to the Stakeholders of the School

Response	Percent
Strongly agree	26
Agree	24
Neutral	37
Disagree	<3
Strongly disagree	<3
Not applicable	8

When asked if the private partner or representative was present during the planning meetings nearly one-quarter (24%) indicated that they strongly agreed that the private partner or representative was present during the planning meetings. Nearly one-third (29%) of the participants agreed that the private partner or representative was present during the planning meetings. Thirteen percent (13%) neither agreed nor disagreed that the private partner or representative was present during the planning meetings. Five percent (3%) disagreed and three percent (3%) strongly disagreed that the private partner or representative was present during the planning meetings. Eighteen percent (18%) of participants chose not applicable for this question. Over one-half (53%) strongly agreed or agreed that the private partner or representative was present during the planning meetings. Refer to Table 16 for the percent from participants.

Table 16

Participants Who Indicated that the Private Partner or Representative was Present During the

Planning Meetings

Response	Percent
Strongly agree	24
Agree	29
Neutral	13
Disagree	11
Strongly disagree	5
Not applicable	18

The responses to item 17 yielded qualitative data related to the study sub-question b.

What was the level of satisfaction teachers and principals had with their engagement and input

into the design of the school building developed in compliance with the provisions of the

public/private partnership agreement? Participants employed in the school division during the

planning stages prior to construction were asked, "If applicable, please describe the process your

school division used to solicit feedback from teachers and principals during the planning stages

when your school was built, renovated, or added to?" The following matrix in Table 17

illustrates the responses organized by the categories. "R" refers to the respondent number given

by the researcher.

Table 17

Matrix of Responses to Survey Question 17 by Category

Category	Responses
A Meeting(s) to Solicit Feedback From Teachers and Principals During the Planning Stages	• "Meetings scheduled for input." (R1) • "One meeting was held in order for teachers, by subject area, to give feedback concerning needs, wants, and desires as to the design of science labs." (R2) • "The school system used discussion during the planning stages to hear the teachers. However, I do not know how much of the input was actually used." (R9) • "Several meetings took place to inform us about the planning stages; we also had meetings to gather our input on some minor decisions about the layout of classes." (R17)

Table 17 *(continued)*

Category	Responses
A Meeting(s) to Solicit Feedback From Teachers and Principals During the Planning Stages *(continued)*	• "Many opportunities for departments to meet with design and building team." (R19) • "Some departments, the sciences and vocational mostly, met with designers to review layout and needs for individual classrooms. Later meeting reviewed and modified the classroom design plans." (R20) • "Meetings were held with some basic options discussed and available. Mostly teacher input in the actual planning was minimal. Instead we were presented plans others had made and asked to endorse them, with tiny changes only perhaps. Very little of the changes we asked for were given consideration or implemented. Yet another example of a fig-leaf covering to say we were "consulted" and "involved". Truth was we were told after the fact most of the time. Only real choices we had were fixtures and fittings and even then that was very limited." (R21) • "Departmental meetings took place with architects and administrators to consider needs and options in our areas." (R22) • "Planned meetings." (R23) • "The school allowed for a day that the architects visited the school and we were able to meet with them. I believe there were certain times set aside for each department so that discussions were similar in needs and in the areas of the school. We were brought in, showed drawings of the plans, and the drawings were described to us as to the layout of our departments. The setup for this event seemed very satisfactory." (R28) • "The circumstances are not as clear cut as it may seem. Two schools were built. One school was a brand new building and meets much of the input given by staff during meetings. Staff was given a schedule and attended meetings during the time specified for specific departments." (R29) • "A presentation was made to which teachers and public were invited and allowed to comment. Sometimes they accepted ideas and changes were made but most of the time, if it meant changing the cost or the footprint, we were told that the ideas weren't feasible." (R30) • "The entire faculty was included in few meetings; a group of faculty was invited to participate in other meetings. Our general feeling was that a design was already in place as the creative suggestions we offered were ignored. It is common in our school division to schedule meetings to give stakeholders an illusion their input matters." (R31)

(table continued)

Table 17 *(continued)*

Category	Responses
Teachers and Principals Were Asked for Their Input During the Planning Stages, But Not During a Planned Meeting	• "The teachers and principals were asked what classrooms were being housed in mobile units in the back of the school building. These rooms were then included in the new addition. The YMCA was contacted about what they would like to see in the gym." (R3) • "We were asked to submit ideas about what kinds of desks and chairs we wanted in our classroom. I don't think anybody got what they requested, but I am satisfied with what I have." (R7) • "As teachers, we were allowed to provide input into the design and furniture selection of science labs and science classrooms. This was extremely helpful to us as science teachers." (R8) • "Surveys." (R11) • "Principals asked teachers to provide ideas during the planning stages, and principals took those ideas, as well as their own, to the Central Office." (R18)
Multiple Communication Types to Solicit Feedback From Teachers and Principals During the Planning Stages	• "Survey, community forums, and faculty meetings." (R4) • "1. Community public hearing; 2. School meetings; 3. Teacher input." (R5) • "The school district put together a Planning Committee that was made up of different stake holders (teachers, staff, admin, parents, etc.). Along the way plans were shown to each grade level team. Those teams provided feedback, questions or concerns to the planning committee. The committee got answers to questions and proposed changes. If possible the changes were made to the plans." (R6) • "Committees surveys and formal meetings." (R12) • "School division representatives would either come and speak to the faculty or members of the ASAC committee (sorry, can't remember what this stands for, although it was a committee comprised of teachers, principal, community members, school division personnel and other stakeholders in the renovation) (usually teachers) would bring information back from ASAC meetings and get feedback from the faculty." (R13) • "A committee of dept. chairs was formed, we toured schools around the region that the architect felt met the requirements we were asking for, we went back to the teachers in our dept. and discussed concerns, sightings, etc. Models of the building were set out for previewing and comment. Parents were asked for their input." (R14)

(table continued)

Table 17 *(continued)*

Category	Responses
Multiple Communication Types to Solicit Feedback From Teachers and Principals During the Planning Stages *(continued)*	• "Several years prior to construction the school system had a series of meetings one night a month over several months to do vision planning with members of the school system and community. After renovations & expansions were approved there were other meetings teacher were invited to attend. Emails were sent to request teacher input on items like color, tiles, and carpet." (R15) • "Emails; surveys; scheduled meetings with faculty and staff as a whole and by departments." (R16) • "Meetings and a teacher rep on the building steering committee. Feedback was gathered but not always used to adjust design/planning." (R24) • "We were invited to go to many meetings, had an active participant in the final committee, and were given chances to fill out requests and needs on several occasions." (R25) • "I served on the "Open Space Design" team. A collaborative effort between the teachers, administration, and students to design the best usage for the open spaces at the end of each hallway was well as any common space, such as the cafeteria. I was not involved in any building design process (which is why most of the previous questions are marked N/A). This was still a collaboration between the school and an outside furniture vendor, however probably not what you are looking for your survey." (R26) • "Had teachers and principals put together a wish list. Then architect gave a preview of what their vision was and we could comment and give our input." (R27) • "Meetings with architect, school board, community members." (R32)
No Effort to Solicit Feedback From Teachers and Principals During the Planning Stages	• "None was asked of us." (R10)

The following matrix in Table 18 illustrates the percentage of responses by category.

Table 18

Process Used for Participants to Provide Feedback During the Planning Stages

Response	Survey Response Percent
Meeting(s) to Solicit Feedback from Teachers and Principals	46
Teachers and Principals were Asked for Feedback, But Not During a Planned Meeting	14
Multiple Communication Types to Solicit Feedback from Teachers and Principals	37
No Effort was Made to Solicit Feedback from Teachers and Principals	3

Most often, participants responded that they attended a meeting or meetings to learn about the school construction project. The actual perception of the meetings varied among participants. One participant responded;

Meetings were held with some basic options discussed and available. Mostly teacher input in the actual planning was minimal. Instead we were presented plans others had made and asked to endorse them, with tiny changes only perhaps. Very little of the changes we asked for were given consideration or implemented. Yet, another example of a fig-leaf covering to say we were "consulted" and "involved." Truth was we were told after the fact most of the time. Only real choices we had were fixtures and fittings and even then that was very limited. (R21).

Similarly, another participant responded;

The entire faculty was included in few meetings; a group of faculty was invited to participate in other meetings. Our general feeling was that a design was already in place as the creative suggestions we offered were ignored. It is common in our school division to schedule meetings to give stakeholders an illusion their input matters. (R31).

One participant had a more positive experience in the meetings prior to construction, but mentions that input was solicited for minor decisions; "Several meetings took place to inform us about the planning stages; we also had meetings to gather our input on some minor decisions

about the layout of classes." (R17). While the voices of teachers and principals might have been heard, the perception evident in the responses indicated that their voices were not listened to.

Additionally, some participants responded that they were asked for feedback during the planning stages, but not necessarily during a formal meeting. One participant simply responded; "Surveys" (R11). Others commented that their input was gathered when it was time to order the furnishings of the classroom. "We were asked to submit ideas about what kinds of desks and chairs we wanted in our classroom. I don't think anybody got what they requested, but I am satisfied with what I have." (R7). Similarly, one participant stated; "As teachers, we were allowed to provide input into the design and furniture selection of science labs and science classrooms. This was extremely helpful to us as science teachers." (R8). Additionally, one participant mentioned that principals solicited feedback from teachers and then shared the information gathered with the Central Office. "Principals asked teachers to provide ideas during the planning stages, and principals took those ideas, as well as their own, to the Central Office." (R18)

Thirty-seven percent (37%) of the participants indicated that multiple forms of communication were used to gather feedback from teachers and principals during the planning stages prior to construction. One participant stated;

> The school district put together a Planning Committee that was made up of different stakeholders (teachers, staff, admin, parents, etc.). Along the way plans were shown to each grade level team. Those teams provided feedback, questions or concerns to the planning committee. The committee got answers to questions and proposed changes. If possible the changes were made to the plans. (R6).

Additionally, participant (R15) stated;

> Several years prior to construction the school system had a series of meetings one night a month over several months to do vision planning with members of the school system and community. After renovations & expansions were approved there were other meetings teacher were invited to attend. Emails were sent to request teacher input on items like color, tiles, and carpet.

The data suggest that some school divisions have a formalized process to include all stakeholders in decision making regarding the school construction process, while some school divisions lack a

process that allows for open lines of communication as participant (R10) stated; "None was asked of us."

Research question c. What was the level of satisfaction teachers and principals had with the product at the completion of the public/private partnership process? The responses to item 19 yielded qualitative data related to the study sub-question c. What was the level of satisfaction teachers and principals had with the product at the completion of the public/private partnership process? Participants employed in the school division during the planning stages prior to construction were asked, "As a participant in the planning meetings your school division held, do you feel your voice was heard and ultimately communicated in the documents your school division submitted to the architect? Why or why not?" The following matrix in Table 19 illustrates the responses organized by the categories. "R" refers to the respondent number given by the researcher.

Table 19

Matrix of Responses to Survey Question 19 by Category

Category	Responses
Yes, Teachers and Principals Were Heard During the Planning Stages and Their Voice Was Communicated in the Documents Submitted to the Architect	• "Yes, I had a chance to say what I did and did not want in the addition and in the gym." (R3) • "Yes - architects make good decisions for what they believe a building should look/function like. As a teacher I was able to share how/why thing might need to look different to function best as a classroom/school building." (R6) • "I know for a fact that our voice (as science teachers) was heard and communicated directly to the architects. Our layout of science classrooms and labs were followed according to our specifications." (R8) • "Yes, I do feel my voice, as well as the voice of faculty, staff, and parents were heard and were valued." (R33) • "Yes, many of the ideas I had were reflected in the plans and ultimately the final building." (R11) • "Yes. The new school has, for the most part, what we as teachers wanted." (R12) • "I feel like our voice was heard at the ASAC meeting and communicated to the architect." (R13) • "Yes - because I work in the office I helped design." (R16) • "Yes. Everything was open and transparent. Team did well in meeting the needs based on our budget." (R19)

(table continued)

Table 19 *(continued)*

Category	Responses
Yes, Teachers and Principals Were Heard During the Planning Stages and Their Voice Was Communicated in the Documents Submitted to the Architect *(continued)*	• "Yes. Our facilities for the needs in our area were met and supported based on our input and the facilities in our prior high school." (R22) • "Yes, but I chose to not be very active, as both my needs and my spatial talents are minimal and I had hoped to retire before the building was ready for occupancy (alas, did not happen)." (R25) • "Yes, we were able to get the extra white boards we requested and the space is designed to meet our needs." (R26) • "Yes. CTE rooms were designed as we requested." (R27) • "Yes - the features I asked to have included in the Theatre are present." (R32)
Partially, Teachers and Principals Were Heard During the Planning Stages and Their Voice Was Partially Communicated in the Documents Submitted to the Architect	• "Yes, at times it was heard." (R1) • "Yes, except for the chairs we chose and space for storage. We were told the teacher pods would be big enough for storage as these would be our base. However, there is no real storage for belongings in the pods." (R14) • "Yes. The arrangement/location of rooms was teacher driven but the placement/amount of built in furniture was not discussed with teachers (provided less flexibility for room arrangement). There was good integration of technology into all the room, though requests about the placement/location were not considered. Good storage areas were provided outside of the classrooms." (R15) • "Yes, somewhat." (R18) • "Yes communicated and submitted, however changes to the plans were made without teacher input." (R20) • "The ed spec document did contain many of the requests that were made. However, some were left off. No justification was given as to why some reasonable things were left off." (R23) • "Yes. Classroom equipped as requested- just would have liked larger room. Again, money limitations." (R34) • "In one case it was, but in most cases our ideas were not implemented." (R30)

(table continued)

Table 19 *(continued)*

Category	Responses
No, Teachers and Principals Were Not Heard During the Planning Stages and Their Voice Was Not Communicated in the Documents Submitted to the Architect	• "I feel that although my opinion may have been communicated, it was not valued. It is my opinion that most decisions were related to budgetary issues." (R2) • "No. Finances." (R4) • "I feel my voice was listened to but I'm not for sure how much it was considered." (R5) • "Not really." (R7) • "I feel like the school system already knew what they wanted. Therefore, it probably did not matter what input we gave." (R9) • "Probably not, the company had built several schools and most teachers are only concern about the minor details." (R17) • "No. Because of time constraints and costs." (R21) • "I was the teacher rep on the building committee and I felt that I was there primarily to create the appearance of teacher input. When I brought something up that they were not committed to doing (i.e., making science labs with the minimum square footage recommended in VA and NSTA guidelines), they would politely tell me they could not do everything according to teachers' preferences." (R24) • "We had direct communication with the architects. They didn't have to relay anything to them, we spoke directly to them. To answer the question though, the architects ignored most of my requests and dismissed them. I was told that they had built many of these schools and they never had any problems with how they built certain things. I remember asking, "How many of these people did you go back to and ask after it was finished whether it met their needs?" They just stared at me.." (R28) • "Notes were taken during the meetings but I have no idea what was actually sent to the architect. I do not have an architect's vision, but now that I have been working in the building I could give better and more specific recommendations. (R29) • "Absolutely not. The design of the building did not incorporate any of the innovative suggestions from faculty." (R31)

The following matrix in Table 20 illustrates the percentage of responses by category.

Table 20

Participant Voice Communicated in Educational Specification Documents Submitted to the Architect

Response	Survey Response Percent
Yes, Teachers and Principals Voice was Communicated in the Educational Specification Documents Submitted to the Architect	42.5
Partially, Teachers and Principals Voice was Communicated in the Educational Specification Documents Submitted to the Architect	24.2
No, Teachers and Principals Voice was Communicated in the Educational Specification Documents Submitted to the Architect	33.3

The majority of the participants felt their voice was communicated in the documents submitted to the architects. Participant (R) stated; "Yes - architects make good decisions for what they believe a building should look/function like. As a teacher I was able to share how/why thing might need to look different to function best as a classroom/school building." (R6). Similarly, one participant commented; "I know for a fact that our voice (as science teachers) was heard and communicated directly to the architects. Our layout of science classrooms and labs were followed according to our specifications." (R8). Additionally, participant (R) stated; "Yes, I do feel my voice, as well as the voice of faculty, staff, and parents were heard and were valued." (R33)

While the majority of participants felt their voices was communicated in the documents submitted to the architects, when the participants who either partially felt their voice was communicated in the documents submitted to the architect is combined with participants that they felt their voice was not communicated at all to the architect the total is over 57%. The process was not as seamless for a significant portion of the participants in this study. As participant (R24) stated;

> I was the teacher rep on the building committee and I felt that I was there primarily to create the appearance of teacher input. When I brought something up that they were not committed to doing (i.e., making science labs with the minimum square footage

recommended in VA and NSTA guidelines), they would politely tell me they could not do everything according to teachers' preferences.

Another participant stated;

We had direct communication with the architects. They {We} didn't have to relay anything to them, we spoke directly to them. To answer the question though, the architects ignored most of my requests and dismissed them. I was told that they had built many of these schools and they never had any problems with how they built certain things. I remember asking, "How many of these people did you go back to and ask after it was finished whether it met their needs?" They just stared at me..." (R28).

Similarly; "Notes were taken during the meetings but I have no idea what was actually sent to the architect. I do not have an architect's vision, but now that I have been working in the building I could give better and more specific recommendations. (R29). Finally, one participant shared; "Absolutely not. The design of the building did not incorporate any of the innovative suggestions from faculty." (R31).

The responses to items 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, and 30 yielded quantitative data related to the study sub-question c. What was the level of satisfaction teachers and principals had with the product at the completion of the public/private partnership process? A five point Likert-type scale was used to gain quantitative data for the research study for these questions. All teachers and principals who agreed to participate in this public/private partnership research study (N= 131) were asked to record their feedback about their completed school facility using a scale which ranged from 1 which indicated the participant "strongly disagrees" to 5 which indicated the participant "strongly agrees." When asked if the school facility reflected the needs of teachers and principals the mean score was 3.90 and the mode value was 4. The frequencies of each response for this survey item were: one participant chose 1 or strongly disagree, nine participants chose 2 or disagree, 32 participants chose 3 or neutral, 47 participants chose 4 or agree, and 40 participants chose 5 or strongly agree. Two participants chose "not applicable" for the question. When asked if the classroom spaces were educationally adequate for teaching and learning to take place the mean score was 3.96 and the mode value was 4. The frequencies of each response for this survey item were: two participants chose 1 or strongly disagree, 10 participants chose 2 or disagree, 24 participants chose 3 or neutral, 48 participants

chose 4 or agree, and 45 participants chose 5 or strongly agree. Two participants chose not applicable for this survey item. When asked if the school facility has specialized facilities that were adequate for the grade level the school serves the mean score was 3.74 and the mode value was 4. The frequencies of each response for this survey item were: one participants chose 1 or strongly disagree, 14 participants chose 2 or disagree, 37 participants chose 3 or neutral, 43 participants chose 4 or agree, and 33 participants chose 5 or strongly agree. Three participants chose not applicable for this survey item. When asked if the school facility reflected the input of teachers and principals during the planning stages the mean score was 3.70 and the mode value was 3. The frequencies of each response for this survey item were: 11 participants chose 1 or strongly disagree, 13 participant chose 2 or disagree, 39 participants chose 3 or neutral, 26 participants chose 4 or agree, and 21 participants chose 5 or strongly agree. Twenty-one participants chose not applicable for this survey item. When asked if teachers and principals were satisfied with the school facility the mean score was 3.82 and the mode value was 4. The frequencies of each response for this survey item were: one participant chose 1 or strongly disagree, 13 participants chose 2 or disagree, 31 participants chose 3 or neutral, 49 participants chose 4 or agree, and 33 participants chose 5 or strongly agree. Four participants chose not applicable for this survey item. When asked if the school facility was completed on time the mean score was 4.31 and the mode value was 5. The frequencies of each response for this survey item were: four participants chose 1 or strongly disagree, 15 participants chose 2 or disagree, 18 participants chose 3 or neutral, 21 participants chose 4 or agree, and 42 participants chose 5 or strongly agree. Thirty-one participants chose not applicable for this survey item. When asked if the school was completed on budget the mean score was 4.77 and the mode value was not applicable. The frequencies of each response for this survey item were: one participant chose 1 or strongly disagree, six participants chose 2 or disagree, 19 participants chose 3 or neutral, 20 participants chose 4 or agree, and 33 participants chose 5 or strongly agree. Fifty-two participants chose not applicable for this survey item. When asked if the school facility serves the stakeholders of the school adequately the mean score was 4.05 and the mode value was 4. The frequencies of each response for this survey item were: four participants chose 1 or strongly disagree, eight participants chose 2 or disagree, 27 participants chose 3 or neutral, 41 participants chose 4 or agree, and 36 participants chose 5 or strongly agree. Fifteen participants chose not applicable for this survey item. When asked if classroom spaces were sized

appropriately for the grade levels served the mean score was 3.74 and the mode value was 4. The frequencies of each response for this survey item were: four participants chose 1 or strongly disagree, 12 participants chose 2 or disagree, 34 participants chose 3 or neutral, 45 participants chose 4 or agree, and 32 participants chose 5 or strongly agree. Four participants chose not applicable for this survey item. When asked if the administrative areas, library, gym, cafeteria, teacher workroom, and conference room areas were adequate for the grade levels served the mean score was 3.73 and the bimodal value was 4 and 5. The frequencies of each response for this survey item were: three participants chose 1 or strongly disagree, 20 participants chose 2 or disagree, 28 participants chose 3 or neutral, 38 participants chose 4 or agree, and 38 participants chose 5 or strongly agree. Four participants chose not applicable for this survey item. When asked if the school facility is an asset to the community the mean score was 4.31 and the mode 5. The frequencies of each response for this survey item were: one participant chose 1 or strongly disagree, four participants chose 2 or disagree, 19 participants chose 3 or neutral, 40 participants chose 4 or agree, and 60 participants chose 5 or strongly agree. Seven participants chose not applicable for this survey item. Refer to Figure 10 for a graphical representation of the data above.
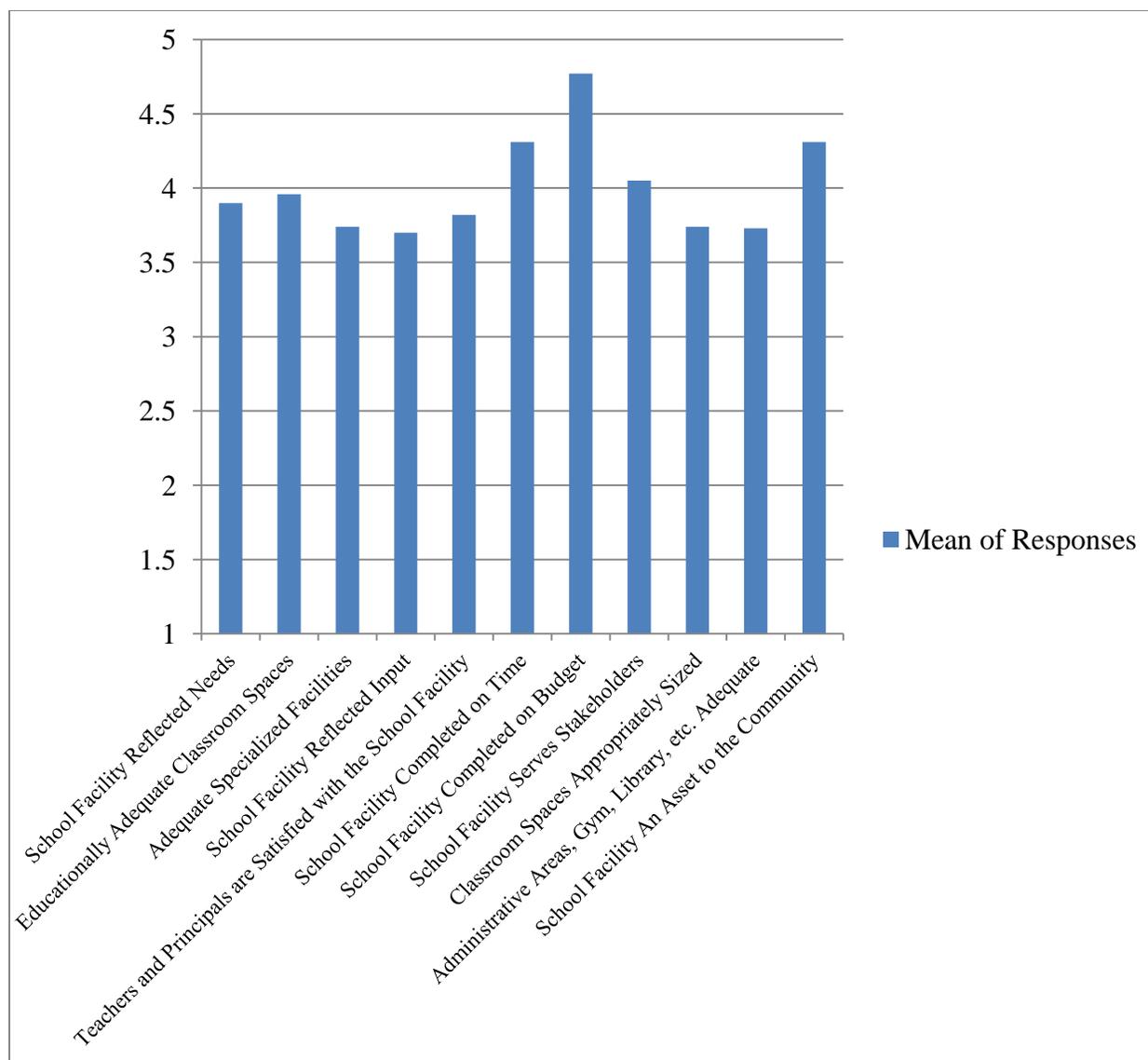
Figure 10. Level of satisfaction in the completed school facility.

When asked if school facility reflected the needs of teachers and principals nearly one-third (31%) indicated that they strongly agreed that the school facility reflected the needs of teachers and principals. Nearly one-third (36%) of the participants agreed that the school facility reflected the needs of teachers and principals. Nearly one-quarter (24%) neither agreed nor disagreed that the school facility reflected the needs of teachers and principals. Seven percent (7%) disagreed and less than one percent (1%) strongly disagreed that the school facility reflected the needs of teachers and principals. One percent (1%) of participants chose not applicable for this question. Refer to Table 21 for the percent from participants.

Table 21

Participants Who Indicated that School Facility Reflected Their Needs

Response	Percent
Strongly agree	31
Agree	36
Neutral	24
Disagree	7
Strongly disagree	<1
Not applicable	1

When asked if the classroom spaces were educationally adequate for teaching and learning over one-third (34%) indicated that they strongly agreed that the classroom spaces were educationally adequate for teaching and learning. Thirty-seven (37%) of the participants agreed that the classroom spaces were educationally adequate for teaching and learning. Eighteen percent (18%) neither agreed nor disagreed that the classroom spaces were educationally adequate for teaching and learning. Eight percent (8%) disagreed and one percent (1%) strongly disagreed that the classroom spaces were educationally adequate for teaching and learning. Two percent (2%) of participants chose not applicable for this question. The vast majority of the participants (71%) either strongly agreed or agreed that the classroom spaces were educationally adequate. Refer to Table 22 for the percent from participants.

Table 22

Participants Who Indicated that the Classroom Spaces were Educationally Adequate

Response	Percent
Strongly agree	34
Agree	37
Neutral	18
Disagree	8
Strongly disagree	1
Not applicable	2

When asked if the school facility had specialized facilities that were adequate for the grade levels served one-quarter (25%) indicated that they strongly agreed that the school facility had specialized facilities that were adequate for the grade levels served. One-third (33%) of the participants agreed that the school facility had specialized facilities that were adequate for the grade levels served. Over one-quarter (28%) neither agreed nor disagreed that the school facility

had specialized facilities that were adequate for the grade levels served. Eleven percent (11%) disagreed and less than one percent (1%) strongly disagreed that the school facility had specialized facilities that were adequate for the grade levels served. Two percent (2%) of participants chose not applicable for this question. Refer to Table 23 for the percent from participants.

Table 23

Participants Who Indicated that the School Facility had Educationally Adequate Specialized Facilities

Response	Percent
Strongly agree	25
Agree	33
Neutral	28
Disagree	11
Strongly disagree	<1
Not applicable	2

When asked if the school facility reflected the input of teachers and principals during the planning stages sixteen percent (16%) indicated strong agreement that the school facility reflected the input of teachers and principals during the planning stages. One-fifth (20%) of the participants agreed that the school facility reflected the input of teachers and principals during the planning stages. Nearly one-third (30%) neither agreed nor disagreed that the school facility reflected the input of teachers and principals during the planning stages. Ten percent (10%) disagreed and eight percent (8%) strongly disagreed that the school facility reflected the input of teachers and principals during the planning stages. Sixteen percent (16%) of participants chose not applicable for this question. Only thirty-six percent (36%) of the participants responded with strongly agree or agree when asked about how the completed school facility reflected the input of teachers and principals during the planning stages. Nearly one-third (30%) neither agreed nor disagreed, which indicated some type of disconnect between their understanding from the planning meetings into the translation of the completed facility. Eighteen percent (18%) of participants disagreed or strongly disagreed that the school facility reflected the input of teachers and principals during the planning stages. The responses suggested that teachers and principals were surprised when they moved into a school facility they thought they had helped to design. Refer to Table 24 for the percent from participants.

Table 24

Participants Who Indicated that the School Facility Reflected the Input of Teachers and

Principals During the Planning Stages

Response	Percent
Strongly agree	16
Agree	20
Neutral	30
Disagree	10
Strongly disagree	8
Not applicable	16

When asked if they were satisfied with the school facility one-quarter (25%) indicated strong agreement that they were satisfied with the school facility. Thirty-seven percent (37%) of the participants agreed that they were satisfied with the school facility. Nearly one-quarter (24%) neither agreed nor disagreed that they were satisfied with the school facility. Ten percent (10%) disagreed and less than one percent (1%) strongly disagreed that they were satisfied with the school facility. Three percent (3%) of participants chose not applicable for this question. The majority of participants (62%) endorsed the notion that they were satisfied with their school facility, while thirty-five percent (35%) of participants did not endorse completely the notion of satisfaction with their school facility. Refer to Table 25 for the percent from participants.

Table 25

Participants Who Indicated They Were Satisfied with the School Facility

Response	Percent
Strongly agree	25
Agree	37
Neutral	24
Disagree	10
Strongly disagree	<1
Not applicable	3

When asked if the school facility was completed on time nearly one-third (32%) indicated strong agreement that the school facility was completed on time. Sixteen percent (16%) of the participants agreed that the school facility was completed on time. Fourteen percent (14%) neither agreed nor disagreed that the school facility was completed on time. Eleven percent (11%) disagreed and three percent (3%) strongly disagreed that the school facility

was completed on time. Twenty-four percent (24%) of participants chose not applicable for this question. Forty-eight percent (48%) responded positively when asked about the timeline for the school construction project. A little over one-quarter (28%) could not endorse completely the notion that the school facility was completed on time. Also, nearly one-quarter (24%) responded not applicable for this question. Most likely the reason the participants responded with not applicable was because they were not employed by the school division when the school construction project was completed. Refer to Table 26 for the percent from participants.

Table 26

Participants Who Indicated that the School Facility was Completed on Time

Response	Percent
Strongly agree	32
Agree	16
Neutral	14
Disagree	11
Strongly disagree	3
Not applicable	24

When asked if the school facility was completed on budget one-quarter (25%) indicated strong agreement that the school facility was completed on budget. Fifteen percent (15%) of the participants agreed that the school facility was completed on budget. Fifteen percent (15%) neither agreed nor disagreed that the school facility was completed on budget. Five percent (5%) disagreed and less than one percent (1%) strongly disagreed that the school facility was completed on budget. Forty percent (40%) of participants chose not applicable for this question. Refer to Table 27 for the percent from participants

Table 27

Participants Who Indicated that the School Facility was Completed on Budget

Response	Percent
Strongly agree	25
Agree	15
Neutral	15
Disagree	5
Strongly disagree	<1
Not applicable	40

When asked if the school facility serves the stakeholders of the school adequately over one-quarter (27%) indicated strong agreement that the school facility serves the stakeholders of the school adequately. Nearly one-third (31%) of the participants agreed that the school facility serves the stakeholders of the school adequately. Over one-fifth (21%) neither agreed nor disagreed that the school facility serves the stakeholders of the school adequately. Six percent (6%) disagreed and three percent (3%) strongly disagreed that the school facility serves the stakeholders of the school adequately. Twelve percent (12%) of participants chose not applicable for this question. When asked about the adequacy of the school facility, the majority of participants (58%) responded positively. At the same time, the term adequate describes a school facility that meets minimum standards and is acceptable. As detailed previously, there were participants who did not feel they had an opportunity to express ideas during planning meetings or that their ideas were valued and translated into the educational specification documents submitted to the architect. Refer to Table 28 for the percent from participants.

Table 28

Participants Who Indicated that the School Facility Serves the Stakeholders of the School Adequately

Response	Percent
Strongly agree	27
Agree	31
Neutral	21
Disagree	6
Strongly disagree	3
Not applicable	12

When asked if the classroom spaces were sized appropriately for the grade level served one-quarter (25%) indicated strong agreement that the classroom spaces were sized appropriately for the grade level served. Over one-third (34%) of the participants agreed that the classroom spaces were sized appropriately for the grade level served. Over one-quarter (26%) neither agreed nor disagreed that the school facility serves the stakeholders of the school adequately. Nine percent (9%) disagreed and three percent (3%) strongly disagreed that the classroom spaces were sized appropriately for the grade level served. Three percent (3%) of participants chose not applicable for this question. Refer to Table 29 for the percent from participants.

Table 29

Participants Who Indicated the Classroom Spaces were Sized Appropriately

Response	Percent
Strongly agree	25
Agree	34
Neutral	26
Disagree	9
Strongly disagree	3
Not applicable	3

When asked if the administrative areas, library, gym, teacher workroom, and conference room areas were adequate for the grade level served twenty-nine percent (29%) indicated strong agreement that the administrative areas, library, gym, teacher workroom, and conference room areas were adequate for the grade level served. Twenty-nine percent (29%) of the participants agreed that the administrative areas, library, gym, teacher workroom, and conference room areas were adequate for the grade level served. Over one-fifth (21%) neither agreed nor disagreed that the administrative areas, library, gym, teacher workroom, and conference room areas were adequate for the grade level served. Fifteen percent (15%) disagreed and three percent (3%) strongly disagreed that the administrative areas, library, gym, teacher workroom, and conference room areas were adequate for the grade level served. Three percent (3%) of participants chose

Table 30

Participants Who Indicated that the Administrative Areas, Library, Gym, Teacher Workroom, and Conference Room Areas were Adequate for the Grade Level Served

Response	Percent
Strongly agree	29
Agree	29
Neutral	21
Disagree	15
Strongly disagree	3
Not applicable	3

When asked if the school facility is an asset to the school community almost one-half (46%) indicated strong agreement that the school facility is an asset to the school community. Nearly one-third (31%) of the participants agreed that the school facility is an asset to the school community. Fifteen percent (15%) neither agreed nor disagreed that the school facility is an

asset to the school community. Three percent (3%) disagreed and less than one percent (1%) strongly disagreed that the school facility is an asset to the school community. Five percent (5%) of participants chose not applicable for this question. Refer to Table 31 for the percent from participants.

Table 31

Participants Who Indicated the School Facility is an Asset to the School Community

Response	Percent
Strongly agree	46
Agree	31
Neutral	15
Disagree	3
Strongly disagree	<1
Not applicable	5

The responses to item 31 yielded qualitative data related to the study sub-question c. What was the level of satisfaction teachers and principals had with the product at the completion of the public/private partnership process? Participants employed in a school constructed under the provisions of a public/private partnership were asked, "What features about your school facility are helpful to you as you complete your duties as a teacher or principal?" The following matrix in Table 32 illustrates the responses organized by categories. "R" refers to the respondent number given by the researcher.

Table 32

Matrix of Responses to Survey Question 31 by Category

Category	Responses
Classroom Size and Design	• "The new classrooms, in the bottom wing, are large and are appropriate for the fifth grade students to engage within inquiry lessons." (R40) • "Adequate sized classrooms…" (R41) • "Large Classroom..." (R43) • "The classroom is clean, spacious, and appropriate for Pre-K children." (R47) • "Our classrooms are bright and very conducive to learning." (R48) • "Much needed classroom space." (R54)

Table 32 *(continued)*

Category	Responses
Classroom Size and Design *(continued)*	• "A room to house students while teaching." (R10) • "The new classrooms." (R11) • "Modernized classrooms with technology upgrades." (R59) • "I like the size of my classroom." (R63) • "The sizes of the rooms are larger than the other rooms and it helps classroom management as students are not clustered too closely." (R66) • "Spacious classrooms..." (R18) • "Adequate classroom space..." (R73) • "The rooms are nice and big enough for our needs." (R75) • "Classroom size is appropriate." (R19) • "Teachers have their own classrooms and do not have to share classrooms. In the previous building, there were not enough academic classrooms, so teachers had to swap out during planning periods." (R82) • "The rooms are large enough for the number of students." (R86) • "Nice size classrooms…" (R89) • "The classroom is nice. I agree that the size of the building is adequate - if not in excess and does allow for growth of the student population." (R94) • "Classrooms are large…" (R98) • "My room is adequately sized and the facilities that I am involved are appropriate for what I use them for. We have some very nice facilities." (R28) • "The rooms are big enough…" (R30) • "My room is of sufficient size, although I don't feel all classrooms are large enough to accommodate class sizes." (R109) • "Being able to move the tables for grouping." (R38) • "Everything is now adequate in terms of space, ease of access, and ability to accommodate all students regardless of disability." (R42) • "More space makes it easier to accommodate students." (R67) • "The building includes space to provide independent living skills instruction to our students who require such instruction. The facilities provide appropriate instructional space…" (R106)
Specialized Facilities	• "We have an additional computer lab in the new addition." (R35) • "The school science labs are separate from the regular classrooms. These labs are shared between two science teachers." (R2) • "Music rooms, library, PC lab, and art room." (R36)

Table 32 *(continued)*

Category	Responses
Specialized Facilities *(continued)*	• "I have taught as the art teacher at my school for 10 years. Our school did not have an elementary art program before that time. I had a regular classroom with no cabinets etc. when I started teaching, and the space was limited. I bought plastic shelves and used a book rail to stack supplies. Five mobile units housed SPED, Gate, the Reading Specialist, Music, and ESL. When space became limited I moved to a mobile unit with the Music teacher. Later we both moved to the stage and I went to a cart. When the decision was made to add on to the school I was excited needless to say. I currently have an "art" room with great cabinets and a sink. The room is rectangular and has one window. It looks like all the other rooms in the building however. The room is not big enough for an art room, but it is a room." (R37) • "The addition and the new gym and library have enhanced the morale of the staff, students, and staff because they are modern and clean. The library is larger and allows for more research and storage." (R3) • "…large auditorium and gymnasium." (R41) • "Larger cafeteria…" (R4) • "The new library is much more inviting for the students. The new gym is also very nice to have for the students to have an indoor place to exercise." (R45) • "I am not a homeroom teacher so I did not have a classroom prior to the addition. I am in my own classroom now which is a huge improvement to being an itinerant teacher who had to carry all her supplies on a rolling cart to work with students." (R46) • "We have a fabulous new library to use when doing research and compiling materials for a unit." (R48) • "The spaces that are most used in my duties (other than my classroom) are the mail room that is separate from the main office, copy room that is separate from the main office and the team room on our grade level floor. Each team uses their individual team room the most after their individual classrooms." (R6) • "Nice and spacious library, music and art room…" (R50) • "The separation of the community areas of the school from the academic areas of the school is a very important aspect of the design. The ability to keep the two separate is great. During public activities (ballgames) the separation keeps our classrooms from having uninvited visitors. The cafeteria is located at one end of the building away from any classrooms. An excellent design." (R8)

(table continued)

Table 32 *(continued)*

Category	Responses
Specialized Facilities *(continued)*	• "I am a guidance counselor and the facility was designed in a more useful layout to serve the needs of the process and there are several things that we would have done differently if we had been involved in the design layout. Our work space was not laid out in a format that served our needs the best although what we now have is better than the 60 year old building that we were in before." (R51) • "The multi-use cafetorium, the gym, the athletic fields in close proximity to the school." (R52) • "The cafetorium is helpful because it serves multiple functions. The negative is that it is a cafetorium." (R55) • "…the building has a wonderfully stocked library and a gym to support competitive sports" (R56) • "New classrooms for music, art, and media." (R57) • "Large office space with conference room. Large spaces for teacher workroom areas." (R59) • "The proximity of the classrooms for both the grade and department." (R60) • "The new library now uses Destiny for locating books. The workroom now has adequate room and work space." (R61) • "The new library, music and art rooms are the most helpful to me as a teacher. We are able to utilize the old library as a book room/work area. Art now has a permanent classroom." (R64) • "Library, computer lab…" (R70) • "Separate biology lab…" (R73) • "The new library is spacious and inviting." (R74) • "Amazing resources in the building." (R79) • "The Auditorium is a great space for both the school and community." (R19) • "Science classrooms appropriately equipped." (R20) • "Science teachers had input into the design of their facilities such as lab space and class space, all other academic areas had little or no input. As a science teacher, I am pleased with the facility, which meets my needs for my teaching style of labs and student active learning with notes to support their understanding. Some things were left out such as garbage disposals etc., to cut cost." (R83) • "Being a career and technical teacher, my room and lab are ideal for my needs." (R84)

Table 32 *(continued)*

Category	Responses
Specialized Facilities *(continued)*	• "For the first time since I started working in this school district (2000), I do not have someone teaching in my room during every planning period, so I can set up labs etc. more efficiently." (R24) • "Library and book rooms." (R87) • "Science labs…" (R92) • "Multiple spaces for physical education opportunities." (R102)
Safety and Security Enhancements	• "Safety features with security system and cameras." (R1) • "…easier access road for buses…" (R4) • "Parking is adequate which was not the case before moving to this building. Less administrative time is spent of parking issues." (R29)
Storage	• …plenty of storage space." (R43) • "More space and storage than previous space." (R44) • "We have amble cabinet storage space." (R9) • "The rooms have good storage. The other rooms in our facility have virtually no place to store supplies." (R66) • "Storage…" (R15) • …storage." (R70) • "Rooms have adequate built-in storage areas." (R77) • "Storage is appropriate. " (R19) • "There is adequate space for storage…" (R30) • "…adequate storage." (R110)
More Bathroom Facilities	• "…more bathrooms." (R36) • "Student bathrooms in rooms." (R39) • "Additional bathrooms." (R50) • "…the addition of another set of restrooms for students." (R11) • "…multiple bathrooms for staff use…" (R16)
Design of Hallways/Open Spaces/Location of Rooms	• … wide hallways…" (R41) • "The grade levels are contained in different wings of the building in pods, so 6th graders do not cross paths between every class with 8th graders. 8th graders have their floor and pod." (R56) • "Open spaces with high ceilings in the cafeteria area." (R59) • "Good visibility of 90% of student areas." (R59) • "We have multiple staircases and routes to access in our building." (R63) • "The location of the resource rooms such as library, music and art are in close proximity of the classroom. Bathrooms are close by so that students can go out use the facility and return without disruption to class instruction." (R65)

Table 32 *(continued)*

Category	Responses
Design of Hallways/Open Spaces/Location of Rooms *(continued)*	"…special education classrooms located in the same cluster as gen ed classrooms and connected to one classroom." (R15) "Student and teacher bathrooms nearby." (R15) "Useful in team teaching." (R71) "It is great to have all students within the building as we used to have many classes that were held in mobile units prior to the construction." (R68) "Open space." (R16) "The layout is great, our previous school was built in 1952, so just the fact that it is a new school and up to date is awesome." (R17) "We now have the space for meetings and conferences." (R72) "Teacher work areas, copiers, fax machines, etc..." (R73) "The office is in a central location for all to access." (R76) "Grade levels can now be in proximity of each other." (R77) "Classes are close together to save on transition times." (R77) "No mobile units are used." (R77) "I like having a computer lab accessible down the hall from my classroom. The academic wings are next to each other so you don't have to take a snack lunch to go visit a colleague." (R78) "All students are now housed under one roof. Grade levels and art classes can be grouped together. There is plenty of room for teachers and parents to conference." (R80) "There is plenty of room for teachers and parents to conference." (R "The school has a capacity of 1400 students. It is divided into wings and floors according to academic subject, which makes it easy to navigate, despite being rather large." (R82) "Conference rooms, Career Center, space for intern." (R21) "Teacher workroom…" (R88) "Different blocks of school are used for different grade levels." (R90) "I like that my whole department is centered in the same area and that we now have a copier that is easier to access." (R91) "Common office for department allows for more collaboration." (R26) "The layout of the school lends itself well to the flow of students; is used by community members for various extra-curricular activities." (R95) "Office room for each department equipped with copy machine, storage, etc." (R96) "Each department has its own workroom with desk space for teachers/aides, staff restroom, photocopier, and storage." (R97) "Easy to navigate with wide hallways and easy layout." (R98)

Table 32 *(continued)*

Category	Responses
Design of Hallways/Open Spaces/Location of Rooms *(continued)*	• "One level. Easy to navigate." (R27) • "Collaborative spaces for teacher and students…" (R100) • "Counseling office is a huge improvement from previous school." (R101) • "Each department has a book/workroom close to the department classrooms." (R103) • "Open cafeteria…" (R104) • "There is one area, the gym, where the entire school can fit at the same time." (R30) • "I like having a teacher's pod in each wing of the school. That gives each subject area a space to work and use the copier and not have all teachers surrounding and waiting for the same machine." (R107) • "Accessibility: The layout of the school allows me to quickly get to one place to the next." (R108) • "Work rooms for each department…" (R109) • "Outdoor learning spaces available." (R109) • "Because the school is designed as one floor unit with no stairwells, moving around the school is much easier navigation for students and staff." (R110) • "…many doors." (R104)
Technology Enhancements	• …better technology for teachers." (R4) • "Classroom technology." (R5) • "Access to the internet." (R49) • "The new touch screen TVs avoid the need for projectors." (R7) • "Each of the departments of the school was given a designated computer lab, except for the science department. Because we did not get a lab, we have used our departmental monies to purchase laptops and charging carts." (R7) • "Technology in all of the classrooms…" (R50) • "The availability of numerous technology devices is also a positive attribute." (R52) • "The classrooms are equipped with SMART televisions. Therefore, we are able to use a mixture of PowerPoints and video clips to engage learning. There are several computer labs and this helps with projects and diversifying learning." (R9) • "Much improved technology and supplies." (R12) • "…wireless internet." (R15) • "We are fortunate to have 3 computer labs in the building when it was built." (R69) • "…technology…" (R18)

(table continued)

Table 32 *(continued)*

Category	Responses
Technology Enhancements *(continued)*	• "Accessible Computer Lab." (R73) • "Technology infrastructure is in place…" (R77) "We have state of the art projectors that really help with teaching." (R81) "Decent technology." (R21) • "The building is equipped with the latest technology including Smart Boards and sound projection equipment." (R82) • "Probably the Elmo and Smartboard." (R23) • "…modern technologies such as smart board…" (R25) • "Updated technology is the most helpful feature. New/updated computers are most helpful in my job." (R85) • "The technology in the school is top notch, tablets for all students, new projectors." (R86) • "Computer labs and technology equipment…" (R88) • "Computer labs…" (R87) • "The access to updated and working technology." (R93) • "State of the art classroom! I use the technology daily in my class." (R34) • "There is adequate technology in the classroom…" (R94) • "Integration of technology within the building (built-in Smart boards and projectors in every classroom)" (R95) • "Each classroom has a SmartBoard mounted to the wall with a projector mounted to the ceiling." (R99) • "…access to technology." (R100) • "All classrooms have a SmartBoard." (R103) • "Computer labs available." (R109)
Climate Controlled Spaces	• "The controlled climate has increased my efficiency during my planning period. It has enhanced student learning by avoiding the distraction of being too hot or too cold, and the noise of the fan. We were still using projectors, and the projector would overheat on a daily basis in the warm months. The new touch screen TVs avoid the need for projectors." (R7) • "I very much appreciate the central heat/air since we did not have it in our previous school." (R18) • "Climate controlled classroom." (R73) • "Heat and cooling are quiet…" (R77) • "Windows are helpful…" (R25)

(table continued)

Table 32 *(continued)*

Category	Responses
Natural Light	• "Lots of natural light in classroom." (R58) • "…lots of windows that allow for natural lighting…" (R16) • "Most rooms have adequate natural lighting." (R77) • "Bright and clean." (R21) • "The design also utilizes lots of natural lighting." (R82) • "Good lighting…" (R25) • "…lots of natural light." (R86) • "Natural light…" (R89)
Physical Location of the School	• "The school is centrally located." (R75) • "…the grounds are spacious." (R30)
Furnishings	• "We also have up to date desks and chairs." (R81) • "…all of the school furniture is great." (R94) • "…adequate furniture to aid in the planning and teaching." (R98)
Aesthetics	• "It is a nice looking building." (R105) • "The building is bright, with bright colors…" (R86) • "The building is aesthetically pleasing…" (R95)
Building is an Asset to the Community	• "…an asset to the community." (R106)
No Positive Attributes Noted	• "To my knowledge teachers had no input in the facility construction. Using teacher input would have been helpful in design." (R53) • …the old rooms need maintenance, heating/air replacements or upgrades, windows replaced, and numerous other changes should be made." (R62) • "Our renovation was actually a new wing to house 5th grade (which was moved to our school from the middle school). I do not actually work in the new wing and have very little interaction with those who do. The new renovation, however, is already over capacity in only the 2nd year of existence, and we are using trailers for the overflow." (R13) • "Nothing about the "new" school itself. The old school afforded the same opportunities to complete my duties." (R23) • "…library is absurdly minimal, classrooms are too small, and there is too much student communal space. Bathrooms allow little privacy as male/female back each other." (R25) • "I cannot identify any." (R31)

The following matrix in Table 33 illustrates the percentage of responses by category.

Table 33

Features of the School Facility are Helpful as Participants Complete Their Duties

Response	Survey Response Percent
Classroom Size and Design	13
Specialized Facilities	19
Safety and Security Enhancements	2
Storage	6
More Bathroom Facilities	3
Design of Hallways/Open Spaces/Location of Rooms	23
Technology Enhancements	18
Climate Controlled Spaces	3
Natural Light	5
Physical Location of the School	2
Furnishings	2
Aesthetics	>1
Building is an Asset to the Community	>1
No Positive Attributes Noted	3

Most often participants commented about the design of the hallways, open spaces, and location of rooms as the features of their school facility that was most helpful as they completed their duties. One participant responded; "The location of the resource rooms such as library, music, and art are in close proximity of the classroom. Bathrooms are close by so that students can go out use the facility and return without disruption to class instruction." (R65). Similarly, participant (R78) stated; "I like having a computer lab accessible down the hall from my classroom. The academic wings are next to each other so you don't have to take a snack lunch to go visit a colleague." (R78) Also, participant (R110) commented; "Because the school is designed as one floor unit with no stairwells, moving around the school is much easier navigation for students and staff." When school facilities are designed with stakeholders in mind efficiency is increased and the ease of use of the building lends to greater productivity.

The second most common category of responses participants commented upon was specialized facilities as being helpful when completing their duties. One participant stated; "The addition and the new gym and library have enhanced the morale of the staff, students, and staff because they are modern and clean. The library is larger and allows for more research and storage." (R3). Similarly, participant (R) commented; "The new library, music and art rooms are the most helpful to me as a teacher. We are able to utilize the old library as a book room/work area. Art now has a permanent classroom." (R64). One participant noted that the science labs and class space were ideal, to the exclusion of other input from different content areas.

> Science teachers had input into the design of their facilities such as lab space and class space, all other academic areas had little or no input. As a science teacher, I am pleased with the facility, which meets my needs for my teaching style of labs and student active learning with notes to support their understanding. Some things were left out such as garbage disposals etc., to cut cost. (R83)

Finally, participant (R19) stated; "The auditorium is a great space for both the school and community." By incorporating specialized facilities into the design of the school facility, these professionals are able to more precisely meet student needs and meet professional goals.

The third most common response from participants when asked what features of the school facility helped them complete their duties they cited technology enhancements. One participant stated; "The classrooms are equipped with SMART televisions. Therefore, we are able to use a mixture of PowerPoints and video clips to engage learning. There are several computer labs and this helps with projects and diversifying learning." (R9). Additionally, participant (R34) commented; "State of the art classroom! I use the technology daily in my class." Similarly, participant (R95) stated; "Integration of technology within the building (built-in Smart boards and projectors in every classroom)". Since technology was considered when creating the design for the new school facility, the students, teachers, and principals are able to work more efficiently to accomplish tasks and seamlessly work throughout the entire school facility.

There are a variety of other school facility features teachers and principals mentioned as helpful as they complete their duties listed above. However, what is unusual is there were some teachers and principals that could not identify helpful features of their new school facility. One participant stated;

Our renovation was actually a new wing to house 5th grade (which was moved to our

school from the middle school). I do not actually work in the new wing and have very

little interaction with those who do. The new renovation, however, is already over

capacity in only the 2nd year of existence, and we are using trailers for the overflow"

(R13).

Similarly, participant (R23) stated; "Nothing about the "new" school itself. The old school

afforded the same opportunities to complete my duties." Additionally, one participant added this

comment; "…library is absurdly minimal, classrooms are too small, and there is too much

student communal space. Bathrooms allow little privacy as male/female back each other" (R25).

The responses to item 32 yielded qualitative data related to the study sub-question c.

What was the level of satisfaction teachers and principals had with the product at the completion

of the public/private partnership process? Participants employed in a school constructed under

the provisions of a public/private partnership were asked, "How could the process from planning

to school construction completion be improved for future projects?" The following matrix in

Table 34 illustrates the responses organized by categories. "R" refers to the respondent number

given by the researcher.

Table 34

Matrix of Responses to Survey Question 32 by Category

Category	Responses
More Discussions about Building Materials and the Impact on Classroom Instruction	• "When selecting the contractor research the materials they would use and how they would sound proof rooms so each room cannot hear the one right next door." (R35) • "Our addition was not adequately equipped with sound proofing between the new classrooms and now we are under construction again to implement those needed improvements." (R46) • "Be sure sound proofing of each class to avoid noise coming through the walls." (R57)

(table continued)

Table 34 *(continued)*

Category	Responses
More Discussions about Building Materials and the Impact on Classroom Instruction *(continued)*	• "If I had been present during the planning and construction of the building, I would have been an active participant in the process of creating the laboratory space for my department. The ventilation in my laboratory is inadequate. The storage in my laboratory is inadequate and is not designed for the type of wear that it will receive from the machinery and equipment that will be stored in it. In addition, the welding spaces are too small, the shop walls are hung with drywall and the floor has no rough sealant; it is smooth concrete, which can be a safety hazard. More thought should have been put into the construction of an area that, in my opinion, is not in line with OSHA regulations. I would have been a larger part of the process and would have brought these issues to light." (R94)
More Input From Stakeholders	• "More teacher input!" (R2) • "I was never consulted as to what I would need for an art room. We have another new school that was built that has a large room with window, 1 closet, many cabinets with many counters and a kiln room. I think they were mainly interested in getting rid of the mobile units. Even the new music room is too small and is not soundproof." (R37) • "I think a lot of research needs to be submitted to ensure all stakeholders have input." (R38) • "Teacher input." (R111) • "More input from the staff, parents, and community would be helpful. Staff could visit other schools to see what options are available." (R112) • "I was not present for the planning but I know of individuals who were. Teachers were not consulted as to the appropriateness of the layout of the classrooms. They are large but there are unusable areas due to layout. It is important to ask educators who are using the facility what concerns they have and how those concerns could be addressed through proper design of a classroom." (R40) • "More teacher input." (R43) • "Consult teachers and staff." (R44) • "Have all teachers input." (R45) • "Include the classroom teacher in designing her room and the other rooms in the addition." (R47) • "More community based input." (R5) • "Input from teachers on aspects such as flooring surfaces, entrance doors and parking areas could be taken more seriously." (R8)

Table 34 *(continued)*

Category	Responses
More Input From Stakeholders *(continued)*	• "Include all stakeholders in the planning process and then use the information gathered. Much of the information gathered here from our teachers was not used. Some were asked to simply say that they included teacher input for appearances sake. Wiring and access ports were not placed in a realistic location in each room. Adequate furniture was not purchased for the building's new capacity. Classrooms can hold up to 30 students but only 20 or so desks were purchased so old desks had to be brought from the old facility. Common sense did not prevail, but the dollar did." (R51) • "More teacher and stakeholder involvement in the process. In many situations, both are provided an opportunity to share their thoughts but the facilities departments overrule the recommendations with limited knowledge of what really happens within the classroom. This is especially the case for the specialized facilities needed for Career and Technical Education, Performing Arts, and Music/Band courses." (R52) • "Teacher input." (R54) • "Let the teacher's input be heard." (R10) • "Incorporate more teacher input regarding classroom spaces; Incorporate more coach/administrator input regarding dressing room/locker room areas." (R59) • "Ask the teachers what they want." (R113) • "Gather more input from all stakeholders, such as: custodial, cafeteria, teachers, admin, etc." (R60) • "I have no idea. Teachers are seldom asked questions regarding about planning construction or actual construction. This is mandated by administration and the school board." (R62) • "I do not believe enough teacher/staff input was asked for the planning of the classroom design specifically in regards to storage." (R63) • "More educator input." (R64) • "Teacher input in design of classroom and placement of cabinets, electrical sockets and number, etc." (R114) • "Involve teachers and principals more in the planning stages." (R115) • "Allow input from staff." (R67) • "Teachers need to be involved from the very beginning."(R69) • "Input from public and teachers." (R70) • "Ask the teachers what they need and what they would like to see in a facility." (R72) • "Have input from those who use it on a daily basis." (R74)

Table 34 *(continued)*

Category	Responses
More Input From Stakeholders *(continued)*	• "I would get input from the staff that actually works in the classrooms or other areas in the school to get their input." (R76) • "Teachers and other users of the space should have some voice in building design." (R77) • "I was not here during the planning/building stages of the current school, so I have no idea whether teacher input was given on the current design. If not, I would recommend teacher input." (R78) • "Allow teachers actual say in design, or at least in their hallways/classrooms. Mine is too small, lights are a disaster, glare as no shades, projector and smartboard massive misalignment (wrong lens installed/too late now)." (R21) • "More input from all teachers." (R83) • "I think it could truly be improved by taking every one's opinion into consideration and not allowing decisions to come from just those in charge." (R23) • "More teachers involved…" (R90) • "When we met with the architects, we were shown all the features of our rooms. When I noted a few things I would want differently from what they had, they basically fed me static. They said they had built many schools and that the sizes of certain rooms, certain entrances, and the lack of space for buses to come and go the way we would like for them to go would not be a factor. Well, I brought this up so they would change them because I knew they would be a factor. They did not change them and just argued about it with me that they knew best. Well, now I am here, and they were wrong and I was right. The exact things I brought up were not addressed and are not satisfactory for our needs." (R28) • "More teacher involvement." (R102) • "Getting input from the teachers that are using the facilities is the best way to make sure the finished school will meet the needs of the teachers and students using the school." (R103) • "Instead of coming with a plan, architects should actually listen to input from stakeholders and incorporate suggestions. If there is no intention of seeking input from stakeholders, don't waste people's time." (R31) • "More input from teachers. For example, my SMARTBOARD is in a horrible place for the student to utilize it. Make a mock classroom and then ask." (R98)

(table continued)

Table 34 *(continued)*

Category	Responses
More Secure Financing and/or Clarity Regarding Funding	• "I think the funds were limited and they could only do so much. It is unfortunate." (R37) • "To meet budget restraints, there were some short-comings that had to occur. For example, insulation was not installed as a cost-savings measure." (R33) • "Be truthful about budget for planning facilities. Don't promise what can't be done within budget and time line." (R58) • "I feel the biggest problem is lack of long term financial planning for school construction (i.e., building was not as good as it could/should have been because of budget. Our auditorium is already at capacity for our student body.)" (R24) • "…money ran short, and the needs were many." (R25) • "I'm not sure--I had worked in the system prior to the opening of this school. There was not strong community support for funding new school construction or improvements to existing schools. Without community support, I'm not sure that teachers' and administrators' needs can adequately be met, because there will always be resistance from the taxpayers." (R109)
Accurate Enrollment Projections	• "School is already back to using trailers as classrooms. Growth was not expected to be as high as it is." (R39) • "Plan for growth - families moved to our locality so their student could attend a new school. No on planned for this and our classrooms were over-filled the first year." (R16) • "More thought to growth in the community." (R71) • "Enrollment projections should be considered." (R77) • "Most classrooms are packed full currently (the building is only 5 years old). Slightly bigger classrooms would greatly improve current congestion." (R78) • "With the growing number of new families in the area and new construction for homes on the increase, the school district should be proactive in looking for new land to be possible space for schools." (R86) • "Better predictions about the size of the student population in 10/15 years. City has approved large housing developments and the schools are really starting to feel the impact." (R89) • "…projected growth numbers taken into account." (R90)

Table 34 *(continued)*

Category	Responses
More Communication about the Construction Process	• "Perhaps more knowledge of completion dates and plans for moving into and out of classrooms." (R42) • "Could have been more transparent in the location of the school." (R12) • "No one knew exactly who the rooms would be for or why that grade level was chosen." (R66) • "School board and central office need to be more open with staff and the public about the process." (R96)
Aesthetics	• "The only issue I would change is final approval of wall and floor colors. I am not sure we got that and there are some strange color combinations in a few areas in our school." (R6)
Timing of the Construction Process	• "Majority of the work being done during sessions when school is closed. (ex summer)." (R50) • "Schedule construction time during the time that school is not in session. The noise was detraction during class time." (R65) • "Also, it would have been nice to move into our new building in the beginning of the school year instead of over Christmas break. It was difficult for me to have had to move multiple times during the same school year." (R68) • "Timeliness." (R16) • "Do not rush the process. Completing a task quickly and on time are in conflict with quality and purpose." (R20) • "All was rushed to get in on time. I can understand why for Middle school kids/parents but corners were cut that didn't need to be. Wait 6months/1 year and do it properly." (R21) • "Also, the company was so centered on finishing on time that they did not complete the roof in a quality manner. The first week the school was open, the roof leaked during a hurricane and is still leaking horribly every time it rains." (R91)
Design Limitations	• "Just using common sense can go a long way. There is ONE teacher bathroom per floor. This is not adequate. I use the student bathroom between classes or I would never get a chance to go. The gym was built with small bleachers on one side. This will probably prevent us from hosting certain tournaments. Tournaments could bring in a lot of money for the school system and town. Other than that the school is adequate and what the students need!" (R9) • "The computer work station is built facing the corner so that a teacher must turn his/her back to the class in order to use the technology." (R97)

Table 34 *(continued)*

Category	Responses
Design Limitations *(continued)*	• "Rooms more evenly designed (not narrow and long) and rooms with windows to help with airflow/temperature control." (R104)
	• "There are not enough staff bathrooms." (R63)
	• "More and better security features that would keep us safer." (R85)
	• "The cabinets are too narrow and not deep enough. The cubbies do not hold a backpack so they are useless." (R63)
	• "I am not sure. I would say that storage is a big concern and needs to be addressed more appropriately. All classrooms should be the same size." (R14)
	• "There is almost no storage in the classrooms. There are 2 small cupboards built into the computer work station." (R97)
	• "Include a chorus room and a separate room for cafeteria." (R41)
	• "The combined cafeteria and performing stage have not worked well for the production of plays, concerts, and related performances." (R56)
	• "Planners need to consider going to and from place to place. The gym is not attached to the school building. When it rains or snows, students have to stay in the classroom for Physical Education." (R61)
	• "Our teacher pod (social studies) doubles as a computer lab. That prevents us from having an area that is student-free." (R91)
	• "Locating the office in the center of the building that would be more accessible to teachers and students alike would be more appealing." (R110)
	• "It could take into consideration the needs of special education and science work space. Regarding special education, the need for several quiet testing rooms, study areas, and tutoring space would be helpful. Regarding science classrooms, having separate teaching and lab spaces would be nice." (R105)
	• "Technology continues to be an issue. Also, with the additional classrooms, additional technologies such as enough promethean boards should have been considered when ordering materials for the new rooms." (R46)
	• "Equipment was used in our building that was already outdated for the times. Electrical equipment throughout the school was from technology that was going away and not of technology of that time or from forward thinking..." (R28)
	• "Be more green. Energy independence, rain water collection and filtration system, solar panels, maximize the ability to use the sunlight instead of electricity." (R49)
	• "Natural light is key. No room should not have windows!!" (R98)

(table continued)

Table 34 *(continued)*

Category	Responses
Design Limitations *(continued)*	• "Having the playground equipment installed at the same time as the new addition to have avoided having to wait so long for the kids to use the equipment could have been smoother." (R68)
Incomplete Renovation or Unfinished Work	• "Many parts of the old section of the building were not renovated (bathrooms, windows, flooring) and many of the sections that were updated look unfinished." (R15)
Understanding of the Unique Attributes of a School Community	• "More of an appreciation of by some central office personnel of the unique attributes of our school community." (R22)
Unknown/ No Changes Necessary or a Positive Experience	• "I think the planning was done just as it should have been." (R48) • "I thought our process went very well for our school system." (R6) • "I don't know." (R7) • "I think our building planning committee did a good job with the process they used." (R18) • "All went as well as I would have expected." (R19) • "This project was completed on budget and in an unusually short time period, even for a PPEA project. I don't think it could be improved." (R82) • "The process worked fine..." (R25) • "It was well organized." (R34) • "It went very smooth." (R27) • "Wasn't really involved the first time." (R101) • "Don't see many places it could be improved." (R30)
Neutral Responses	• "It's hard to please everyone." (R36) • "It's good to get input but including to many opinions drags the process down." (R17) • "I'm not sure." (R80) • "I wasn't here when it was constructed, so I am not familiar with the process that took place." (R116) • "I was not here during the initial planning phase, so I am not familiar with the process." (R88) • "I am not familiar enough with the current process." (R108)

The following matrix in Table 35 illustrates the percentage of responses by category.

Table 35

Participants Identified How the Process from Planning to Completion Could Be Improved

Response	Survey Response Percent
More Discussions about Building Materials and Impact on Classroom Instruction	4
More Input from Stakeholders	38
More Secure Financing and/or Clarity Regarding Funding	6
Accurate Enrollment Projections	7
More Communication About the Construction Process	4
Aesthetics	<1
Timing of the Construction Process	6
Design Limitations	18
Incomplete Renovation or Unfinished Work	<1
Understanding of the Unique Attributes of a School Community	<1
Unknown/No changes or a Positive Experience	10
Neutral Responses	5

The top two response categories were more input from stakeholders (38%) and design limitations (18%). As participant (R37) stated;

I was never consulted as to what I would need for an art room. We have another new school that was built that has a large room with window, 1 closet, many cabinets with many counters and a kiln room. I think they were mainly interested in getting rid of the mobile units. Even the new music room is too small and is not soundproof.

Additionally, participant (R51) commented;

Include all stakeholders in the planning process and then use the information gathered. Much of the information gathered here from our teachers was not used. Some were asked to simply say that they included teacher input for appearances sake. Wiring and access ports were not placed in a realistic location in each room. Adequate furniture was not purchased for the building's new capacity. Classrooms an hold up to 30 students but only

20 or so desks were purchased so old desks had to be brought from the old facility. Common sense did not prevail, but the dollar did.

Additionally, one participant shared;

More teacher and stakeholder involvement in the process. In many situations, both are provided an opportunity to share their thoughts but the facilities departments overrule the recommendations with limited knowledge of what really happens within the classroom. This is especially the case for the specialized facilities needed for Career and Technical Education, Performing Arts, and Music/Band courses. (R52)

The design limitations are the effect to the need for more teacher and principal feedback. Participant (R22) commented;

Our auditorium is not as large as our student body while another new school in our division has space for about 300 more students in its auditorium. Politics should be removed from the process and focus on needs and not be concerned about being "owed" or being "our turn". By appeasing some people, the needs of our school were not met (auditorium size is the only criticism) and funds should have been transferred accordingly.

Additionally, participant (R97) commented; "The computer work station is built facing the corner so that a teacher must turn his/her back to the class in order to use the technology." When teachers and principals are permitted to have an influential role in the planning of a new school facility, the result is a facility that meets or even exceeds the needs of the school community. Unfortunately, many of the participants did not have a positive experience with their public/private partnership school construction project.

The responses to item 33 yielded qualitative data related to the study in general. The researcher sought to gather any additional information that principals and teachers would like to share about the public/private partnership school construction project experience. Participants employed in a school constructed under the provisions of a public/private partnership were asked, "Is there anything else you would like to share about your school facility?" The following matrix in Table 36 illustrates the responses organized by categories. "R" refers to the respondent number given by the researcher.

Table 36

Matrix of Responses to Survey Question 33 by Category

Category	Responses
Construction Was Rushed to Meet Deadlines	• "The construction was rushed to meet deadline…" (R35)
Inferior Construction Materials Utilized/ Substandard Construction Practices	• "…and cheap grade materials where used and it shows." (R35) • "Teachers have discussed the thin walls in the new addition to the school. They can hear the classroom next door and sometimes a classroom several doors from their room." (R61) • "Even though the addition is nice, it has many issues due to cost cutting measures. The pipes in the new gym froze last year, there was no heat, and it flooded in the spring. There is no covered walkway to the gym and it is on the back corner of the school campus." (R74) • "Think about noise control." (R77) • "The infrastructure of the school should be block and not drywall." (R94) • "When the building was constructed, there was very limited oversight. Basic things such as external ventilation being set up in specialized facilities (as required) where never installed. Rather, they just recirculate within the building. When the FACS class is cooking, the smoke is sent back through the system and goes into multiple classrooms. Additionally, many devices where connected but never set up such as light sensors still being in the rafters. We have to slam the door to trigger the sensor for the lights to turn on…" (R52) • "The classroom walls do not reach all the way to the roof. Above the ceiling tiles, it is all open construction, so sound carries too easily. Teachers four classes away can hear everything going on in all of the rooms around us. The result is very loud rooms." (R91) • "Rooms are not as sound proof as we would have liked. Sounds of desks and chairs moving can get pretty loud." (R34) • "It seems to me that corners were cut and money was wasted on fancy light switches that, in many classrooms, don't work properly after just one year." (R94)
New School Facility is Already Too Small	• "It is a beautiful facility, but we have already outgrown it. Common areas (gym, cafeteria, auditorium) are not big enough. There is not enough classroom space and some teachers have to share spaces." (R2) • "…we need more new rooms." (R36) • "Build to last." (R77)

(table continued)

Table 36 *(continued)*

Category	Responses
Comments Regarding Green Concepts	• "Our school system and community has a big commitment to "being green". We have a number of LEED certified building, including this new MS. This has been troublesome in a few areas: restrooms, sinks, lighting, & heating/cooling. We have experienced a number of problems that seem to stem from those green aspects that cost us more money & time to fix." (R6) • "No consideration was taken into account for LEED construction practices. It is a very inefficient energy building." (R52)
Design Problems	• "I would have preferred the entrance door and office door to be more visible and centrally located." (R8) • "The layout is well-designed, with the exception of some of the locker room areas. I would have liked for these to be a little larger for a broader array of uses." (R59) • "My classroom is designed for small students." (R113) • "The new teacher workroom has been turn into a computer room that wasn't in the plan moving the workroom too far for teachers to have quick access to the area when students are in the class." (R65) • "It is laid out great on paper, but not in actual real life. Classrooms aren't necessarily put where they make sense." (R81) • "Our Auditorium is not as large as our student body while another new school in our division has space for about 300 more students in its Auditorium. Politics should be removed from the process and focus on needs and not be concerned about being "owed" or being "our turn". By appeasing some people, the needs of our school were not met (Auditorium size is the only criticism) and funds should have been transferred accordingly." (R22) • "Teachers feel very isolated." (R25) • "The cafeteria is designed with the open flow attached directly to the academic hallway and gymnasium lobby without any doors. It makes it difficult to keep students from wandering out of lunch when there is no barrier." (R97) • "The biggest flaw I can find with the building is the way rooms are numbered. Some offices and closets within room are numbered, which often confuses students." (R99)

Table 36 *(continued)*

Category	Responses
Design Problems *(continued)*	• "…That being said, when we spoke with the architects about specific things such as a door size in a room, a way for buses to reach a part of the building that groups leave from in buses all the time, and parts of the auditorium that were not addressed such as using tape players instead of CD recorders and not having a built in recording mic setup in the auditorium, or not having mic inputs on the front of the stage, or running air conditioned duct work right above the stage with vents that pour onto the stage during quiet performances, and not listening when specifically addressing an opening in the back that they decided to use 1 door with large glass beside it rather than a double door (a simple fix if they had changed it then), it has left us with a building that at times is difficult to use and quite honestly, outdated from the time it was built." (R28) • "Hall system is very confusing for new visitors." (R104) • "The auditorium should have been made large enough for the entire student body to fit." (R30) • "I really don't have much positive to say. The colors are neutral; we were told we could not bring anything from our previous building to personalize our space. There are some aspects of the building that have raised safety concerns. One is that there are full glass doors and people can see from one exterior door through the hallway and out the opposite exterior door. There is a lot of wasted space. There are spaces that make it easy for students to "disappear." (R31) • "Our school facility is spread out. Therefore, it is very difficult to maintain connectivity with all staff members. Our fifth grade team is divided between the bottom floor of the school and 6 trailers that are located outside. There are team members that I do not even see but once a week in passing due to our physical division." (R40) • "There is less need for flat screen televisions throughout the building and more need for an auditorium that is large enough to seat the entire school population at one time. These to me seem like logical and relevant items that should have been addressed when building a grandiose building that is meant to last for quite some time." (R94) • "…more than one teacher bathroom per floor." (R9) • "Teacher restroom facilities are important." (R77) • "With the number of students in the building, increasing the number of student and staff bathrooms." (R86) • "We wanted certain areas to be provided but they were not." (R10)

Table 36 *(continued)*

Category	Responses
Design Problems *(continued)*	• "The only thing I would change about our facility would be having a full set of bleachers on the visitors' side in the gym to facilitate larger crowds at ballgames and tournaments." (R18) • "Multipurpose rooms, like a cafetorium DO NOT WORK!" (R58) • "Less money should have been spent on lounge areas in the hallway." (R94) • "We waste a lot of space that could be used for instruction because of the lack of storage." (R69) • "…a window in every classroom (2 do not have windows)." (R80)
More Input Needed From Stakeholders	• "…stakeholders should have more input." (R51)
Campus Improvements	• "I feel like a sports stadium should have been included along with a full size gym (bleachers)…" (R9) • "Not enough space surrounding the school for all athletic facilities." (R73) • "There are only a few things I would change...a covered sidewalk to the gym." (R80) • "…landscaping." (R80)
Location of School Troublesome	• "Terrible location." (R12)
Maintenance Problems	• "Maintenance issues are ignored or not completed in a timely fashion." (R62)
Final Product Does Not Match Construction Costs	• "School is nice but for the money not as good as it should be." (R21)
Students Show Pride in New School Facility	• "Students show a lot of pride in the new facility. Students and teachers overall like the building, even though it was build and then the schedule changed from traditional 7 period day to A , B block days, The school design is suitable overall." (R83) • "Students like the end result more than faculty." (R25)
Specialized Facilities Needed	• "The facility needs a room set aside specifically as a Science Lab and fully equipped for students to engage in experiments and activities related to their SOL's." (R116)

Table 36 *(continued)*

Category	Responses
Design for the Future	• "Always try to prepare for the future. Allow for growth in student enrollment and think about how technology might evolve. Example: build in enough electrical sockets to handle for recharging tablets and computers." (R103)
Climate Control Issues	• The only complaint I have about the facility is that the HVAC system has never worked properly. Some areas are over 80 degrees, other areas are 65 degrees." (R106)
Positive Comments Regarding the School Facility	• "Beautiful views." (R34) • "It is a very nice place to work where all children are treated equally." (R42) • "We are very pleased to have all our students in the building as we have held classes in mobile trailers for many years prior to the new construction." (R46) • "It is a wonderful place to teach. The room is bright and allows for my class to move freely and not be as confined as before." (R47) • "We are very excited about our new addition and facilities." (R48) • "It is very refreshing coming to school and working with children in a new facility" (R50) • "I am overall very satisfied with the school facility…" (R8) • "It is very nice and state of the art in terms of technology…" (R51) • "It is a beautiful facility!" (R55) • "It is inviting and useful for all grade levels." (R57) • "This is an outstanding facility that we are all very proud of. The spaciousness of the building, the high ceilings in heavy traffic areas help to limit the noise in the building. The contractors did an excellent job of finishing the building on time and under cost. I am greatly impressed with all of their work. I also appreciated the way that they included us in the construction phase, asking for input and recommendations." (R59) • "Great facility. Overall we are very pleased with what we have." (R12) • "I am so glad that we have a new addition for our students!" (R68) • "It is beautiful and we are proud to have it as a landmark in our community." (R16) • "The school is great." (R73) • "I am very thankful for the extra room for instruction and storage. Our custodial staff works extra hard to keep our facilities clean." (R80)

Table 36 *(continued)*

Category	Responses
Positive Comments Regarding the School Facility *(continued)*	• "Our school has a lot of collaborative areas for small groups and individuals to congregate. I led the Open Space Design Committee, which selected the furnishings for these areas and the dining areas. This Committee consisted entirely of students and teachers. Rarely, do the stakeholders have so much input into a building. It was a very positive aspect of the PPEA process." (R82) • "I think there are teachers who would like to nitpick the building, especially the parts that may not be perfect. But all-in-all this is a fantastic facility." (R84) • "I love coming to this school. The building is bright and airy. The classrooms are a nice size and the offices, special areas and meeting areas are sufficient." (R89) • "School is very well designed." (R27) • "Great school and great facility." (R107) • "The location of our facility is terrific, as it allows access to outdoor learning opportunities for science, social studies, and other subject areas that take advantage, without the need for field trips." (R109) • "I like that the students have full size lockers to store their books and sports bags..." (R9) • "The layout is nice and spacious..." (R9) • "I love our new facility. It serves us and our public well…" (R28)

Summary

The responses of participants indicated a variance in the level of engagement during the planning stages and in the level of satisfaction in the different public/private partnership school construction projects throughout the Commonwealth of Virginia. According to the responses of participants, individuals who were involved during the planning stages and felt their comments were valued and translated into the completed facility were much more likely to rate the public/private partnership school construction process as positive. Principals and teachers who were not afforded an opportunity to provide feedback during the planning stages of the public/private partnership school construction process expressed resentment in their lack of a voice. Additionally, if participants were able to participate in planning meetings and their ideas did not translate into the completed school facility, they resented that their ideas were not valued or appreciated. However, there was wide acknowledgement that the new, renovated, or added to school facility was an asset to the community. There were factors in the different school construction projects that either made the process extremely beneficial for the school community

or a negative experience with concerns that impacted the school community at the time of this study. Additionally, when the responses of the participants who participated during the planning stages were isolated and analyzed, the findings were unchanged. Chapter Five provides a summary of the findings, presents implications, presents conclusions, and makes suggestions for future studies.

Chapter 5

Summary of Findings

Introduction

Public/private partnerships have often been utilized in public infrastructure projects throughout the United States of America. However, the implementation of public/private partnerships to fund public school construction projects was a relatively novel concept at the time of this study. This study examined the implementation of the Public/Private Education Facilities and Infrastructure Act of 2002 in the Commonwealth of Virginia to construct public school facilities. The purpose of this study was to determine if the instructional and organizational needs of educators were fully met in school buildings constructed through the provision of a public/private partnership and if the users of the building had engagement and input into the planning and design development of the project. The school planning process, design development processes, and the eventual product were factors explored when assessing whether the educator needs were met. The main research question guiding this study was: Were the instructional and organizational needs of educators fully met in a building constructed through the provisions of a public/private partnership and was there user engagement and input into the planning and design development processes? The following sub-research questions provided additional data for this study:

a. What was the level of engagement and input by teachers and principals into the educational specifications their school division developed in compliance with the provisions of the public/private partnership agreement?

b. What was the level of satisfaction teachers and principals had with their engagement and input into the design of the school building developed in compliance with the provisions of the public/private partnership agreement?

c. What was the level of satisfaction teachers and principals had with the product at the completion of the public/private partnership process?

For the purposes of this study, school divisions which implemented a public/private partnership between 2002 and 2013 were identified by the Virginia Department of Education (Appendix A). Between 2002 and 2013, there were 18 school divisions in the Commonwealth of Virginia that built a school or schools utilizing the provisions of a public/private partnership. Of

the 18 school divisions, eight superintendents gave permission to contact the school principal to seek permission to distribute the researcher created Public/Private Partnership eSurvey. The eSurvey was sent to the administrators and teachers of 14 public schools throughout the Commonwealth of Virginia. After the data collection window closed, there were 131 participants from 14 schools that completed and returned the survey.

Summary of Findings

After the data were analyzed, the following findings were made in relation to the three sub-research questions.

Sub-research question a. What was the level of engagement and input by teachers and principals into the educational specifications their school division developed in compliance with the provisions of the public/private partnership agreement?

- The majority of the teachers and principals who participated in this study either did not have the opportunity or choose not to participate in the planning meetings.

- The responses suggested that the majority of the teachers and principals perceived an active effort to involve them in the planning stages of construction. However, the feedback also indicated that 35% of the teachers and principals surveyed either did not know the number of meetings scheduled or knew of one or two meetings.

- One-quarter (25%) of the participants believed the educational specification documents submitted to the architect did not reflect this input.

- While the majority of participants (52%) strongly agreed or agreed that the private partner provided feedback during the planning meetings that helped the team make decisions, that leaves almost half of the participants without any direct acknowledgement that the private partner impacted the planning stages in a positive way.

- At several schools that completed a public/private partnership project during the period in question, there was a high level of engagement and input (58%) by teachers and principals. Several participants mentioned multiple opportunities that were provided to offer feedback, meet with architects, visit other school facilities, and impact the educational specification documents submitted to the architect in anticipation of their school facility. However, at some schools, the level of

engagement was low. The teachers were not invested in the process and unfortunately 56% of the participants who responded to the survey and were employed by the school division during the planning stages did not participate in any planning discussions.

- Several participants responded that their experience in their school division, prior to the planning stages of construction, involved meetings for appearances that lacked any substance or any real opportunity to share thoughts and ideas. For some participants, the prior experience appeared to taint their view of the planning meetings. As a result, their level of engagement was low. While their views potentially are accurate, their prior experience mattered and impacted their belief that any ideas they shared would make an actual difference in the educational specification documents submitted to the architect.

Sub-research question b. What was the level of satisfaction teachers and principals had with their engagement and input into the design of the school building developed in compliance with the provisions of the public/private partnership agreement?

- Several school divisions represented in this study have definitive, formalized plans to ensure engagement and input from all stakeholders throughout any building construction process. The results from these school divisions are almost exclusively positive, which skews the data from the fourteen schools as a whole.

- While the majority of participants (58%) either strongly agreed or agreed that teacher and principal input was valued and considered in the educational specification documents submitted to the architect, about one-third of the participants could not agree that their input was valued during and considered in the submitted documents to the architect.

- The participants were active during the planning meetings, but the number of opportunities to participate may have been limited or the participants input may not have translated to the design or educational specification documents.

- Fifty percent (50%) of the participants indicated that they could not endorse the statement that the proposed educational specification documents were communicated to the stakeholders of the school.

- While the majority of participants (53%) endorsed the presence of the private partner at the planning meetings, many participants had four or less meetings to discuss the public/private partnership school construction project.

- Most often teachers and principals attended meetings to learn about the public/private partnership school construction project. Surveys and questionnaires were also common methods used to solicit feedback from teachers and principals. Several respondents mentioned formal committees that met on a monthly basis and served as a liaison between stakeholders. Also, there was a small percentage (3%) of participants who commented that no effort was made to share information about the school construction project. The formality of the process appeared to vary across school divisions.

Sub-research question c. What was the level of satisfaction teachers and principals had with the product at the completion of the public/private partnership process?

- Over forty percent (40%) of participants believed that their feedback shared during the planning stages prior to construction was translated into the completed school facility. Those participants expressed pride in their new school facility. Conversely, the remainder of participants (60%) were not convinced that their ideas were evident in the new school facility and expressed frustration in the wasted opportunities.

- The majority of participants (67%) indicated that the school facility reflected the needs of teachers and principals. However, when the responses of the participants who indicated a neutral response or disagreed, nearly one-third of the participants have a concern about the attribute(s) of the new school facility.

- While the majority of participants (58%) strongly agreed or agreed that the school facility had specialized facilities that were adequate for the grade level served, approximately 40% of the participants did not endorse the notion that the specialized facilities were adequate in their school facility.

- The majority of participants (58%) responded positively when asked about the size of their classroom spaces for the grade level they serve. However, thirty-eight percent (38%) of participants could not completely endorse the idea that their classroom spaces were sized appropriately for the grade level they serve.

- A significant portion of the respondents (40%) were unaware of the financial agreements of the public/private partnership.

- The majority of participants (58%) strongly agreed or agreed the administrative areas, library, gym, teacher workroom, and conference room areas were adequate for the grade level served. This outcome is extremely positive since these areas are often utilized by all of the school stakeholders. Obviously, in some schools, participants responded not as favorably. Thirty-eight percent (38%) of participants responded with a rating less than agree. The participants identified some feature as less than adequate for the grade level they served. Since so many participants felt that they did not have the opportunity to express their ideas or that their ideas were not translated into the educational specification document the fact that almost forty percent (40%) of the participants rated this question less than positive is not surprising.

- Overwhelmingly, the participants responded positively about their school facility as an asset to the community. Seventy-seven percent (77%) of the participants responded with strongly agree or agree. Many of the statements participants made when asked qualitative questions revealed an appreciation and thankfulness for the new, renovated, or added to school facility. While the previous questions revealed many concerns about the school facilities in question, the participants were able to examine the "big picture" and recognize the overall improvements made within the school facility.

- For over half (54%) of the participants, the design of the facility, specialized facilities, and technology enhancements were the most helpful features in the completed school facility that assisted them in completing their duties. However, some participants felt the money spent to build, renovate, or add to their school facility was not beneficial to them as professionals.

- A cause and effect relationship exists between the need for input from stakeholders and design limitations with the school facility. When teachers and principals do not have an opportunity to provide feedback that is valued and respected, the design of the school facility does not meet the needs of the professionals who work within it.

- By far, teachers and principals responded that more input and engagement during the planning stages was critical to a more successful school construction project.

Additionally, teachers and principals wanted the input provided to make a difference in the plans submitted to the architect so the school facility would greater meet the needs of stakeholders.

Conclusions

The overall research question guiding this study was: **Were the instructional and organizational needs of educators fully met in a building constructed through the provisions of a public/private partnership and was there user engagement and input into the planning and design development processes?** There were a wide variety of experiences teachers and principals had across the Commonwealth of Virginia in relation to public/private partnership school construction. In some instances, teachers and principals were fully engaged throughout the planning stages, their input mattered, and they were pleased with the resulting school facility. Conversely, there were teachers and principals who only had limited engagement, if at all, in the planning stages, their feedback was not solicited or listened to, and the completed school facility does not fully meet the needs of the stakeholders. The answer to this question seemed to depend on the school division that entered into the public/private partnership agreement. Some school divisions appeared to have methodical, formalized systems in place to communicate regarding the new school construction project, while some just built a school building seemingly oblivious to the stakeholders who are the users of the facility. The disregard of the teachers and principals viewpoints was evident in the low level of satisfaction from these professionals in the completed school facility. Conversely, the inclusion of teacher and principal input into the design of the school facility led to professionals highly satisfied with the completed school facility. While some participants had an ideal experience, the majority of the participants did not feel that they had significant engagement or input during the planning stages prior to the public/private partnership school construction project. Additionally, while thankful for an improved school facility, teachers and principals consistently responded that if their feedback had been valued, they would be working in a completed school facility better suited to meet the needs of all stakeholders.

Discussion

The responses of the participants in this study underscored previous research highlighting the importance of stakeholder input during any school construction process. While this study

focused on teacher and principal experiences in relation to the public/private partnership school construction process, students, parents, and community members are also critical stakeholders to consider when constructing a school facility responsive to the needs of a community. Since any school construction project directly impacts the experience of all school stakeholders, more opportunities for feedback seem appropriate. School facilities are integral to the overall school experience and even four planning meetings for teachers and principals to provide feedback about the building design seems inadequate when making decisions about a school facility that potentially could serve the community for the next forty years or more.

As a result of ineffective communication during the planning stages, a common vision between teachers, principals, Central Office staff, private partner, and the architect was absent for many participants. There was a disconnect between the needs of the individuals working in the school facility and those making the final decisions about the construction design. Unfortunately, many of the participants responded that they did not recognize the presence of a common vision. Even if the architect created a design aligned to the submitted documents, a large portion of the participants would not be satisfied with the completed school facility. Additionally, there were participants who thought their ideas were listened to during the planning meetings and translated to the educational specification documents, but when the actual school facility was completed they were surprised and felt insulted because the facility failed to meet their understandings from the planning meetings. The researcher questions why the participants were even invited if their input was not valued or considered.   The entire process for these participants appeared to be a waste of valuable time. Communication is a critical component of any school construction process. If extenuating circumstances necessitate the need to modify the agreed upon plans, the architect should proactively communicate the changes to all stakeholders to limit the feeling of surprise with the completed school facility that some participants expressed.

The design of the school facility is crucial to the usefulness of the building for all stakeholders. Even though there were only 38 respondents that participated during the planning stages of the facility, clearly many participants felt the actual design of the facility was inadequate. Since classroom spaces are where students and teachers spend most of their time in a school, positive ratings of the classroom space are encouraging for the long-term viability of the school facilities studied. At the same time, the term adequate describes a classroom space

that meets minimum standards and is acceptable. As detailed previously, there were participants who did not feel they had an opportunity to express ideas during planning meetings or that their ideas were valued and translated into the educational specification documents submitted to the architect.

Encouragingly, responses from several participants detailed planning meetings that were held several years prior to the construction process and on a monthly basis during the project. While this approach is time consuming and costly, it appears to be best practice. When school administrators, private partners, and architects actively listen to the needs of the community and communicate effectively about the school construction project, the potential for a more beneficial completed school facility is a possibility. These responses underscore the importance of communication during any school construction process. Interestingly, when the responses of the participants who participated during the planning stages were isolated and reanalyzed, the findings were unchanged. While completing the analysis of data provided by teachers and principals employed during the planning stages of construction in isolation, the polarization of experiences ranging from positive to negative was more pronounced. However, the majority of the participants were still concerned with the low level of input and engagement during the planning stages and often were disappointed with the completed school facility.

Finally, the percentage of participants who responded with neutral response was more than expected. The neutral responses allude to the need for refinement of the processes employed by school divisions entering into a public/private partnership agreement. While teachers and principals could identify components of the process that seemed beneficial, there also were some components that hindered the process. School leaders must be purposeful and intentional so teacher and principal input is valued and included throughout the school construction process. Upon gaining the trust of the building users there is a sense of ownership in the process and when changes do have to be made there is a positive relationship to rely on. Additionally, the large number of neutral responses might be the result of a lack of involvement in the construction process from planning to completion or for the simple fact that the participant was not employed during construction process. While school division leaders could not involve teachers and principals not employed, more purposeful inclusion of all school stakeholders throughout the planning and design stages and clear, consistent communication throughout the construction phase could have been a reality.

Implications

Based on the data and the findings from this study, there are several recommendations that should be considered by educational leaders when considering utilizing a public/private partnership agreement to build, renovate, or add to a school facility. Recommendations are as follows:

1. Since, fifty-six percent (56%) of participants indicated that they did not attend planning meetings and for many of the participants they attended four or less meetings, one recommendation for educational leaders is to formalize the process so all stakeholders are included and to begin planning years prior to the beginning of the design phase of the facility. Educational leaders need to clarify future enrollment projections and collaborate with the stakeholders of the school community to design a facility that not only meets the needs of students, teachers, and community members, but is a school in which the community is proud. Open and honest dialogue with the public/private partner regarding funding limitations and the latitude the teachers and principals have to suggest design modifications is critical to an outcome that does not led to teachers and principals who feel their input was marginalized. By completing these steps, the educational specifications documents the team submits to the architect will more closely mirror the desires of the school community and the unique attributes needed in the proposed school facility.

2. Several participants commented that there was limited input into the design of the school because the architect and public/private partners worked to identify a "model" school facility prior to engaging teachers. Educational leaders and private partners should be realistic about funding limitations while at the same time keeping an open mind to design suggestions the users of the building make during the planning stages. Each school community has unique needs that must be accounted for in the school facility design and the users are the most qualified to make decisions in the best interest of the stakeholders. When educational leaders employ active listening skills and regular checks for understanding among the teachers and principals preparing for a school construction project, the level of satisfaction of teachers and principals is dramatically improved. Even if teachers and principals are not able to enjoy every design feature that they would prefer, dynamic communication by the educational

leader and private partner leads to more engaged and understanding users of the school facility.

3. The responses of some participants conveyed a sense of surprise at the features of the completed school facility. Many teachers and principals felt they had communicated their needs during the planning stages only to find that their ideas were not considered or even ignored. Communication is critical among all parties of the public/private school construction project at all stages of planning, design, and development. Educational leaders should take the lead when it comes to facilitating the communication process. The stakeholders need to be kept apprised of the change requests to the school facility design and the users of the facility should have an opportunity to respond to proposals. Educational leaders and private partners also should work together to ensure that a timeline established by a completion date does not rush the construction and lead to inferior construction practices that hinders efficiency of the school facility and the overall level of satisfaction of the users.

4. School divisions should employ architects who have an open mind about the needs of educators, rather than duplicating a school that was built for another community. Preconceived ideas on the part of the architect devalue the input of educators and disregard the uniqueness of the community they are attempting to serve. School Boards should closely examine the way an architect works with a community to ascertain their openness before they hire the individual. School administrators, private partners, and architects must come to the planning meetings with a blank slate ready to actively listen to the needs expressed by the stakeholders of the proposed school facility.

5. Superintendents should be surrounded by school division leaders who understand the importance of feedback from a variety of stakeholders. Even though a superintendent must rely on leadership team members to help manage the school division, when beginning a school construction project the superintendent must be in tune with the entire process from design to completion. A school facility is a long-term investment that must reflect the needs of the community. A superintendent cannot delegate this process. Teachers, principals, students, and community members must be heard throughout the process. The feedback they provide must be evaluated and

communicated in the educational specification documents submitted to the architect. The superintendent must ensure this actually happens and when issues arise during construction those issues must be communicated to stakeholders so there is not a sense of surprise when the facility is completed. If the feedback stakeholders provide is not valued, then leaders should not force them to participate in planning sessions that are meaningless. The entire process turns into a waste of time.

Recommendations for Further Study

The purpose of this study was to determine if the instructional and organizational needs of educators were fully met in a school building constructed through the provision of a public/private partnership and if the users of the building had engagement and input into the planning and design development of the project. The school planning process, design development processes, and the eventual product were factors explored when assessing whether the educator needs were met. Since this study focused on the public/private partnership process in the Commonwealth of Virginia, future studies could replicate the study on a regional or national level.

Future studies may also consider modifying the study to include superintendents as participants. Throughout the study, the researcher had the pleasure to speak to several superintendents regarding their experiences during the public/private partnership construction project in their school division. The superintendents were able to provide background information that was helpful when understanding how the entire process worked for their school division.

Additionally, future research could explore the viewpoint of the architects who have completed public/private partnerships in the Commonwealth of Virginia. The perspective of the architects would be interesting to explore. The level of formality in the school divisions included in this study is vastly different and understanding how architects navigate those dynamics would be curious to this researcher.

Lastly, future studies may investigate the technical details of the financial arrangements of each or a selected group of public/private partnership agreements in the Commonwealth of Virginia. While speaking to superintendents, the researcher learned of land transfers, proposed projects that fell through because of financial details, and lease agreements that financially obligated the school divisions for as many as thirty years. The historical framework of the

financial details would be interesting to capture for educational leaders to learn from as they consider using a public/private partnership for their next school construction project.

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Appendix A

PPEA Projects in the Commonwealth of Virginia Since 2001

PPEA PROJECTS SINCE 2001				
Reporting Year	**School**	**Division**	**Award Date**	**Architect**
2001-02	None			
2002-03	South County H.S.	Fairfax Co.	June 2003	BeeryRio
	Margaret Brent E.S.	Stafford Co.	July 2003	Moseley
2003-04	Cosby H.S.	Chesterfield Co.	February 2004	Moseley
	Conway E.S.	Stafford Co.	January 2004	Moseley
2004-05	Fredericksburg Upper (3rd-5th)	Fredericksburg City	July 2004	Moseley
	George Mason M.S.	Falls Church City	February 2005	BeeryRio
	Patrick Henry H.S.	Roanoke City	November 2004	Rife + Wood
	James Monroe H.S.	Fredericksburg City	July 2004	Moseley
	Skyline H.S.	Warren Co.	February 2005	OWPR
	T.C. Williams H.S.	Alexandria City	October 2004	Moseley
2005-06	Mayfield E.S Jefferson Forrest H.S. renov./add	Manassas City Bedford Co.	January 2006 2006	SHW ClarkNexsen
2006-07	Northumberland M-H. School	Northumberland Co.	July 2007	Moseley
2007-08	Belle Heth E.S.	Radford City	March 2008	RRMM
2008-09	Staunton River H.S. Gym add	Bedford Co.	2008	ClarkNexsen
2009-10	None			
2010-11	None			
2011-12	2 new H.S. 1 renov.	Montgomery Co.	March 2012	SHW
	Appomattox Primary	Appomattox Co.	July 2011	Dewberry
2012-13	Thomas Jefferson E.S.	Falls Church City	June 2012	SHW
	Lunenburg Central H.S.	Lunenburg Co.	June 2012	DeStafano
	3 E.S.	Mecklenburg Co.	No notice	No notice
	New Union H.S.	Wise Co.	June 2012	RRMM
	New Central H.S.	Wise Co.	June 2012	RRMM

(Virginia Department of Education, 2014)

Appendix B

Public/Private Partnerships Survey

This survey explores the use of public/private partnerships to build, renovate, or add to public school facilities. A public/private partnership is defined as a business relationship between a private-sector company and a government agency for the purpose of completing a project that will serve the public. The agreement can be used to finance, build and operate projects such as public transportation networks, parks, convention centers, and school facilities. Your school was identified by the Virginia Department of Education as a school facility financed by a public/private partnership agreement.

Choose 'Yes' to grant consent and continue with the survey.
a. Yes
b. No

Part 1: Demographics

1. What position do you currently hold?
   a. Principal
   b. Teacher

2. What grade level do you currently teach or supervise?
   a. Elementary school
   b. Middle school
   c. High School

3. What school year best represents the time period when the school you currently work in was constructed, renovated, or added to during the period between the 2002-03 to 2012-13 school years?
   a. 2002-03
   b. 2003-04
   c. 2004-05
   d. 2005-06
   e. 2006-07
   f. 2007-08
   g. 2008-09
   h. 2009-10
   i. 2010-11
   j. 2011-12
   k. 2012-13

Part 2: Planning stages prior to construction, renovation, or addition

Since the school you currently work at was constructed, renovated, or added to since the 2001-02 school year, the following questions examine your level of input and engagement in the planning stages BEFORE the construction began.

4. Were you employed at your current school during the planning stages prior to the construction, renovation, or addition? If your school was an entirely new building, were you working in the school division during the planning stages prior to the construction?
   a. Yes
   b. No **(Please skip to Part 3)**

5. Did you participate in school division sponsored planning meetings to discuss the needs of principals and teachers in the new, renovated, or added to school facility you currently work in?
   a. Yes
   b. No **(Please skip to Part 3)**

6. How many meetings were scheduled?
   a. One
   b. Two
   c. Three
   d. Four
   e. Five or more
   f. Unknown

7. How many meetings did you attend?
   a. One
   b. Two
   c. Three
   d. Four
   e. Five or more

To what extent were the following evident during the **PLANNING STAGES** of the construction, renovation, or addition to the school building you currently work in? Please use the following scale:

Strongly Disagree 1 --- 2 --- 3 --- 4 --- 5 Strongly Agree

8. Teacher and principal input was valued and considered.   1   2   3   4   5   NA

9. Teacher and principal input was included in the documents
   submitted to the architect by the school division.   1 2 3 4 5 NA

10. Teacher and principal input was valued and considered
    regarding the actual design of the school facility.   1 2 3 4 5 NA

11. Teachers and principals were active participants during
    the planning meetings.   1 2 3 4 5 NA

12. A common vision was evident during the planning.   1 2 3 4 5 NA

13. Educational specifications submitted to the architect
    were agreed to by the participants.   1 2 3 4 5 NA

14. The proposed educational specifications were
    communicated to the stakeholders in the school
    community.   1 2 3 4 5 NA

15. The private partner or representative was present
    during the planning meetings.   1 2 3 4 5 NA

16. The private partner provided feedback during the
    planning meetings that helped the team make
    decisions.   1 2 3 4 5 NA

Please respond to the following questions with a short response.

17. If applicable, please describe the process your school division used to solicit feedback from teachers and principals during the planning stages when your school was built, renovated, or added to?

18. Did all teachers and principals have an opportunity to share input during the planning stages? If so, how was that accomplished?

19. As a participant in the planning meetings your school division held, do you feel your voice was heard and ultimately communicated in the documents your school division submitted to the architect? Why or why not?

Part 3: Completed school facility

To what extent were the following evident in the **COMPLETED SCHOOL FACILITY** you currently work in? Please use the following scale:

Strongly Disagree 1 --- 2 --- 3 --- 4 --- 5 Strongly Agree

20. The school facility reflects the needs of principals
    and teachers.   1 2 3 4 5 NA

21. The classroom spaces are educationally adequate
    for teaching and learning to take place.   1 2 3 4 5 NA

22. The school facility has specialized facilities that are
    adequate for the grade levels the school serves.   1 2 3 4 5 NA

23. The school facility reflects the input from teachers
    and principals during the planning stages.   1 2 3 4 5 NA

24. Teachers and principals are satisfied with the
    school facility.   1 2 3 4 5 NA

25. The school facility was completed on time.   1 2 3 4 5 NA

26. The school facility was completed on budget.   1 2 3 4 5 NA

27. The school facility serves the stakeholders of the
    school adequately.   1 2 3 4 5 NA

28. The classroom spaces are sized appropriately
    for the grade levels your school serves.   1 2 3 4 5 NA

29. The administrative areas, library, gym, cafeteria,
    teacher workroom, and conference room areas
    are adequate for the grade levels your school serves.   1 2 3 4 5 NA

30. The school facility is an asset to the community.   1 2 3 4 5 NA

Please respond to the following questions with a short response.

31. What features about your school facility are helpful to you as you complete your duties as a teacher or principal?

32. How could the process from planning to school construction completion be improved for future projects?

33. Is there anything else you would like to share about your school facility?

Thank you for your time. Please click here to submit your responses.

Appendix C

Sample Letter to Superintendents

VirginiaTech
School of Education

Educational Leadership and
Policy Studies
219 E. Eggleston Hall (0302)
Blacksburg, Virginia 24061
540/231-5642 Fax: 540/231-7845

Superintendent Bruce Benson
Stafford County Public Schools
31 Stafford Avenue
Stafford, VA 22554

Dear Superintendent Benson,

I am currently working on a research study as part of my requirements for a doctorate in Educational Leadership from Virginia Polytechnic Institute and State University. The study explores teacher and principal experiences working in a school facility completed using the provisions of a public/private partnership. The Virginia Department of Education Office of Facility Services identified Margaret Brent and Conway Elementary School as schools built, renovated, or added to using a public/private partnership agreement.

The purpose of the study is to determine if the instructional and organizational needs of educators are fully met in a school building constructed through the provision of a public/private partnership and if the users of the building had any input into the planning and design development of the project. The school planning, design development processes, and the eventual product will be factors explored when assessing whether the educator needs are met. With shrinking budgets, research on alternative funding sources to construct school facilities is timely and absent from scholarly educational publications.

I am requesting your permission to proceed with my research by contacting the principal at Margaret Brent and Conway Elementary School to solicit responses from the staff to further my research. The principal and teachers will be asked to complete an electronic survey consisting of twenty-five multiple choice questions and seven short response questions. The total time commitment for each principal or teacher completing the survey should be no more than fifteen minutes. I anticipate conducting the study in September and October and expect to complete the study shortly thereafter. A copy of the results will be made available to you upon request.

If you have any questions or need further explanation of the study or procedures, please call me at Central Elementary School at (540) 463-4500. **To provide your consent to contact the principal of Margaret Brent and Conway Elementary, you may email me at rbarber3@vt.edu.** Thank you in advance for your cooperation in advancing this research.

Sincerely,

Ryan N. Barber   Glen I. Earthman
Principal   Dissertation Committee Chairperson
Rockbridge County Public Schools   Virginia Tech School of Education

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An equal opportunity, affirmative action institution

Appendix D

Sample Letter to Principals and Teachers

Dear Principals and Teachers,

You have been identified by the Virginia Department of Education as an educator working in a school facility built using the provisions of a public/private partnership. I am a doctoral candidate at Virginia Tech in the Department of Educational Leadership and Policy Studies. I am studying the implementation of public/private partnerships in identified Virginia public schools. Your participation in this research study about your experience will benefit the educational system as a whole and assist me in the completion of my dissertation study.

You are invited to participate in this study entitled, "School Facilities Built Using a Public-Private Partnership and Teacher/Principal Input and Engagement during the Planning and Satisfaction with the Completed Project." Your participation in the study is voluntary and the time commitment is less than 30 minutes. The purpose of the study is to determine if the instructional and organizational needs of educators are fully met in school buildings constructed through the provision of a public/private partnership and if the users of the building had any input into the planning and design development of the project. The school planning, design development processes, and the eventual product will be factors explored when assessing whether the educator needs are met. With shrinking budgets research on alternative funding sources to construct school facilities is timely and absent from scholarly educational publications.

Your identity will be kept confidential. You will be sent a link to an electronic survey. If you agree to participate, please complete the attached consent form. Completion of the consent form and survey will be considered permission to use your results in the study. You may choose not to participate in this study. If you choose not to participate, there will be no negative consequences. There are no anticipated risks or discomfort associated with this study. If you have questions about this research project please contact me at 540-463-4500.

If you have any questions or concerns about your rights as a research participant in this study, they should be directed to the Office of Research Compliance at Virginia Polytechnic and State University at 540-231-4991.

Thank you for taking the time to read this cover letter. I encourage you to participate in this timely study.

Sincerely,

Ryan N. Barber, Principal
Central Elementary School
Rockbridge County Public Schools

Appendix E

Sample Email to Principals and Teachers Returning the Consent Form for Participation

Dear Principal or Teacher,

Thank you for agreeing to participate in my doctoral dissertation study on public/private partnerships. As described earlier, the electronic survey should take no more than 15 minutes to complete. The link to the survey is below:

Insert electronic survey link here

You may be able to click on the link to access the electronic survey or you may copy and paste the link into your internet browser.

Again, thank you for your participation.

Sincerely,

Ryan Barber
(540) 463-4500
rbarber3@vt.edu

Appendix F

Telephone Script for Participants Who Did Not Respond to Initial Email

Good morning/afternoon. I am Ryan Barber, a doctoral student at Virginia Tech. Recently, I sent you an email regarding a dissertation study I am completing regarding public/private partnerships in Virginia. Your superintendent, _____, gave me permission to contact you. I understand how busy you are. Can I send you the informed consent form again for your review?

If the answer is no I will say: Thank you for your time. I hope you have a good day.

If the answer is yes I will say: Can I double check the email address I have on file before I resend the informed consent form?

Following the completion of the informed consent form, you will be permitted to access the electronic survey. Thank you for your interest in my dissertation study. Do you have any questions?

Have a good day.

Appendix G

Informed Consent and Public/Private Partnerships Survey Informed Consent

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
Informed Consent for Participants
In Research Involving Human Subjects

Title of Project: Teacher and Principal Satisfaction with the Public/Private Partnership Process in Building School Facilities

Investigators: Ryan N. Barber and Glen I. Earthman

I. Purpose of this Research/Project
The purpose of this mix-methods study is to determine if the instructional and organizational needs of educators are fully met in school buildings constructed through the provision of a public/private partnership and if the users of the buildings had any input into the planning and design development of the project. The school planning, design development processes, and the eventual product will be factors explored when assessing whether the educator needs are met. With shrinking budgets research on alternative funding sources to construct school facilities is timely and absent from scholarly educational publications.

II. Procedure
Teacher and principal participants who are interested in participating in this study will identify themselves by giving written consent and completing an electronic survey about their level of input and engagement during the planning stages of the building, construction, or addition to their school facility. Also, the level of satisfaction in their school facility will be assessed using the same electronic survey.

III. Risks
There are less than minimal risks associated with this research study. The parameters of this study are limited to the completion of one electronic survey instrument.

IV. Benefits
The benefits associated with this study will hopefully affect educators across the Commonwealth of Virginia by providing insight into the viability of public/private partnerships for financing new or renovation public school construction projects. There is a gap in the literature regarding the application of public/private partnerships in public school construction projects and this study begins to fill that gap. Also, this study could be used to highlight the importance of input of the users of a facility during all stages of construction or renovation. Finally, this study underscores previous research findings about the importance of high quality school facilities on the educational experience of students, teachers, and administrators.

V. Extent of Anonymity and Confidentiality
Every effort will be made to keep your information confidential. The names of the participating schools and teachers will not be identified by school number, name, or division in the survey instrument or in the body of the study. Information will be kept under lock and key with the researcher at all times. It is possible that the Institutional Review Board (IRB) may view this study's collected data for auditing purposes. The IRB is responsible for the oversight of the protection of human rights involved in research.

VI. Compensation
There are no researcher initiated incentives or compensation for participating in this study.

VII. Freedom to Withdraw
You may refuse to participate in this study without penalty. If you choose to participate in this study you may discontinue participation at any time without penalty. By signing this form, you do not give up any personal legal rights you may have as a participant in this study.

VIII. Subject's Responsibilities
I voluntarily agree to participate in this study.

IX. Subject's Responsibilities
I have read the Consent Form and conditions of this project. I have had all my questions answered. I hereby acknowledge the above and give my voluntary consent:

_____   _____
Subject Signature   Date

Should I have pertinent questions about this research or its conduct, and research subjects' rights, and whom to contact in the event of a research-related injury to the subject, I may contact:

_____   _____
Investigator(s)   Telephone/email
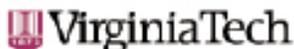
_____   _____
Faculty advisor   Telephone/email

_____   _____
Departmental Review/Department Head   Telephone/email
David M. Moore   540-231-4991/moored@vt.edu
Chair, Virginia Tech Institutional Review   Telephone/email
Board for the Protection of Human Rights
Office of Research Compliance
2000 Kraft Drive, Suite 2000 (0947)
Blacksburg, VA 24060

Appendix H

IRB Study Approval Letter

VirginiaTech

MEMORANDUM

DATE: September 3, 2014

TO: Glen I Earthman, Ryan Neal Barber

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

PROTOCOL TITLE: Teacher and Principal Satisfaction with the Public/Private Partnership Process in Building School Facilities

IRB NUMBER: 14-853

Effective September 2, 2014, the Virginia Tech Institution Review Board (IRB) Chair, David M Moore, approved the New Application request for the above-mentioned research protocol.

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

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

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

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

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

PROTOCOL INFORMATION:

Approved As: **Exempt, under 45 CFR 46.110 category(ies) 2**
Protocol Approval Date: **September 2, 2014**
Protocol Expiration Date: **N/A**
Continuing Review Due Date*: **N/A**

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

FEDERALLY FUNDED RESEARCH REQUIREMENTS:

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

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

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