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SUPERINTENDENTS' PERCEPTIONS REGARDING
THE IMPACT OF CLASS SIZE REDUCTION
ON SCHOOL FACILITY PLANNING IN GEORGIA

Andrea Jones Williams



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SUPERINTENDENTS' PERCEPTIONS REGARDING
THE IMPACT OF CLASS SIZE REDUCTION
ON SCHOOL FACILITY PLANNING IN GEORGIA

A Dissertation

Presented to
the College of Graduate Studies of
Georgia Southern University

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Education
in
Educational Administration

by
Andrea Jones Williams
August 2002

Andrea Jones Williams 2

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June 17, 2002

To the Graduate School:

This dissertation entitled " Superintendents' Perceptions Regarding the Impact of Class Size Reduction on School Facility Planning in Georgia" and written by Andrea Jones Williams is presented to the College of Graduate Studies of Georgia Southern University. I recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Education with a major in Educational Administration.

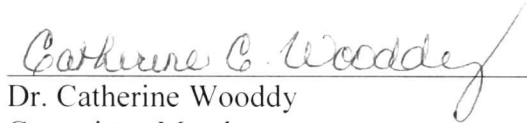


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We have reviewed this dissertation and recommend its acceptance:



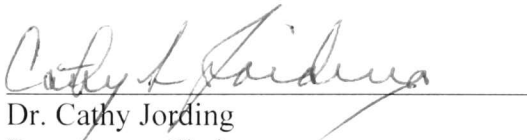
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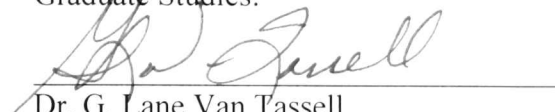


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DEDICATION

This dissertation is dedicated to the memory of my grandfather, R.V. Woodard. It represents the culmination of a long journey that began when I was just a little girl sitting on his lap. My grandfather was constantly reminding me that regardless of the cards life dealt me, nothing could ever take away my education. Even though he has been gone for 17 years, I can still hear him telling me to "Get your education". I bet he never realized just how much I would take that to heart. Even after I had finished my bachelor, masters, and specialist degrees, I could still hear my grandfather's words. I knew I would not be satisfied until I went as far as I could go. I know my grandfather would be proud. I thank him for instilling in me the importance of an education and for loving me unconditionally and with all his heart.

ACKNOWLEDGEMENTS

This dissertation would not have been possible without the love, support, and encouragement of my wonderful husband, Andy. I could not have done it without him. He was there through many long nights and days. He was my shoulder to cry on, my editor, my friend, and biggest supporter. I will never be able to thank him enough for all that he has done and put up with through this process.

I also want to thank my family for supporting me. My Aunt Jean can finally quit asking, “When are you ever going to be through going to school?” I want to thank her and D. D. for supporting me and worrying about me whenever I was on the road to Statesboro. I appreciate all the help and encouragement that Daddy, Jewell, Mitch, and Judi offered. I am also grateful to my niece, Kelsey, who at twelve kept reminding me to “go home and work on your dissertation”. I also want to thank Tommy and Judy, my sibling-in-laws and next-door neighbors, for their support and encouragement.

Life would be pretty empty without family and friends. Luckily I have both. I need to thank two very special friends, Ella Ruth and Jenny. Ella Ruth always offered her support and provided needed distraction. Jenny provided the impetus for this educational journey. When she first suggested that we go back to school, I immediately took her up on her offer. I could not have done it without her. Through all the classes and long drives and late nights, we stuck it out. I thank her for putting up with me.

Along the way I also met some very special people, the members of Cohort VII: Bette, Bill, Charles, Deanna, Jenny, Judy, Maggie, Pat, Phillip, Shannon, Sylathia, and

Victor. I am so glad that we ended up together. Each one of us was different but we came together and made our cohort the best one yet. I thank them for their help and encouragement through the good times as well as the bad. I will never forget them. I want to especially thank my cohort buddy and carpooler, Judy Lucas, for guiding and encouraging me through the final steps of this dissertation. She was a very big help.

I would also like to acknowledge and thank the members of my committee. Dr. T.C. Chan, my committee chair, provided expert advice and counsel. His willingness to help his students is a testimony to his character and love for education. He will be missed. Dr. Cordelia Douzenis, my methodologist, helped me to make sense of all the data. She was an excellent teacher. Her patience and kindness throughout this process were very much appreciated. Dr. Catherine Woody was also a valued committee member and teacher. I appreciated the time and effort she spent helping me make this a work of which I could be proud. I am also grateful to Dr. Fred Page for agreeing to serve on my committee. His suggestions were always helpful.

A heartfelt thank you must go to Dr. Buster Evans, my superintendent. His help with my survey and interviews was invaluable. He played a key role in helping me get an acceptable response rate. I will always remember and appreciate his willingness to help me with any problems or questions that I encountered.

I would also like to thank a few other people who helped me along the way. Richard Smith, my assistant principal, was a great motivator and friend. He was always willing to proofread and offer suggestions. Dr. Michael Richardson convinced me to switch from curriculum to educational leadership. This dissertation is evidence of that good advice. I also need to thank Ken Brooks and Ramona Giles at First Baptist Church

of Cochran for helping me fold all those letters and surveys. They saved me hours of work. I would like to thank Mary Delorenzo, a former Bleckley County High School English teacher, for taking time out of her retirement to proofread my work. She was an excellent teacher and coworker. I valued all of her corrections and comments.

I would also like to thank all the superintendents in Georgia who took time out of their busy schedules to complete and return my survey. Their willingness to help made this study possible. I would also like to acknowledge and thank the six superintendents who graciously gave of their time at their Spring Bootstrap Convention for my interviews.

Finally, I would like to acknowledge my Lord and Savior, Jesus Christ. This journey was not without some tears and heartache, but through it all He sustained me. "I can do all things through Christ who strengthens me" Philippians 4:13.

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ABSTRACT

SUPERINTENDENT'S PERCEPTIONS REGARDING THE IMPACT OF CLASS
SIZE REDUCTION ON SCHOOL FACILITY PLANNING IN GEORGIA

AUGUST 2002

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During the 2000 legislative session, Georgia lawmakers felt there was a need to improve education in Georgia. The A-Plus Education Reform Act of 2000 was passed in response to their concerns. One section of this act mandated that public schools reduce class sizes. This mandated reduction in class size has had different impacts on Georgia school systems. Successful implementation has been a daunting task for some school systems. School systems have reported different experiences and challenges during the initial phases of implementation. Problem areas have ranged from a lack of classroom space to teacher availability. These problems have been sources of considerable discussion. Research was needed to document how Georgia school systems were meeting the challenges of this mandated reduction in class sizes.

This research study was designed to examine the initial responses of school systems to the state-initiated CSR program and to explore superintendent's perceptions regarding the effects of this mandate on the facility planning process of their school systems. Quantitative and qualitative methods of inquiry and analysis were utilized in order to fulfill the goals of this study. In order to collect information necessary for this study, public school superintendents were chosen as the best possible respondents. Because no valid survey instrument existed, the researcher had to develop one. This comprehensive survey, developed by the researcher, was then mailed to all Georgia school superintendents except for the five that had participated in the pilot study. Follow-up interviews with six superintendents were also conducted. Once the surveys had been returned and all follow-up interviews were conducted, the researcher analyzed the data to determine patterns and trends. The survey information helped to identify issues related to Georgia's class size reduction (CSR) mandate. Survey results and follow-up interviews also provided an understanding of the initial school district responses to the Georgia CSR initiative as well as the perceptions of superintendents regarding this mandate.

Based on the findings of this study, several conclusions were drawn. The CSR mandate affected the availability of school facilities. Most school systems had to add classrooms as a result of the CSR mandate particularly at the K-3 level. New construction was the preferred method of providing additional classrooms. Renting/purchasing portables and using floating teachers were also commonly utilized options. Some systems chose to convert teacher preparation rooms/lounges into classrooms.

Most superintendents felt the state had not provided sufficient funding to implement the mandate. As a result, SPLOST was the most common method superintendents sought for additional funding. Because of the mandate, most superintendents had to make modifications to their Five-Year School Facility plan as well as reorganize their school construction priorities.

The perceptions of superintendents regarding the impact of CSR varied by system size in certain areas. As system size increased, so did the estimates of additional facilities cost. The perceptions of superintendents regarding the impact of CSR also varied by system wealth in certain areas. High wealth systems were less likely to perceive the CSR mandate as causing financial difficulty for their system than medium or low wealth systems. The funding options utilized by high wealth systems differed from those of medium and low wealth systems. High wealth systems were less likely to pass a SPLOST or increase property taxes than medium or low wealth systems, but were more likely to utilize grants, private donations, and fund balances/fund equity to address their additional classroom needs.

A thorough review of the literature revealed that the majority of CSR studies focused on the effects of CSR on student achievement. There have been very few studies conducted that have documented the effect of CSR on the facility planning process of schools. This study helps to fill this void in the literature.

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CHAPTER I

INTRODUCTION

After the release of “A Nation at Risk” in 1983, many Americans became critical of public education in the United States. Many cited this report as proof that America’s schools are failing miserably (Jehlen, 2001). This report stirred lawmakers around the country, prompting thousands of educational reform efforts. Nearly twenty years later, state legislatures are still searching for school improvement initiatives that might improve the educational progress of their students. Business Education Compact (2001) reported that a variety of educational reform efforts are currently being carried out across the nation to try to ensure that American students are getting a quality education.

General Introduction

Class size reduction (CSR) is just one of the popular education reform efforts. It is a very simple concept to understand (teachers having fewer students) but difficult to carry out (Boze, 1999). It gained national attention in 1998, when President Bill Clinton in his State of the Union address proposed a \$12.4 billion federal initiative to reduce class size. President Clinton’s goal was to reduce class size in grades 1-3 to a nationwide average of 18. In order to accomplish this goal, the \$12.4 billion would be used to hire 100,000 qualified teachers over seven years. Congress approved the program in a last-minute budget deal and on October 21, 1998, the Federal CSR program was signed into law (U.S. Department of Education, 2000). President Clinton was unable, however, to

secure funding for the full seven-year period. When Congress approved the CSR program, they allocated funding on a year-by-year basis (Sack, 2001).

Murray (2000) researched the political popularity of CSR. She found that in the November 1998 elections, 16 gubernatorial candidates had reducing class size as part of their campaign platforms. During a six-month period in which she reviewed newspapers, she discovered over 640 newspaper headlines dealing with the issue of class size. She found that most schools had to be creative in order to reach their CSR goals. Schools reported juggling class schedules, reallocating resources, purchasing portables, and, in some states, year-round scheduling and team-taught classes in order to reduce class size. She also found that most of the research on CSR attempts to answer the following two basic questions: “Is there a relationship between class size and achievement, and if so, what is the optimal class size?” (Murray, 2000, p. 109).

The 1998 elections brought promises to improve education in the state of Georgia. These promises were fulfilled on March 16, 2000, when the Georgia General Assembly passed the A-Plus Education Reform Act of 2000 (Bynum, 2000). According to a report released by the Georgia School Superintendents Association (GSSA, 2000), this legislation “is intended to be a comprehensive education reform statute designed to increase student academic performance and to hold local schools accountable for student progress” (p. 1). One of the ways that the state hoped to accomplish these goals is through Section 20-2-181 of the Act. This section of the bill mandated reductions in class size for Georgia schools. The many provisions of this mandate have had different impacts on local school systems, individual schools, teachers, and students in Georgia.

Georgia's governor agreed to allow school systems to phase in the CSR over a four-year period (Bynum, 2000). During this time frame, school systems must make several changes. Kindergarten class sizes must be reduced from 28 to 21 students. The mandatory maximum class size for first through third grades will be 21. Core subjects in all other grades will be capped at 28 (Georgia Department of Education, 2000). These significant decreases in class sizes may present serious challenges for school systems.

Abramson (2000) reported that over the last decade school districts in Florida and Georgia have had the greatest amount of school construction in the nation. Enrollments at public schools in these states are projected to continue to grow over the next several years. Argon (1998) stated that "the school-age population is booming - there are more students attending today's schools than at any other time in this nation's history, and new records are projected to be set each year through at least 2007" (p. 6). Because of this growth, many school districts in Georgia are constructing new schools and renovating existing facilities.

School districts may need additional teachers and facilities because of CSR. A Georgia Department of Education report estimates that 7,217 additional classrooms will be needed to comply with the CSR mandate. The cost of these additional classrooms is estimated to be between \$500 and \$900 million. The cost will vary depending on whether the classrooms will be added to existing schools or combined into brand-new schools. According to the Department of Education Report, the rapidly growing suburbs of Atlanta are expected to need the most new classrooms. It is in these areas that school construction already cannot keep pace with enrollment (Badertscher, 2000).

If the CSR mandate results in increased school construction and renovation, Georgia school superintendents will have to evaluate how they approach facility planning. Costs and implementation obstacles will have to be considered. The Georgia CSR mandate may affect their long- and short-range facility planning process.

The process by which Georgia and other states receive federal class size reduction funds changed when on January 8, 2002, President George W. Bush signed into law the No Child Left Behind Act of 2001, which reauthorized the Elementary and Secondary Education Act of 1965. Following the transition from the Clinton administration to the Bush administration, CSR was no longer a high priority. This new law consolidated the federal CSR program with the Eisenhower professional-development grant program. This new program called the Improving Teacher Quality State Grants program created a new block grant program focused on teacher quality. This new program still allows districts to use federal funds to hire more teachers in order to reduce class sizes, yet it provides districts with more flexibility in how they choose to spend the federal funds they may receive (U.S. Department of Education, 2002).

Statement of the Problem

During the 2000 legislative session, Georgia lawmakers felt there was a need to improve education in Georgia. The A-Plus Education Reform Act of 2000 was passed in response to their concerns. One section of this act mandated that public schools reduce class sizes. Georgia's counties and schools are not sure how they are going to implement and finance the class size changes mandated by the education reform bill. Although the two main issues appear to be funding and space, teacher shortage is also an issue for

some counties. Systems are wondering how to find the classroom space and teachers needed to reduce class sizes.

Are the benefits of smaller classes worth the cost? The reform act did not provide funding for the construction of additional schools or classrooms. Taxpayers were concerned that this new bill would force property tax increases. Governor Barnes denied these allegations. In an attempt to alleviate these fears, he asked the 2001 legislature to allot \$468 million in additional funding to help school systems reduce their class sizes. For many systems this additional money will not be enough. How will these school systems be able to comply with the governor's reform bill?

This new mandate will have a tremendous impact on the facility needs of some school systems. Because some school systems are growing at such rapid rates, the need for new facilities or renovation of existing facilities is a constant challenge. School construction projects involve large sums of money. Superintendents and local school boards will have to examine their facilities and determine how they are going to comply with the provisions of this new law and the projected population growth of their systems.

While there have been numerous studies conducted that examine the relationship between class size reduction and student achievement, there is a void in the literature concerning the impact of class size reduction on facility planning. Tennessee and California are two states that have recently enacted widespread class size reductions. Tennessee's initiative greatly influenced the California mandate. Tennessee had adequate space for implementing smaller classes, yet in California CSR only worsened an already existing crisis. Very few research studies have examined the impact of state CSR initiatives on facility planning.

Because the reform bill was only recently passed, there have been no research studies conducted that examine the impact of this class size reduction mandate. There exists a need for research to focus on the ways in which school systems are implementing the class size reduction program, how they are financing the facility improvements, and what effect class size reduction is having on their long- and short-range facility planning. The purpose of this study was to determine the effect this mandate is having on the facility planning process of Georgia school systems.

Research Questions

The main research question being addressed by this study was: What is the perceived impact of mandatory class-size reduction on school facility planning in Georgia school systems? The following subquestions were addressed in this research study:

1. What are the perceptions of superintendents regarding the impact of CSR on the availability of facilities?
2. What are the perceptions of superintendents regarding the measures school systems could use to address the immediate need for classroom space?
3. What are the perceptions of superintendents regarding the impact of CSR on the funding of facilities?
4. What are the perceptions of superintendents regarding the impact of CSR on short- and long-range facility planning?
5. Do the perceptions of superintendents regarding the impact of CSR vary by system size?

6. Do the perceptions of superintendents regarding the impact of CSR vary by system wealth?

Importance of the Study

Numerous studies have been conducted to assess the effectiveness of CSR. The majority of researchers have examined the relationship between class size reduction and student achievement while neglecting its impact on school facility planning. A need existed for a reliable body of research that documents the effect of CSR on the facility planning process of schools. This study filled this void in the literature.

As of this date, no studies have been conducted that assess the effects of the 2000 Georgia Education Reform's CSR initiative on facility planning. This study provided research that described how schools are implementing the CSR mandate, how it is affecting their facility needs, and how it is affecting their facility-planning process. It provided information for school systems that are experiencing rapid growth and school construction. School systems can see what measures other systems are taking to implement the CSR mandate. This study also identified the challenges and the areas of concern that are related to the class size reduction initiative.

This study could be beneficial to school systems which are actively planning for school facilities. It serves as a summary of implementation methods throughout the state of Georgia. This study may encourage researchers to conduct future analyses of Georgia's CSR mandate. No money was provided for the evaluation of the CSR initiative contained in the A-Plus Education Reform Act of 2000. Research was needed to illustrate its effects on the facility needs of Georgia school systems.

This study provided information to local and state governments. Policy makers and district leaders lack specific information about the challenges and concerns that school systems are facing as a result of this mandate. This study provides them with information regarding local realities. This information can help them improve the class size reduction initiative. It can also help them in planning and developing implementation strategies for future major reform efforts, especially those that affect the facility-planning process of schools.

The researcher is interested in this topic as an educator and taxpayer. If the researcher's local system has to add new classrooms to comply with the CSR mandate, where will the system get the funds necessary to build these classrooms? Will the school system have to raise property taxes in order to accommodate these new classrooms that will be needed to comply with the mandate?

The researcher is also interested in discovering how this class size reduction mandate will affect education in Georgia. How are systems going to meet their facility needs? Will schools have to shift construction priorities? As a taxpayer, the researcher is interested in finding out how systems will afford to implement the changes that are required by this mandate.

Assumptions

The following were the assumptions of this study:

1. Superintendents who participated responded honestly to the survey and the interview.
2. School systems that responded represented a good sample to make generalizability meaningful.

3. There were varying levels of support and resistance to the implementation of the class-size reduction mandate.

Limitations

The following were found to be the limitations of this study:

1. The study was conducted while the mandate was being implemented.
Therefore, some innovations and concerns will arise after the survey has been completed.
2. This study was conducted only within the state of Georgia, and it may not be possible to generalize these findings to other states.

Definition of Terms

The following terms have been defined for use in this study:

A-Plus Education Reform Act of 2000

This is an alternative title for the Georgia Education Reform Act of 2000 in which the class size reduction requirements and funding for House Bill 1187 were identified.

Class size reduction

In this study, class size reduction refers to reducing the number of students enrolled in a particular classroom according to the Georgia Education Reform Act of 2000.

Full-Time Equivalent (FTE)

A school system's student enrollment adjusted for the various instructional program weights used to derive state funding for local school system's educational programs.

Qualified Zone Academy Bond (QZAB)

The QZAB is a taxable bond that is issued by the school system. It is a federal government program that allows qualifying school systems to secure interest-free or low-interest loans. Once a federal institution purchases the bond, instead of receiving interest payments from the school, the lender receives a tax credit.

Quality Basic Education Act (QBE)

This is a major educational reform act that was passed in 1985 by the Georgia legislature. It revised the state-aid formula to provide funding on a per-pupil basis, according to the student's grade level and particular needs. It set different funding levels for different programs, such as special education and vocational education.

School facility planning

It is a general term used to describe the process of planning school facilities. The process consists of creating a vision and comprehensive plan for school facilities; it involves long- and short-range planning, as well as financial planning.

School system sizes - Small, Medium, or Large

For the purposes of this study, sizes of school systems have been defined using the Georgia Department of Education's systems profile reports.

A small school system has been defined as a system with a student population of 1,999 or fewer students.

A medium-sized school system has been defined as a system with a student population of 2,000 through 9,999.

A large school system has been defined as a system with a student population of 10,000 students or more.

School system wealth – high wealth, medium wealth, or low wealth

For the purpose of this study, school system wealth has been defined using the Georgia Department of Education's system profile reports.

A high wealth school system has been defined as a system that has general fund expenditures per FTE of \$6300 or more.

A medium wealth school system has been defined as a system that has general fund expenditures per FTE between \$5600 and \$6299.

A low wealth school system has been defined as a system that has general fund expenditures per FTE of less than \$5600.

Summary

The A-Plus Education Reform Act of 2000 has given school districts the opportunity to make changes to the educational process in Georgia. Meeting the mandated class size reductions in this bill has challenged school systems. These challenges have required some creative problem solving. The experiences and difficulties that were encountered during the implementation of the mandated class size reductions needed researching, documenting, and reporting. The purpose of this study was to explore the perceptions of school superintendents regarding the impact of mandated CSR on the facility planning process of their schools.

CHAPTER II

REVIEW OF LITERATURE

Introduction

A review of the many class size reduction (CSR) studies, reviews, and summaries can help one develop an understanding of this popular education reform option. In order to understand the wealth of information available on CSR related to this research study, this review of literature was divided into six sections. The first section, Class Size Reduction Research, presents an overview of important research on class size reduction, including both positive and negative findings. The second section, Recognized State Efforts, examines several nationally recognized statewide efforts to improve student achievement by reducing class sizes. The third section, Implementation Issues, discusses the major challenges associated with CSR. The fourth section, Georgia's CSR Initiative, provides the history of Georgia's CSR initiative and possible implications. Because this mandate may require schools to construct or renovate facilities, the fifth section explores the construction funding options that are available to Georgia school systems. The final section reviews factors, other than CSR, that may affect the facility planning process of schools.

Class Size Reduction Research

There have been numerous studies conducted regarding the issue of class size reduction. Boze (1999) reported that over 1,100 studies have attempted to examine the relationship between class size and student achievement. Researchers have used a variety

of data and methodologies, including both experimental and quasi-experimental methods. Still, the issue of class size and its effect on achievement remains a highly debatable and controversial issue. The following is an overview of the major studies related to this topic.

The Seventies and Eighties

A major milestone in class size reduction research was the meta-analysis of Glass and Smith (1978). They conducted the first major extensive review of the research on class size and student achievement in 1978. They did a meta-analysis of 77 empirical research studies that had been conducted over the previous 70 years. Their conclusions were based on their analysis of 725 effects from these 77 different studies. The two primary conclusions from their study were that smaller classes improved student achievement, and in order to make important impacts on student achievement, class size needed to be reduced below 20 students, preferably to 15 students.

The Educational Research Service criticized the Glass and Smith study. So in 1982, Glass and Smith reanalyzed their data. They found that as class size increases, student achievement decreases. They were able to reiterate their initial finding that there was a link between student achievement and class size (Glass, Cahen, Smith, & Filby, 1982).

The release of the Glass and Smith study initiated the examination of the relationship between class size and student achievement by researchers. The National Education Association (NEA) in 1986, in response to the growing popularity of the issue of class size, published a review of major class size research reports. The NEA study found that students who were economically disadvantaged or those with lower academic

ability received more benefit from reduced class sizes than those students who were not. After reviewing all of the available studies, the NEA was unable to propose an appropriate class size number that was best for all grades and subject areas (Kickbush, 1996).

During the same year, 1986, Robinson and Wittebols reviewed more than 100 class size studies using a related cluster analysis approach. This approach involved grouping similar kinds of research studies. Their review also revealed that economically disadvantaged students benefited more from reduced class size, as did minority students. They found that CSR increased reading and math achievement at the primary level. They cautioned that CSR alone did not necessarily increase student achievement. They stated that teachers of smaller classes must alter their instructional methods and procedures if they are to be successful.

Three years after these analyses, Tomlinson (1989) conducted a review of class studies from the 1950s to 1986. His study attracted attention because of the negative implications that he reported. His review revealed that small reductions in class size did not increase student achievement and that only drastic reductions in class size would result in increased student achievement. He warned that these major reductions would not be financially feasible for many schools and that drastic reductions could result in teacher shortages and a decline in teacher quality.

Another study reiterated Tomlinson's finding about drastic reductions. Odden (1990) found that class size reduction can have a positive impact but only when the reduction is significant. He stated that only when class size is reduced to a teacher/student ratio of one to three do significant increases occur. He noted that teachers

are more likely to engage in effective instructional strategies when their classes are smaller.

The year 1989 produced another significant class size-related study, that of Robert Slavin (1990). His review is often touted because of his focus on high-quality research studies that were conducted in accordance with accepted scientific standards. He employed a best evidence synthesis strategy, analyzing only those studies that met three specified criteria: (1) class size had been reduced for at least a year, (2) large classes were compared to classes of 20 students or less, and (3) the students in the large and small classes had to be comparable. He found that CSR did have a small effect but that this effect was not enduring. After his analysis, Slavin pronounced the Glass and Smith study flawed and questioned their findings.

The Nineties

The decade of the nineties saw the issue of CSR continue to gain popularity. The U.S. Department of Education did not ignore this and commissioned a study to review CSR findings. This study summarized the existing research on reducing class size and reported on the efforts of various states to implement CSR initiatives. The report was released in May of 1998, only three months after the CSR issue had gained national attention in President Clinton's State of the Union address. The report showed that 25 states already had started or were considering some sort of CSR initiative. The report also revealed that the majority of the research had been conducted at the primary level and that less was known about the effects of smaller classes on older children. The report provided three overall conclusions about CSR:

- (1) Research shows that smaller classes promote student achievement in the early grades. The significant effects of class size reduction on student achievement appear when class size is reduced to a point between 15 and 20 students.
- (2) If class size is reduced from substantially more than 20 students per class to below 20 students, the related increase in student achievement moves the average student from the 50th percentile up to above the 60th percentile. For disadvantaged and minority students the effects are larger.
- (3) Students, teachers, and parents report positive effects from the impact of class size reductions on the quality of classroom activity. (U.S. Department of Education, 1998, p. 1)

In October of 1998, Congress approved a Federal CSR program. Because of the amount of money allocated for this initiative, the U.S. Department of Education commissioned a study to examine the initial benefits of this federal program. The results of the study, released in September of 2000, discussed how the federal dollars were allocated, where they were sent, and how schools were using these funds. The study reported that part of the money had been used to hire approximately 29,000 new teachers. As a result of this funding, 1.7 million children were learning in smaller classrooms. The program reported that it had played an instrumental role in turning around low-performing schools, improved reading achievement, and increased individualized instruction and classroom management (Cohen, Miller, Stonehill, & Geddes, 2000).

Recognized State Efforts

After the release of the Glass and Smith study in 1978, many states began to seriously consider the issue of class size. Several states, after studying the research, decided to reduce their class sizes. This section of the literature will examine CSR initiatives in Indiana, Tennessee, Wisconsin, and California. These states have received national attention because of their efforts to reduce class size.

Indiana's Project Prime Time

One of the earliest efforts to reduce class size took place in Indiana. This state

was impressed by the potential benefits of smaller classes and piloted CSR on a small scale during the 1982-83 school year. It then instituted a statewide CSR initiative in 1984 called Project Prime Time. According to information from the Indiana Department of Education (2001), Prime Time is a funding formula that is used to reduce class size in kindergarten through third grade. Class sizes were initially reduced to 18 in first and second grades followed by reductions in kindergarten and third grade. Since its inception, several research studies have evaluated its effects (McGivern, Gillman, & Tillitski, 1989; Mueller, Chase, & Walden, 1988; Robinson, 1990; Turner, 1990).

Finn (1998) reviewed these studies and found that Indiana's smaller classes resulted in more time on task, individualized instruction, and fewer discipline problems. Teachers also reported increased productivity and satisfaction. He found the results for academic achievement to be mixed. Some studies showed superior outcomes for smaller classes while others showed larger classes outperforming the smaller ones.

Because Project Prime Time was designed as a demonstration project, it did not follow strict scientific guidelines, which Finn stated are needed for a thorough evaluation. Not all classes were reduced to 18 and some classes with more than 18 students were considered small because they contained a paraprofessional. Because Indiana failed to implement a well-defined, small class intervention, Finn argued that evaluations of this project should not be used to confirm or refute class-size effects.

Tennessee's Project STAR

Indiana's CSR efforts captured the attention of policymakers in Tennessee (Ritter & Boruch, 1999). In 1985 the Tennessee legislature authorized a four-year program and study to determine the effects of CSR. This CSR initiative became known as Project

STAR (Student/Teacher Achievement Rationale). This program has resulted in some of the most convincing studies in support of class size reduction. It is also recognized as “one of the few truly scientific experiments ever conducted in education” (Molnar, 1999, p. 27).

Many states implement CSR initiatives and fail to fund a comprehensive evaluation of their program, as was the case in Indiana. Tennessee policymakers wanted to know whether or not their CSR experiment was truly effective so they provided funding to evaluate Project STAR. The Tennessee Department of Education contracted with a consortium of public and private universities to conduct studies of Project STAR (Illig, 1996). In 1989, they authorized the implementation of a second phase of the project, Lasting Benefits, to further track students (Hirsch, 1998).

Project STAR was conducted in 79 elementary schools from 1985 to 1989. Students in these schools were randomly assigned either to small classes of 13–17 students, regular classes of 22-25 students, or regular classes with a teacher’s aide. The small class size of around 15 was chosen based on the results of the 1978 Glass and Smith study (Ritter & Boruch, 1999). At the end of this four year period, the Project STAR consortium examined the 11,600 students and teachers that had been randomly assigned to these various classroom settings (Finn, 1998; Molnar, 1999).

The research studies showed that students in smaller classes achieved substantially higher test scores than the students in the regular classes. Smaller classes had an obvious advantage over larger classes in reading and mathematics at the primary level. Small classes also increased the promotion rates of students from each grade level

(Finn, 1999; Finn & Achilles, 1999; Molnar, 1999; Pate-Bain, Achilles, Boyd-Zaharias, & McKenna, 1992).

The Lasting Benefits Study followed STAR students after they had completed the third grade, which was the final grade in the STAR project. Several studies have found that the higher achievement from the small-class pupils continued with them through high school (Finn & Achilles, 1999; Hirsch, 1998; Nye, Hedges, & Konstantopoulos, 1999; Pate-Bain, Fulton, & Boyd-Zaharias, 1999). STAR students also graduated from high school on schedule at significantly higher rates than non-STAR students did (Boyd-Zaharias & Pate-Bain, 2000).

Results from Tennessee's STAR program also revealed that urban students, particularly minority ones, benefit more from class size reduction than other students do. Based on this evidence, Tennessee implemented Project Challenge in 1990. This program implemented smaller class sizes in 16 of the state's poorest school districts. Minority students attending these schools had significantly higher self-concepts and their third grade motivation scores were higher than their peers (Achilles, Finn, & Bain, 1997). Another research study has revealed that Project STAR students, especially African-Americans, were more likely to take college entrance exams than non-STAR students (Krueger & Whitmore, 1999).

Project STAR was a major experiment in class size reduction. Bracey (1995) found that 11 states had cited Project STAR results as a driving force behind their legislative efforts to reduce class size. Research will continue for many years on STAR students. Future studies will focus on STAR students' experiences in higher education as

well as their social outcomes such as juvenile detention, adult imprisonment, welfare, and employment experience (Molnar, 1999).

Wisconsin's SAGE Program

The state of Wisconsin, impressed with the results of Tennessee's STAR project, decided to implement their own CSR initiative. In 1995, the state passed legislation to reduce class size to 15 in primary schools that have high numbers of low-income students. This initiative was called SAGE (Student Achievement Guarantee in Education) and was modeled after the STAR program. Twenty-one school districts participated in the initial implementation of the program during the 1996-97 school year. SAGE was designed to be implemented in stages, beginning with reductions in first grade, followed by second, then third grade (Molnar et al., 1999).

The SAGE program included reforms other than CSR. Schools that agreed to participate in the SAGE program had to implement a rigorous academic program as well as provide before- and after-school activities for students and community members. Teachers were required to document student progress in minute detail and participate in additional staff development (Halbach, Ehrle, Zahorik, & Molnar, 2001).

Legislation was also passed that required annual evaluations of the SAGE program. At the end of the first and second years of implementation, test scores for first graders increased from 12% to 14 % over those of students in regular size classes. One of the biggest gains was seen in the scores of African-American males who participated in the study. Their total average achievement scores increased significantly both years as compared to those African-American males attending non-SAGE schools (Gursky, 1998).

In addition to student achievement, classroom changes were also examined. Analyses of qualitative data showed that teachers reported spending more time teaching than on crowd control and were using more individualized instruction. Teachers reported that smaller classes were definitely allowing them to alter their methods of teaching. The SAGE evaluation studies supported the theory that how teachers teach in smaller classes is the key to whether CSR improves student achievement (Halbach et al., 2001).

Millions of dollars have been spent researching the SAGE program (Jacobson, 2001). The research appears to support CSR. However, because of the additional reforms implemented along with the SAGE initiative, some researchers caution that it would be foolish to attribute increased student achievement solely to CSR (Boze, 1999).

California's CSR Initiative

In 1994, the National Assessment of Educational Progress released a report ranking the reading ability of California students last in the nation. This report, along with California's positive economy, prompted California legislators to begin looking at reducing their schools' class sizes. Project STAR results were one of the major factors influencing California legislators' decision to reduce class sizes (Inchausti, 1999; Stecher, Bohrnstedt, Kirst, McRobbie, & Williams, 2001).

Beginning with the 1996-97 school year, California implemented a voluntary, statewide CSR initiative to reduce classes in grades 1-3 to no more than 20 students. The goal of this program was to improve student achievement, especially in the areas of reading and mathematics (Bedell, 1999). Even though the program was voluntary, the state provided a financial incentive to those school districts that participated. By the end

of the third year of implementation, 98.5% of eligible school districts were participating in CSR (Stecher et al., 2001).

The California project differed from the STAR program in that STAR was a controlled experiment and the California initiative was not. The California initiative was also implemented on a much larger scale and more rapidly than the Tennessee study. Therefore, problems were encountered in California that were not experienced in Tennessee. For example, CSR in California exacerbated an already existing teacher shortage. This was not the case in Tennessee (Molnar, 1999).

Soon after the initiation of CSR in California, representatives from five California research and policy organizations formed the CSR Research Consortium. The function of the consortium was to track the effects of the CSR program for the state legislature. Since its inception, the group has reported on the effects of CSR on student achievement as well as its effects on all aspects of the California education system (Keller, 2000; Stecher et al., 2001).

By the end of the third year of implementation (1998-99), the Consortium had completed two evaluations. The results of these two studies revealed that CSR was having positive effects on student achievement and parent attitudes. Achievement gains were similar among all students regardless of their socio-economic status or ethnicity. This was not the case in Tennessee and Wisconsin where CSR had helped to close the achievement gap for economically disadvantaged and minority students. As in Tennessee and Wisconsin, teachers in California's reduced classes reported more individualized instruction, increased parent/teacher communication, and improved classroom management (Stecher et al., 2001).

Implementation Issues

When states decide to reduce class sizes, they must realize that CSR may require a sizable commitment of funds. They must also consider CSR's impact on the number of teachers, facilities, materials, and services available. Implementation problems vary from state to state and even school system to school system. This section of the literature will review the major implementation issues related to CSR.

CSR and Funding

CSR is an expensive education reform option. When a state decides to implement a CSR initiative, they must appropriate the funds necessary to achieve their objective. Some school districts reported receiving adequate funds from their states, while for others, CSR created financial difficulties. States were also able to receive funds from the federal Class-Size Reduction Program. This program, however, provided funding to schools based on poverty levels. Those schools with highest rates of student poverty received the majority of the money (Naik, 1999).

To help implement CSR the state of California passed a funding initiative to accompany their CSR mandate. Tressler (1997) reported that the funding program provided "\$25,000 per eligible teaching station to those schools implementing class size reduction (p. 4)". The law required school districts to reduce their class sizes before they could receive any funds. This created a financial hardship for many school districts. Tressler found that after districts around the state had reduced their class sizes, the \$200 million that was appropriated for the program was insufficient and did not meet the statewide need.

The California mandate did not reimburse districts the actual cost of CSR. California school districts received a specific dollar amount per student in a reduced classroom, regardless of the effort required to reduce the class size. In some districts CSR costs were less than the reimbursement while in others implementation costs exceeded the state reimbursement rates. CSR “was a financial boon for some districts and a financial strain for others” (Reichert, 2000, p.14). In districts that already had small class sizes, the CSR was inexpensive and often free. But for those districts whose class sizes were large and space was limited, CSR was very costly.

CSR can result in another unintended financial expenditure. Ogawa, Huston, and Stine’s 1999 study of nine California school districts found that CSR caused many less-affluent schools to hire minimally qualified teachers. Their results indicated that policy makers needed to allocate funds to train CSR teachers who lack experience and credentials. They also recommended the adoption of programs that provide monetary incentives to teachers who are willing to work in districts with high concentrations of students from minority and low-income backgrounds. They stated that if these issues are not addressed, the CSR policy, which was aimed at solving the problem of overcrowded classrooms, may worsen the problem of a limited pool of quality teachers.

Some school districts consider CSR to be such a worthwhile school improvement initiative that they will initiate a CSR effort of their own even when there is no state mandate present. The Burke County school district in Morganton, North Carolina decided to fund its own CSR initiative. The district used contingency funds from their current operating budget to initiate a reduced class-size program at the elementary level. After the first year evaluation revealed positive results, local support for the program over

the next five years increased from \$274,000 to \$1.2 million (Egelson, Harman, & Achilles, 1996).

Hirsch (1998) questioned whether limiting class size is a smart investment. He reported that international comparisons demonstrate little support for CSR. He found that the average scores of eighth graders in Korea and Japan were significantly higher than their U.S. counterparts in math and science on the Third International Mathematics and Science study. It is interesting to note that the relative class size was 49 for Korea and 36 for Japan and 23 here in the U.S. In his article, Hirsch quoted Chester Finn of the Hudson Institute think tank as saying, "For \$12 billion you could retrain today's teachers so they knew their subjects. You could give each of the nation's 2.7 million teachers a \$1000 tuition grant to go learn math or really effective techniques for teaching reading" (p. 16). In a study of 60 previous research projects Hirsch found that spending on teacher education had the greatest impact on student achievement and that lowering the student teacher ratio had a smaller effect than increasing teacher education, experience, and salaries.

Gardener (1998) argued that CSR is cost effective. The expense of implementing smaller classes at the primary level is offset by the resulting decrease in within-grade retentions, reduced high school dropout rates, diminished needs for remedial instruction and long-term special education services as well as increased teacher job satisfaction and retention. Finn (1998) proposed that the main question when it comes to the cost effectiveness of CSR is how does one determine the dollar value of particular increments in school achievement?

Achilles (1999) recommended that when determining cost effectiveness, it is important to take into account the costs of retention and remediation. Generally, standard operating costs are determined by dividing the total amount of money spent by the number of enrolled students. If cost-effective results for CSR are computed by dividing the amount of money spent by the number of graduates or students meeting academic achievement standards, then the results may vary for cost effectiveness.

CSR and Facilities

Class size reduction may also increase the demand for more classrooms. Because of this, CSR initiatives require careful planning and attention. When these initiatives are implemented without proper funding, it can create a strain on a state's educational facilities. California's CSR initiative created a facilities crisis for many school districts. Because of this crisis, it is estimated that CSR will cost California billions of dollars to fully implement (CSR Research Consortium, 2000).

Tressler (1997) researched the implementation of California's class size reduction initiative. She found that urban areas had limited space to house new classrooms that were needed because of the CSR. Some districts had to establish year round schooling because of space requirements while other districts purchased portable classrooms to house students. Districts across the state were faced with a shortage of qualified teachers, limited space to house new classrooms, and a short implementation time (three months planning and a six-month implementation).

Rountree (1997) also conducted a survey on the implementation of the California CSR initiative. She found that the California Department of Education received 14,000 requests for facilities grants during the initial implementation year. Of those requests,

only 8,000 were funded. She reported that purchasing or renting portables was the most commonly reported method used to house additional classrooms. Reconfiguring space was the second most popular option. She found that “of the new classrooms, 56 percent were created with portables, 8 percent were created from unoccupied space, 8 percent were shared classrooms, 8 percent were converted from other uses, 7 percent were created by reconfiguring grade levels among schools, 4 percent were divided classrooms, and 9 percent were created in some other ways” (p. 80). Based on the results of her survey, she found that the estimated total cost of new facilities as a result of CSR was \$500 million - more than double the state-allocated \$200 million.

The Nevada legislature passed a CSR act in 1989. This act called for a reduction in student-teacher ratios for kindergarten through third grade. Sturm (1997) found that establishing a classroom with one teacher and 15 students was used to reduce 60-70 percent of the first and second grade classes. The remaining classes had to use flexible groupings, multi-age grouping, or two teachers with 30 students sharing a classroom.

To fully implement its CSR program, the Burke County School system in North Carolina purchased additional modular units and remodeled and reopened older schools that had previously been closed (Egelson & Harman, 2000). Johnson Elementary School in Franklin, Tennessee dealt with its lack of space by using hallways for smaller groups and by housing the kindergarten classes in another district (Howley-Rowe, 2000).

The SAGE program in Wisconsin dealt with the issue of classroom space by utilizing a variety of classroom interventions. One method was to have teachers share classrooms. In some schools, erecting a temporary wall in a classroom to create two teaching spaces created shared-space classrooms. In other instances, two teachers would

work together in one room to teach as many as 30 students. There were a few schools that utilized the three-teacher team classroom, where three teachers teach 45 students collaboratively. These shared-space classrooms and team-taught classrooms were found to be as effective as one-teacher classrooms. Teachers who had to share classrooms suggested that additional training on how to share a classroom would have been helpful. Some schools had to utilize floating teachers in order to reduce class size (Molnar et al., 2000).

Some school systems dealt with the issue of space by implementing parallel block scheduling. On a parallel block schedule, class size is reduced for part of the school day. Regular-sized classes are split in half for reading and math instruction. While one half of the class remains for math and reading, the other half attends exploratory classes such as music, art, or computer (Egleson, Harman, & Achilles, 1996).

Other school districts used a modified block extension program instead of the parallel block schedule. At Fall City Elementary School in Fall City, Washington, students on the modified block program spend 35 minutes every other day in a small class setting. Each day during this time, half of the students remain in the regular classroom for instruction in reading and mathematics while the other half go to an extension classroom for enrichment activities (Cotton & Linik, 2000).

When a school system reduces class size, classroom availability may impact educational programming. A change in educational programming may result when programs are added or deleted from the school's curriculum or if these programs are relocated from school to school (Chan, 1998). The majority of the time, CSR results in a reduction of school capacity because the number of classrooms in the school remains

unchanged, which often leads to the deletion of programs from the curriculum. This occurred in California when classroom space was taken from special education, music, art, and computer labs (McRobbie, 1997).

Some schools have opted to reduce class size only for academic subjects such as reading, mathematics, science, and history. Some school systems have allowed their special education and art classes to be larger so that reading and math classes are smaller (Pritchard, 1999). Tressler (1997) found that 32% of schools surveyed reported that they had relocated or eliminated existing programs because of CSR's effect on the availability of facilities.

CSR and Facility Planning

CSR mandates may also affect a school system's facility planning. School facility planning is defined as the complicated task of planning for school buildings (Earthman, 2000). Effective facility planning is needed to anticipate facility needs in the context of programs and student demographics. CSR mandates may affect each school differently, therefore, school systems must develop strategic facility plans that best meet the needs of that system's schools.

In her 1996 analysis of the initial implementation of the California CSR mandate, McRobbie reported that effective implementation was going to require a comprehensive planning approach. She found that effective facility planning would require that educational leaders work closely with parents and teachers to resolve implementation obstacles that resulted from the CSR mandate. This planning process was also going to require the imaginative use of new and existing resources. She advocated that policy makers at all levels attend to facility issues or risk compromising expensive investments

in smaller classes. She also found that long range planning was going to be needed to anticipate facility needs in the context of the California CSR mandate.

California's CSR mandate did create facility problems for many school systems. Each system's leaders reacted differently to these problems. Rountree's (1997) interviews with California school district leaders revealed that firmly established goal-setting and strategic planning processes increased their ability to respond to the problems and demands of implementing CSR. Leaders had to employ strategic procedures that fostered communication and collaboration in order to find classroom space. She found that districts able to respond quickly "employed a continuing data analysis process with clear maps pinpointing exact classroom and school enrollment, growth patterns, and inter- and intra-district agreements, a process that required updating weekly" (p. 91). Her study revealed that districts had to be able to adapt in flexible ways in order to implement the CSR program.

Rountree's study highlighted key elements that supported successful CSR implementation. These elements were as follows:

(1) CSR implementation decisions were based on beliefs about what is best for students rather than what district leaders believed could be immediately accomplished; (2) strategies were more successful when coupled with ongoing reform efforts, especially if aligned with specific educational performance goals for students; (3) successful implementation efforts required efficient, effective, and swift communication procedures that had previously been firmly incorporated in district operations; (4) favorable implementation efforts hinged upon organizational structures that reflected less bureaucratic models and extended power throughout multiple levels of the organization; (5) successful implementation efforts were enabled by professional development and support systems that included new and veteran teachers, administrators and parents. (pp. 121-122)

Adequate planning time is also a key element of effective facility planning.

Tressler (1997) found that educational leaders in Orange County, California believed that

they were not given enough time to effectively plan for and implement the CSR mandate. The majority felt that their implementation would have been more effective had they been given more planning time. They believed strongly that this lack of planning was going to lead to unforeseen consequences.

A thorough review of the literature has revealed that the majority of class size reduction studies focused on the effects of CSR on student achievement. The researcher found very few studies that address the impact of CSR on facility planning. It is this lack of research that makes this study relevant.

Georgia's CSR Initiative

As CSR gained popularity across the nation, policymakers in Georgia became interested in the effects of smaller classes on children's learning. After studying available CSR research, the Georgia legislature enacted a law in 2000 requiring school systems to decrease class size in the primary grades. This section of the literature will examine the history of Georgia's CSR initiative and potential implementation obstacles.

Governor's Education Reform Study Commission

In an effort to reform education in Georgia, Governor Roy Barnes in 1999 asked that the legislature approve the creation of a special commission to study education (R.E. Barnes, personal communication, September 10, 2001). HR 425 created the governor's Education Reform Study Commission and the commission was formed on June 7, 1999 with the understanding that the commission would be abolished April 15, 2000 (Professional Association of Georgia Educators (PAGE), 2000). HR 425 stipulated that the commission members would consist of the governor, five members of the House of

Representatives in consultation with the Speaker of the House, and five members of the Senate in consultation with the president of the Senate.

Governor Barnes was also given the power to appoint as members of the commission residents of Georgia “of recognized interest and expertise in the field of education, as he deems advisable” (Governor’s Education Reform Study Commission, 2000, p. 1). The commission was ordered to make a first report of its findings and recommendations, including proposed legislation, if any, to the governor and all members of the General Assembly on or before December 1, 1999, and a second report on or before April 15, 2000 (Governor’s Education Reform Study Commission, 2000).

In addition to the governor, state school superintendent, and legislators, the 64-member commission included representatives from business and industry, educational administrators, professors, teachers, board members, lawyers, and other professionals. It was their task to analyze Georgia’s educational process and make recommendations for improvements. The commission held its first meeting in June of 1999. Four committees were established and members were assigned to the Accountability, Funding, Seamless Education, or School Climate committees.

Jacobson (1999) found that the commission spent most of its time reviewing programs in other states, specifically North Carolina, Tennessee, and Texas. North Carolina and Texas had not received national attention for their CSR efforts like the state of Tennessee, but these states had been nationally recognized for a variety of other reform movements. The commission chose to examine these states because these states had low-test scores that had improved after the implementation of some type of reform effort (P. Dykes, personal interview, March 6, 2002).

Dykes (personal interview, March 6, 2002) stated that members of the governor's staff prepared issue papers for the commission committees. These papers summarized the major educational research findings related to various reform efforts around the nation. Committee members received these papers prior to each committee meeting so that they would have time to examine them and write down any questions they might have for the governor's staff. When the committee met, they would discuss the issue papers and ask questions of the governor's staff. Often committee members would listen to guest speakers, such as the Texas State school superintendent. At the conclusion of the committee meetings, members of the governor's staff would write up the findings and recommendations of each committee.

Two of the committees studied the issue of class size. These committees were the funding committee and the school climate committee. The funding committee was created to review how and where education tax dollars were currently being spent in Georgia and to assess what changes needed to be made in the Quality Basic Education formula, which is a weighted pupil formula that distributes funds to all instructional programs. They were also assigned the task of examining the method by which education construction projects were funded and to come up with alternative ways to plan and fund educational facilities (Governor's Education Reform Study Commission, 2000).

The funding committee reviewed research studies that had been conducted on CSR initiatives from the following states: Tennessee, Indiana, California, and Wisconsin. The committee specifically quoted the STAR and SAGE studies, indicating that these studies had shown that small classes promote higher achievement. Based upon these findings, the committee recommended that the Education Reform Study Commission

should consider lowering the maximum class size. It was their recommendation that these efforts specifically target kindergarten through third grade (Governor's Education Reform Study Commission Funding Committee, 1999).

The school climate committee was created to examine how to make the school environment a place where teachers and students can perform and achieve. They also looked at class size reduction research studies. They examined the issues of space and teachers, equity, complexity, public accord and accountability, and cost effectiveness. After reviewing the available research and discussing the implications, the committee arrived at the following conclusions. These conclusions are listed below:

Class/school size reduction positively affects student learning in all subject areas. Indications are that class sizes between 12 and 17 are optimal and that minority children and those in urban school settings show the most gains from such reduction in early grades. Several conditions are critical to the success of reducing class size, including an adequate supply of good teachers, sufficient classroom space, a representative mix of students in classes, and access to adequate materials and services for teachers (Governor's Education Reform Study Commission School Climate Committee, 1999, p. 13)

Based upon these findings, this committee also recommended that class size in Georgia be reduced to 15 students in kindergarten through third grade.

Georgia's A-Plus Education Reform Act

The Governor's Education Reform Study Commission used the recommendations from the various committees to draft HB 1187. This bill, whose purpose was to reform education in Georgia, was presented to the legislature when it convened in January 2000 (Georgia School Superintendents Association (GSSA), 2000). After much debate and controversy, HB 1187 became The A-Plus Education Reform Act of 2000 and was passed by the Georgia General Assembly on March 16, 2000. This bill amended or

created a total of 98 sections of the Georgia Code and was 179 pages long. It easily passed the House of Representatives with a vote of 134 to 39.

Because the bill made some very controversial mandates and recommendations, such as the elimination of teacher tenure, it received a great deal of negative publicity from Georgia's teacher organizations. Because of this publicity and the heated emotions generated by the bill, many senators were hesitant to support it and the bill was narrowly passed in the Senate by a vote of 33 to 22 (GSSA, 2000).

PAGE analyzed the final version of the Reform Act and reported the following specifications pertaining to class size:

Class size shall not exceed the funding class size by more than 20 percent, unless specifically authorized by the State Board; provided however that in no case shall the 20 percent maximum be exceeded for math, science, social studies, or English classes. Also the maximum class size for grades 1-3 shall not exceed 20 percent over the funding ratio except for art, music or P.E., and the maximum class size for special education, gifted and ESOL shall be set by the State Board. An aide may be used to increase the maximum class size in Kindergarten from 18 to 20 and may be used in all other programs to increase class size as allowed by the State Board, except that an aide shall not be used to increase the maximum class size in grades 1-3 (PAGE, 2000, p.1)

Potential Problems

As school systems around the state began to examine the CSR initiative, superintendents began to examine funding, classroom space, and teacher availability. Georgia's CSR initiative would require a considerable commitment of funds and could be affected by the availability of qualified teachers and a current statewide recession. For many districts classroom space was already at a premium and school systems were not sure where they would find the space required to house the additional classrooms that would be needed to comply with HB 1187's mandated CSR (Roedemeier, 2000).

Stephenson (1998) proposed that the adverse effects of CSR would be particularly noticeable in rural areas as well as rapidly growing areas of the state. These areas could experience a decrease in teacher quality in addition to a shortage of classrooms. If the supply of teachers remained the same and CSR increased the demand for teachers, these school systems would have trouble finding qualified teachers to hire. In order to prevent these problems, Stephenson recommended that Georgia should phase in CSR over several years.

Another potential problem could occur if architects, engineers, and contractors in Georgia are stretched to handle several projects at once due to the CSR mandate. This could result in design errors, cost overruns, poor workmanship, and delays. A construction crisis could develop from a lack of long-range, comprehensive planning (Carey, 2000).

These potential concerns did not go unnoticed by Georgia's governor. On April 19, 2000 when Governor Barnes attended the spring conference of the Georgia School Superintendents Association, he shared his plans for further educational reform in Georgia (Badertscher, 2000). The governor explained his reasons for several of the year's major reforms, including the CSR mandate. "That one change could eventually reduce the dropout rate and end social promotions, if students in smaller classes are able to stay on grade level, he said" (Badertscher, 2000, A10). He realized that schools would need more space to accomplish the CSR mandate, so he proposed a standard school building design that could be used several times by different systems. The governor also proposed en masse bidding on school construction projects, an idea he picked up from the

state of Florida. He was quoted as saying “In Florida, the schools may look bland, but they are good and functioning” (Badertscher, 2000, A10).

Another major obstacle was that the reform act did not provide initial funding for the construction of additional schools or classrooms. Georgia residents were concerned that this new bill would force property tax increases. Governor Barnes, in an attempt to alleviate the fears and concerns that many citizens and school systems were voicing, asked the 2001 legislature to allot \$368 million in additional funding to help school systems reduce their class sizes. School systems could request this funding by filling out a HB 1187 Needs Analysis Document. This document would allow school systems to amend their current local facilities plan to reflect the number of instructional units that they would need to reduce class sizes in accordance with HB 1187 (D. Cromer, personal interview, October 24, 2001).

Enrollment increases could also present problems for the CSR mandate. Enrollment in Georgia over the last decade has increased by 25%. From 2000 to 2010 projected state enrollment in schools is expected to increase by 78,000 students, a 5.4% increase. This will require 3,120 additional classrooms. The Georgia Department of Education reported that 7,217 additional classrooms will be needed just to comply with the CSR mandate. The state already has reported a backlog of school construction needs with many school systems having problems keeping pace with the annual growth of students (Badertscher, 2000).

The current conditions of many Georgia schools could also hinder successful implementation of the CSR mandate. According to a report from the U.S. General Accounting Office (1996), 26% of schools in Georgia need total replacement or extensive

repair. The cost to modernize existing Georgia schools to meet rising enrollments, equip schools with modern technology, and fund teacher professional development is estimated to be \$8.5 billion.

Successful implementation of the CSR mandate will also be affected by the availability of funds. Because of a statewide recession, Governor Barnes asked state departments to cut their budgets by 5% for the year 2002. Although he assured educators that state money for teacher salaries and construction projects would not be cut, this caused school superintendents to wonder how the budget cut would affect their systems and the implementation of HB 1187 (Lord, 2001).

Funding of School Facilities in Georgia

Enrollment increases, CSR mandates, and new program requirements can force school systems to either build new schools or renovate existing ones. Finding the money to fund these projects can be difficult. Traditionally, schools have been built with local funds and supplemented by state money. Argon (1996) found that the traditional forms of funding, bond issues and tax levies, are becoming more difficult to pass. Therefore, school systems across the nation have had to find alternative methods to raise money for their construction projects.

The responsibility for funding public school facilities in Georgia is shared by the state and local school systems. The Governor's Education Reform Study Commission's subcommittee on funding (Georgia School Boards Association Report, 1999) found that extraordinary demands were going to be placed on taxes to fund school construction in Georgia due to the growing demand for construction and the increased costs due to new technology and general inflation. As a result of their findings, they recommended that

there was a need for school systems to find alternatives for funding construction projects.

This section of the literature will examine the various options that Georgia school districts may use to finance their school construction projects.

State Funding

Georgia was one of the first states to provide money to local school systems to help them meet their school facility needs. In 1977, legislation was enacted that created Georgia's current funding program, the Capital Outlay Program. This program was developed to provide state funding for school construction and renovation based on identified needs rather than political debate. Each year systems receive an annual entitlement (paper credit) from the General Assembly. A school system receives entitlement funds based on their share of the total state need and a ratio of the total amount approved by the General Assembly for that fiscal year. Walker and Sjoquist (1996) found that each year school systems must decide whether to use their entitlement funds or save them for a future project.

Capital outlay funds may be used for the construction of new facilities, additions to existing buildings, as well as renovations and modifications of existing facilities. In order to obtain capital outlay funds, school systems are required to develop a five-year long-range facilities plan. This plan identifies all the facility needs of the system and specific cost estimates for proposed projects to address these needs. Walker and Sjoquist (1996) reported that once the State Department of Education has approved the plan, school systems might then request capital outlay funds

School systems are required to provide a certain percentage of local matching funds. These funds must be available at the time the system submits its capital outlay

application. Each system's local participation is based on the system's wealth per full-time equivalent student. School systems are not required to provide more than 20% nor less than 8% of the state approved construction costs. D. Cromer (personal interview, October 24, 2001) stated that a system may decrease its required local participation if it has funded projects listed in the local facilities plan before earning the state entitlement for them or if they have had to use funds from their maintenance and operations budget to fund capital outlay projects

Georgia's Capital Outlay Program only funds eligible construction costs. The state has predetermined standards that are eligible for funding. If a system wants to exceed these standards, then they are responsible for any additional costs that may be incurred. There are also certain requirements regarding funds obtained for renovation purposes. A school system may only receive these funds if the facility has not been previously renovated with state funds and if it was constructed prior to 1985. If the facility meets these requirements, the school system will receive a fixed dollar amount based on the age and condition of the facility. The Capital Outlay Program also restricts school systems from using their funds to purchase land or portable units. In addition, the money may not be used for site preparation and development expenses or furniture and equipment needed for the facility (Governor's Education Reform Study Commission Education Facilities Committee, 2000).

Because the Capital Outlay Program was developed during a period of declining student enrollment, it had to be amended when Georgia school systems began to experience increases in their student population. In 1994, the General Assembly created the Exceptional Growth Program to provide additional funds to those school systems

experiencing growth in their student population. According to information from the Governor's Education Reform Study Commission Education Facilities Committee (2000), the money allocated from this program may only be used to construct new schools or new additions at existing schools.

A 1999 amendment created the Low-Wealth Program. This program was designed to provide additional capital outlay money to those school systems with low property and sales tax wealth per student as well as low per-capita income. The legislation that created this program stipulated that the program would be abolished on June 30, 2002 but the 2001 legislature voted to continue it through 2009 (D. Cromer, personal interview, October 24, 2001).

The Capital Outlay Program received a special appropriation of funds during the 2001 session of the General Assembly. The legislature approved the authorization of \$368 million to provide money for the construction of classrooms that are needed to implement the smaller class sizes stipulated in HB 1187. School systems could request these additional capital outlay funds by completing a HB 1187 Needs Analysis document. Cromer (personal interview, October 24, 2001) stated that this document was created to ensure that the funds available from the special appropriation would be used by school systems to construct classrooms that are determined to be needed in order to reduce classes to the required sizes stipulated in HB 1187.

Property Taxes

State funding alone is insufficient to fully finance the school facility projects of local school systems. Therefore, Georgia school systems must obtain money from other sources. Property taxes are one of the major funding sources for local school systems.

Each year local boards of education set the millage rate at which property taxes are assessed. Although this is an important source of revenue for school systems, most systems do not receive enough money from this source to accumulate cash reserves large enough to fund large-scale school construction projects (L.C. Evans, personal interview, April 21, 2001).

General Obligation Bonds

Earthman (2000) found that local government general obligation bonds are the traditional mechanisms by which school systems secure the additional funding needed for capital improvement projects. Before a school system may sell these bonds, the local board of education must ask voters to approve the issuance of the bonds for a stated amount of money. If voter approval is secured, then the bonds are sold at public bidding. The school system attempts to secure the lowest percent interest for the repayment of the bond. The entity that submits the lowest bid, usually a bank or brokerage firm, is awarded the bonds. The money received from the sale of the bonds is repaid from property tax revenues or ad valorem tax revenues.

Each school system has a bond capacity, which is essentially the amount of debt they can incur. According to information from the Georgia Department of Education (2001), a school system may not sell bonds that will result in exceeding their bond capacity. The state will allow a school system to borrow up to a certain percentage of expected revenues. The percentage is set by the state and a system may not exceed this limit.

Pay-As-You-Go Financing

This method of funding involves school districts using current revenues to finance their school facility needs. When funds are available, construction may take place. This method is generally used only by very wealthy or large school districts. Most school districts do not have sufficient funds available from their day-to-day operations budget to use this method of financing. However, some school districts choose this method in order to avoid indebtedness or if they are in situations where they have already reached their level of maximum indebtedness. Earthman (2000) reported that this method of funding saves the school district money that would normally be spent on interest payments, which may range from 40% to 200% of the total cost of construction.

Some school districts put money aside in a special savings account. These reserve funds are called fund balances or fund equity. Georgia law restricts school districts from accumulating fund balances of more than 10 to 15 percent of their current year's revenues. School systems may use a portion of their fund balances for capital outlay (L. C. Evans, personal interview, April 21, 2001). Credit-rating agencies view a moderately sized fund balance as an indicator of good money management and will often provide lower interest rates to these systems. Siekle (2000) found that a good credit rating could lead to greater marketability of school bonds.

Grants and Donations

Some school districts may seek grants or donations from private organizations or citizens to assist with school construction projects. During the 2000 school year, the Seattle school district was awarded a \$25.9 million grant from the Bill and Melinda Gates Foundation. Many businesses and foundations are willing to donate funds to school

districts. One school district was fortunate to have a local builder's association donate all materials and labor to build an addition to their high school. When businesses donate money for equipment and other expenses, it frees up funds that the district may use for construction or renovation. Because many corporations realize the importance of a quality education, Kennedy (2000) found that over 2,000 local educational foundations have been established nationwide. Schools have to be willing to seek out funds that might be available from these foundations.

Lease-purchase Agreement

Many schools use the lease-purchase agreement to help fund their construction projects. With a lease-purchase agreement, a private company finances the costs of the construction and allows the school to pay for the improvements through a lease that lasts several years. Many leases are considered to be certificates of participation. Because of this, they are not strictly debt obligations and therefore do not require voter approval or debt limitations (Kennedy, 2000).

Leasing

Earthman (2000) found that for some school systems it is more economically feasible to lease a facility than to build a new one. Churches and businesses may have available spaces that could be leased out to schools. The advantage of leasing is that it allows school systems the use of a facility without the burdensome debt that accompanies the construction of a new one. The school system also continues receiving tax revenues from the owner of the facility.

Sales Tax

Several states use an increase in sales tax as a school construction-funding alternative. Georgia voters approved a constitutional amendment in November of 1996 that allowed local boards of education the option of calling for a referendum to ask their voters to approve a special purpose local option sales tax (SPLOST). Until this time, the primary source of local revenue available to most Georgia school systems for renovation, modernization, or construction of school facilities, was the property tax. The burden of funding capital improvement projects was the responsibility of property owners. The SPLOST funding method broadened the range of responsibility of financing school construction from property owners to include those who work, shop, or visit in the county where the SPLOST is being collected (Georgia Department of Education, 2001).

SPLOST, when approved by voters, provided school systems in Georgia an additional method for funding capital improvement projects. This funding option has had the most significant impact on reducing the construction needs of Georgia school systems. However, according to information from the Georgia Department of Education (2001), SPLOST funds may only be used for capital outlay projects for educational purposes and the retirement of previously incurred general obligation bond debt. These funds may not be used for salaries or district general operation costs.

Qualified Zone Academy Bonds

The federal government provides limited funding of public schools. One source of federal funding that is available to Georgia school systems is the Qualified Zone Academy Bond (QZAB) program. This program allows qualifying districts to secure

interest-free or low-interest loans. The QZAB is a taxable bond that is issued by the school district. Once a financial institution purchases the bond, instead of receiving interest payments from the school, the lender receives a tax credit. This program was designed to help school systems that have a high population of low-income children, to finance facility renovation and to do repair projects. Each state receives an annual allocation of QZAB funds. In 2001, Georgia received \$45.8 million in QZAB funds (D. Nelson, personal communication, April 9, 2001).

Federal law mandates that 95% or more of these funds must be used for facility renovation or repair. They may not be used for new construction or new additions to existing facilities. The school must also receive contributions from private businesses or organizations that equal 10% of the QZAB allocation for that school. This contribution is not restricted simply to money. The contribution may be in the form of equipment, computer software, internships, personnel time, technical services, or volunteers. Nelson (personal communication, April 9, 2001) wrote that Georgia school systems that meet the criteria must submit an application to the state department requesting QZAB funds.

Other Factors Affecting Facility Planning

The facility planning process involves defining the facility needs of a school system and determining what assets and resources are available to meet those needs. CSR is just one of many factors that may have an impact on this process. The educational programs offered, student enrollment, and available space directly influence the number of new school buildings or classrooms that will need to be constructed. In an effort to keep pace with changes in legislation and enrollment, school districts must plan

for the future. Effective school construction requires extensive facility planning. This section of the research will examine other factors besides CSR that can influence the process of school facility planning.

Student Enrollment Shifts

Unexpected rapid population growth or decline can adversely affect the function of a school system. Changes in the student population can result in the need for new school buildings or the elimination of existing buildings. School systems need to know how many students they will be educating, now and in the future, in order to carry out effective planning.

Accurate student enrollment projections are a part of any long-range planning effort. By knowing the number of students the system will expect to serve, the school system can have the right kinds of educational spaces in the correct locations at the appropriate times. School systems must have buildings available that can accommodate population increases. The school's educational facility planner must also be able to reconfigure existing space in case of enrollment decline. A decrease in the student population can result in a surplus of instructional spaces while an increase in enrollment can result in a shortage of space (Boynton & Cecil, 1996).

There are several factors that cause enrollment growth and decline. Earthman (2000) reported that the availability of adequate, affordable housing and employment opportunities are the most influential factors affecting student immigration and emigration. An absence or decline in these factors can result in increased student immigration.

Enrollment decline. An example of a school system that has been affected by a change in enrollment is the Pulaski County school system in Georgia. This system has reported a decline in enrollment for the 2001-2002 school year. The superintendent attributed this decline to the loss of one of Pulaski County's biggest employers, Pillowtex. When Pillowtex closed in April of 2001, over 360 jobs were lost. The superintendent stated that "it really takes industry and employers to keep our graduates here" and that the "question of whether families with children or young people stay in Pulaski County hinges on the local economy" (Cadette, 2001a, A6). One advantage of Pulaski County's decreased enrollment is that it has helped them comply with HB 1187's mandated CSR. Some Pulaski County schools have reported numbers lower than the maximums mandated by this law (Cadette, 2001a).

School systems that have declining enrollments must determine how to efficiently use their existing facilities. Georgia's state funding formula has resulted in the closing of more than 100 smaller, older school buildings since 1986. Paxton (1999) found that consolidation of school buildings and the construction of large schools that serve a wider area were the major solutions to the problem of declining enrollment.

Paxton argued that Georgia's funding formula is "tilted in the favor of new construction and discourages rehabilitation of older neighborhood schools, while providing no help for ongoing maintenance" (p. 1). Many school consolidation efforts are met with local resistance. Parents object to their children being moved to schools that are located far from their homes. School districts in Georgia that want to keep their smaller neighborhood schools have often passed up state funding and used only local money to renovate their existing facilities that are no longer eligible for state funds.

Enrollment increases. Just as a decline in enrollment can cause problems for a school system, so can an increase in student population. A Georgia school system that has experienced an increase in student enrollment is the Houston County school system. According to the 2000 Census, Houston County was one of the fastest growing counties in Georgia. Houston County has experienced a 24.2% population increase over the past 10 years. Local leaders attributed this growth to a strong economy with large employers that are constantly expanding their operations. This increased growth has created problems for the Houston County School System. Record numbers of pupils have been added onto already overcrowded class rolls. The school system has reported a shortage of 99 classrooms. Because of the overcrowded conditions at some schools, students must follow a schedule for bathroom breaks and attend classes on stages and in closets (Cadette, 2001a).

The Houston County Board of Education, in March of 2000, approved a \$160 million facilities plan to address the facility crisis caused by increased student enrollment. The facilities plan was defeated when presented to voters in a bond referendum. After this defeat, the facilities committee revised the plan to \$99 million. This plan was presented to voters in November of 2001. Seventy-two percent of voters supported the revised plan. If the referendum had failed again, then Houston County facility planners would have had to figure out how to accommodate record numbers of students as well as comply with HB 1187's mandated smaller classes (Cadette, 2001b).

Barnwell Elementary in north Fulton County, Georgia has also reported problems from an enrollment surge. This wealthy, fast-growing school has grown so quickly that its entire fourth and fifth grades were housed in portables for the 2000-2001 school year.

The Fulton County school system is unsure of where they will find the space and teachers needed to comply with the CSR mandate (Roedemeier, 2000).

Other Georgia school systems are also experiencing record student enrollment. Forsyth County, the second fastest growing school district in the nation, reported that for the 2001-2002 school year, all of their schools were at or exceeding capacity. Eighty-five trailers were moved to eight schools during the summer of 2001. The system reported that 2,125 students were assigned to these trailers for the 2001-2002 school year. The total system enrollment for the 2001-2001 school year was 18,919 students. This number is projected to increase to 25,640 students by the year 2004 (Forsyth County Board of Education, 2001). This school system must decide how they will deal with record enrollment as well as HB 1187's mandated smaller classes.

The majority of school systems reported using portables or standard prototypes for new construction as their primary methods of dealing with increased student enrollment (U.S. Department of Education, 2000). In 1999 the U.S. Department of Education reported that half of all public schools are either close to capacity or overcrowded and that about one third of all school systems were using portables to solve the problem of overcrowding. One school system in Clark County, Nevada reported that builders are finishing a new school every 37 days (Toppo, 2001).

Some schools are handling increased enrollment by establishing schools in non-traditional settings such as malls, theaters, office buildings, and museums. The Cartwright Elementary School District in Arizona needed a new middle school but had no site available for building a new school. Kennedy (2001) found that the school system was able to buy and renovate part of a 500,000 square foot area shopping mall. Because

of the bargain price that the school district was able to negotiate, the mall area that they purchased was able to be converted into both a middle and elementary school.

Carey (2000) reported that there are several ways to solve the problem of overcrowding. He proposed the following solutions: (a) adding classrooms, (b) reassigning students, (c) building additional schools, (d) reassigning some special classes, (e) removing students that rightfully belong in a different school, (f) changing grade structure, (g) using classrooms more efficiently, (h) replacing the school with a new and larger facility, or (i) combining several of these solutions in ways that involve other schools.

Educational Program Changes

Identifying a school system's educational program needs is also a part of effective school facility planning. Earthman (2000) defined the educational programs of a school as "all the programs for which the school system assumes responsibility" (p. 28).

Various factors other than CSR can affect the educational programs of a school system.

The types of educational programs that are offered by a school system are directly related to the numbers and types of students that reside within that school system. Because school systems are serving increasingly diverse student bodies, bilingual and special education programs are being implemented and expanded. These extensive programs of individualized service may require varied and specialized spaces within schools. Renovation or new construction is often necessary to accommodate these important advances in teaching and learning (Earthman, 2000).

Educational programming can also be affected by the changing demands of technology, which is used to support teaching and learning. Incorporating technology

into a curriculum may require specialized spaces and room for later growth. Because computers take up a sizable amount of square footage, facility planners need to allow more adequate space in classrooms for technology. Many older buildings are not designed to handle the unique demands of technology, and it may be very costly to integrate technology into these existing facilities. The number of computer labs that are required by a school is also directly related to and affected by student enrollment. Hardt, Wisniewski, Horner, Ficklen, and Ward (1998) found that the larger the school, the more computer labs that will be required by that school.

Building Replacement, Renovation, and Code Updates

Effective school facility planning also involves determining what buildings are currently available and what will be needed for the future. All buildings that are being used should be evaluated so that the capability of each building can be established. This evaluation allows administrators to determine how many students can be accommodated and what types of programs may be offered. The determination of available space will also help school facility planners determine the number of buildings and classrooms that need to be replaced or renovated (Boynton & Cecil, 1996).

School facility planners must also be aware of the conditions of their schools. If a school system has facilities that adversely affect student learning, it is their responsibility to try and immediately improve this environment. The U.S. General Accounting Office (1996) reported that \$127 billion were needed to repair and/or renovate existing school facilities. This dollar amount only included routine maintenance and repair necessary to meet the basic needs of existing instructional programs. The average age of U.S. school

buildings is 42, yet the life span of most schools is 40 years. Once this critical age is reached, most school buildings begin to rapidly deteriorate.

Enrollment growth, coupled with the aging of school buildings, has created an urgent need for new or remodeled school buildings across America. The U.S. Department of Education (2000) reported that nearly 25% of all public school students in 1999 attended a school that had at least one building in less than adequate condition. There is a pressing need for school systems to add, renovate, or replace their educational facilities.

Code compliance also influences facility planning. Schools are required to comply with certain types of building and life-safety codes as well as special federal and state mandated codes. Code compliance is often the driving force behind renovation and construction. Because building and safety codes constantly change, a school building that was constructed ten or twenty years ago may no longer be up to code, and substantial renovations may be necessary to comply with current codes (Boynton & Cecil, 1996).

Federal and State Mandates

In addition to addressing building replacement, renovation, and code compliance, school systems must also make sure they comply with federal and state mandates. Earthman (2000) reported that in the last 20 years, state and federal laws have mandated more and more courses of study and services, thereby determining much of the educational program of a school system. If governments do not allocate sufficient funds for school systems to meet their mandates, the school systems must be able to acquire the resources necessary to achieve these program changes. School systems must often

implement these changes quickly because federal and state mandates may have penalties that can be imposed on school systems for non-compliance.

When the state or federal government mandates new educational policies, school facility planners must understand the effects that these policies will have on their school systems. Earthman (2000) found that these policy changes can create facilities-related problems for school systems. While CSR is one of the most often cited mandated educational policy changes, there have been other mandates in addition to CSR that have created facility problems for school systems.

Examples of mandates that created facility problems for school systems were the Education for All Handicapped Children Act of 1976 and Section 504 of the Rehabilitation Act of 1973. With their passage, the federal government mandated that the handicapped have full access to all buildings owned and operated by local school systems. Because the government did not allocate sufficient funds for schools to accomplish the necessary building renovations, it was up to the local school systems to come up with the funds necessary to comply with the mandatory provisions of this act (Earthman, 2000).

In 1996, another notable mandate was passed that created facility problems for school systems. With the reauthorization of the Individuals with Disabilities in Education Act, the federal government continued to mandate that school buildings should be made accessible to students with special needs, but it also added that schools should be made safe for children by requiring the removal of all asbestos from schools. This act provided few or no funds to systems to comply with this law. As a result, school systems had to use their own funds to make buildings accessible and asbestos free. Anderson,

Augenblock, Myers, and O'Brian (1998) found that money that could have been spent on construction, repair, or renovation had to be used to comply with this federal mandate.

Summary

This review of literature was divided into six sections. The first section, Class Size Reduction Research, revealed that numerous CSR studies have been conducted over the past several decades. The research seemed to suggest that smaller classes do contribute to increased student achievement under certain conditions. It is most beneficial in classes with 20 students or less and in the primary grades (K-3). Economically disadvantaged and minority students appeared to gain the most benefit. Research also suggested that teachers must alter their teaching strategies in order to be more effective with a smaller class. More importantly, the research revealed that there is no guarantee that CSR will yield the results that proponents claim.

The second section, Recognized State Efforts, examined several nationally recognized statewide efforts to improve student achievement by reducing class sizes. Indiana was one of the first states to institute a CSR initiative. Indiana's efforts captured the attention of lawmakers in Tennessee. In 1985, the Tennessee legislature authorized a CSR program. This initiative, Project STAR, has become the most well known CSR effort. Tennessee's success led to initiatives in several other states. Wisconsin and California's efforts at reducing class sizes also garnered national attention. The majority of CSR research has focused on the implementation methods and results from these four states.

The major challenges associated with implementing a CSR initiative were discussed in the third section of this review. The review of literature revealed that the

major obstacles to successful implementation were additional space and the need for more teachers. Without available space and teachers, a school system will be unable to effectively implement a CSR program. Because CSR is an expensive reform option, it may adversely affect the financial resources of a school system. Because CSR affects the number of teachers, materials, and services available, the facility planning process of a school system will also be affected.

The fourth section, Georgia's CSR initiative, provided the history of Georgia's CSR initiative. In 1999, Governor Roy Barnes created a special commission to study education in Georgia. The findings of this 64-member commission resulted in HB 1187. In March of 2000, HB 1187 was passed by the General Assembly and became known as The A-Plus Education Reform Act of 2000. This act specified maximum class sizes for Georgia school systems.

The CSR mandate may force some Georgia school systems to either build new schools or renovate existing ones. Construction funding options that are available to Georgia school systems was discussed in the fifth section. State and local funding are the traditional methods of school construction financing available to Georgia school systems. These traditional methods often do not provide enough funds. Because of this lack of funding, school systems may have to find alternative methods of raising money. Some alternative funding methods available to school systems are SPLOST, grants, leasing, and QZAB funds.

The final section reviewed factors, other than CSR, that affect the facility planning process of schools. Changes in the number of students as well as changes to the educational programs within a school system will affect how school systems manage

their facilities. Building and remodeling needs are influenced by the age and current conditions of existing facilities. Code compliance and governmental mandates will also require school systems to make changes to their facilities. All of these factors may adversely influence the process of school facility planning.

The literature reviewed in this chapter has provided the basis for the analysis of the impact of CSR on the facility planning process of Georgia's public schools. Successful implementation of HB 1187 may prove to be a daunting task for some Georgia school superintendents. Because this is a very expensive education reform option, there is a need for documentation of the challenges experienced during implementation.

CHAPTER III

METHODOLOGY

This chapter presents the research questions that were addressed as well as the methods and procedures that were utilized to carry out this study. Specifically, this chapter discusses the research design, selection of participants, instrument development, data collection procedures, and data analysis methods.

Introduction

HB 1187 has had different impacts on Georgia school systems. Successful implementation has been a daunting task for some school systems. School systems have reported different experiences and challenges during the initial phases of implementation. Problem areas have ranged from a lack of classroom space to teacher availability. These problems have been sources of considerable discussion. Research was needed to document how Georgia school systems were meeting the challenges of HB 1187's mandated reduction in class sizes. This research study was designed to examine the initial responses of school systems to this state-initiated CSR program and to explore superintendent's perceptions regarding the effects of this mandate on the facility planning process of their school systems.

Research Questions

The main research question being addressed by this study was: What is the perceived impact of mandatory class-size reduction on school facility planning in

Georgia school systems? The following subquestions were addressed in this research study:

1. What are the perceptions of superintendents regarding the impact of CSR on the availability of facilities?
2. What are the perceptions of superintendents regarding the measures school systems could use to address the immediate need for classroom space?
3. What are the perceptions of superintendents regarding the impact of CSR on the funding of facilities?
4. What are the perceptions of superintendents regarding the impact of CSR on short- and long-range facility planning?
5. Do the perceptions of superintendents regarding the impact of CSR vary by system size?
6. Do the perceptions of superintendents regarding the impact of CSR vary by system wealth?

Research Design

This study utilized a descriptive research design. Descriptive research provides information about a given population or sample that is being studied. Its purpose is to describe and interpret events, not what caused them. It is used when the objective of the study is to provide factual and accurate descriptions. It may involve studying preferences, attitudes, practices, concerns, or interests of a particular population (Gay & Airasian, 1999).

Descriptive research can use quantitative or qualitative methods (Charles, 1995). This study combined quantitative and qualitative research perspectives. The researcher

believed that using both quantitative and qualitative methods would be necessary to yield the information needed to answer the study's research questions and give insights that neither type of analysis could provide alone.

Quantitative research involves a deductive approach while qualitative research involves an inductive approach. A quantitative approach is used when quantifiable measures of interest are possible and data analysis is mainly statistical. A quantitative research approach can be used to determine whether a particular population shares certain characteristics in common (Gay & Airasian, 1999). The purpose of this research study was to examine Georgia school superintendents' perceptions of the impact of mandatory CSR on school facility planning. Quantitative data were obtained from the administration of a survey to all Georgia school superintendents. Creswell (1994) proposed that this type of data collection "enables a researcher to generalize the findings from a sample of responses to a population" (p. 117).

Qualitative research involves the use of non-numerical data such as observations and interviews. This type of research can be used to discover underlying motivations, feelings, values, attitudes, and perceptions. Qualitative data for this study were obtained in the form of follow-up interviews, which provided clarification about superintendents' perceptions regarding the CSR mandate. According to Gay and Airasian (1999), one of the prevailing forms of data collection associated with qualitative inquiry is interviewing. The follow-up interviews conducted after the administration of the survey allowed the researcher to gather more in-depth information by directly contacting the participants. This qualitative research approach allowed the researcher to explore how superintendents understand and make sense of the CSR mandate.

Participants

This study involved all 180 Georgia public school superintendents. Superintendents were chosen as the respondents because they are the individuals ultimately responsible for the implementation of the CSR mandate. A list of current superintendents and their addresses were obtained from the Georgia School Superintendents Association's web site (<http://www.gssanet.org>).

Because no valid research instrument existed, the researcher had to develop and pilot test the survey before undertaking the research study. Five superintendents from the Middle Georgia School Superintendents Association agreed to participate in the pilot study. Their participation in the pilot study then excluded them from the research study. The remaining 175 Georgia school superintendents then served as the participants for the research study.

One hundred and nine superintendents completed and returned their surveys for a return rate of 62.3%. Of those responding, 79.8 % were male. The majority of superintendents (59.7%) had one to six years experience serving as a superintendent. One to six years was also the number of years that the majority (55.1%) had serving as superintendent of their system. Table 1 presents a demographic and experiential profile of the respondents.

Follow-up interviews were conducted with six selected respondents from the research study who indicated on a returned interview consent card that they would be willing to take part in a follow-up interview. The researcher was only able to select from those superintendents who indicated their consent on the returned interview card. Out of 109 participating superintendents, only 24 superintendents returned their consent cards.

Table 1

Demographic and Experiential Profiles of Superintendents

	Construct	<u>n</u>	%
Sex	Male	87	79.8
	Female	22	20.2
Number of years of experience as a superintendent	Less than 1	10	9.2
	1-3 years	38	34.9
	4-6 years	27	24.8
	7-9 years	6	5.5
	10 or more years	28	25.7
Number of years of experience as superintendent of current system	less than 1	16	14.7
	1-3 years	44	40.4
	4-6 years	29	26.6
	7-9 years	6	5.5
	10 or more years	13	11.9

Note. N=109

The researcher then divided these superintendents into groups based on the size (small, medium, or large) and wealth (high wealth, medium wealth, or low wealth) of their district. The researcher then contacted a superintendent from each category and scheduled interview times during the Georgia School Superintendents Association Spring Bootstrap Conference held in Macon, Georgia on April 17, 2002. Interviews were conducted during the day at the superintendent's convenience.

In order to preserve anonymity, the names of the six superintendents interviewed were masked. For the purpose of this study, they were identified by the category from which they were selected: Superintendent A (large size system), Superintendent B (medium size system), Superintendent C (small size system), Superintendent D (high wealth system), Superintendent E (medium wealth system), and Superintendent F (low wealth system). Five out of the six superintendents interviewed were male. All but one superintendent had 10 or more years experience as a superintendent and only one superintendent had been employed by their system for less than three years.

Research Instrument

Because no appropriate survey instrument existed to conduct this research study, a survey instrument had to be developed and validated by the researcher. Before developing the survey, a thorough review of the literature was conducted. Gay and Airasian (1999) stated that for quantitative research to be effective, the issues must be known prior to the development of a survey. The review of the literature revealed CSR issues that needed to be incorporated into the survey. Appendix A illustrates the relationship among the research questions and the findings from the review of the

literature. Guidelines for designing questionnaires found in Gall, Borg, and Gall (1996) were also used by the researcher in developing the instrument.

The survey instrument consisted of 12 closed form questionnaire items, printed on the front and back of one page of legal size paper. The survey is shown in Appendix B. The survey was divided into five sections: Availability of Facilities, Addressing Facility Needs, Funding of Facilities, Facility Planning, and Demographics. The first two survey items attempted to determine the impact of CSR on the availability of facilities. These two items were correlated to research question one. Items three and four addressed research question two, which attempted to discover what measures school systems were using to address the immediate need for classroom space. Items five through eight were developed to uncover the impact of CSR on the funding of facilities. These four items were correlated to research question three. Item nine dealt with the impact of CSR on facility planning, which correlated to research question four. Items 10-12 were demographic questions, which were included to allow the researcher to describe the research population. A comments section was included at the end of the survey. Bourque and Fielder (1995) proposed that researchers use a comments section because it provides respondents a place to provide additional insight about the study.

A panel of experts was needed to determine the content validity of the instrument. According to DeVaus (1995), each question should be evaluated rigorously before the instrument is administered. The panel of experts (see Appendix C) consisted of a college professor and two facilities experts from the Georgia Department of Education. The panel of experts was chosen based on the members' experience and education relating to the facility-planning process.

The panel of experts was provided with the research questions and survey instrument. They were asked to review the survey and to provide comments about content, clarity, and appropriateness. The researcher revised the instrument in order to improve its validity based on the suggestions of the panel of experts. After the revisions, the researcher then resubmitted the instrument to the panel of experts for final approval.

Once the survey was deemed valid by the panel of experts, it was pilot tested. Gall et al. (1996) stated that a thorough pre-testing of the instrument should be conducted before carrying out the research study and that the pilot study should include “a sample of individuals from the population from which you plan to draw your respondents” (p. 298). Therefore, the researcher pilot tested the instrument with five superintendents from the Middle Georgia School Superintendent’s Association who agreed to participate in the study.

According to deVaus (1995), the results of the pilot test can be used to assess the reliability and validity of the instrument and to revise the survey where necessary. The researcher used the results and comments from the pilot study to improve the instrument. However, the researcher consulted with the panel of experts before making any adjustments to the survey. The researcher also contacted the pilot study respondents to determine their perceptions of the survey and the amount of time required to complete the survey.

A cover letter (see Appendix D) was developed by the researcher to accompany each survey. Gall et al. (1996) cautioned that a cover letter be designed carefully since it strongly influences the return rate. They proposed the following guidelines for writing an effective cover letter: the cover letter should be brief but written so that the purpose of the

study is explained well enough “to persuade the respondents that the study is significant and their responses are important” (p. 299). The cover letter should also explain how confidentiality will be maintained and the conditions for informed consent. The researcher used these guidelines to develop the cover letter for this research study.

The researcher also obtained a letter of support (see Appendix E) from the researcher’s school superintendent to include with the research instrument. Gall et al. (1996) recommended associating the study with a professional organization or to an individual “whose endorsement represents a favorable symbol of authority to the respondents” (p. 300). They have found that this additional letter of support can have a positive influence on the return rate of the survey.

The researcher also developed an interview consent card (see Appendix F) to include with the survey. Because the researcher wanted to insure anonymity, respondents were not asked to consent to an interview on the survey but instead were provided with a pre-addressed, stamped interview consent card to fill out and return to the researcher. The researcher also included a place on the card for them to check if they preferred not to be interviewed but desired a copy of the results of the study.

Procedures

Once the researcher received approval from the doctoral research committee to conduct the study, it was necessary to submit the research proposal to the Institutional Review Board (IRB) of Georgia Southern University. The researcher was not allowed to carry out the research study until it was approved by the IRB. The approval process took approximately two weeks. While waiting on IRB approval, the researcher entered the names and addresses of the 175 participating superintendents, that had been obtained

from the Georgia School Superintendents Association's web site, into a Microsoft Word mail merge. This data base was used to create the mailing labels needed to send the survey to all research participants.

During this two-week period, the researcher also prepared the pre-addressed stamped envelopes that would be used to return the completed surveys. Because the surveys were anonymous and did not contain any identifying information, it was necessary to code the return envelopes. A coding system was developed that was based on the type of stamp and the return address label used on the envelope. By referring to a master code sheet, the researcher would be able to look at the stamp and the address label and determine which superintendent had responded. The researcher could also use the code sheet to determine which superintendents had not returned their surveys in order to conduct a follow-up (Gall et al., 1996).

Once IRB approval (see Appendix G) was secured, the survey instrument was then sent to all the superintendents in Georgia. Only those superintendents who participated in the pilot study were excluded. Each superintendent received an envelope containing a survey, a cover letter, a letter of support from the researcher's superintendent, an interview consent card, and a pre-addressed, stamped return envelope. The cover letter requested that the superintendents complete and return the survey within a two-week time period.

At the end of the two-week period, only 81 surveys had been returned, resulting in a return rate of only 46%. Because a 60% return rate is necessary to provide the researcher with a large enough sample to provide statistically meaningful data, a follow-up was necessary (Gay & Airasian, 1999). Because the return envelopes were coded, the

researcher was able to keep track of which surveys had been returned. The researcher was then able to send reminder emails to all superintendents who had not returned their surveys. Some superintendents were unable to locate their surveys so replacement questionnaires were sent to those requesting an additional survey. This resulted in an additional 12 surveys being returned.

With a return rate still less than 60%, it was necessary to conduct a third follow-up. The researcher's superintendent volunteered to send a personal email to those superintendents who had still not responded. The superintendent selected 26 superintendents from the list of non-respondents to email. In his email, the superintendent personally requested their help with the study. This follow-up resulted in 16 additional surveys being returned. At the conclusion of both follow-ups, a total of 109 surveys had been returned which calculated out to a 62.3% return rate.

As each survey was returned, the researcher would enter the responses into SPSS. Once the surveys had been substantially returned, the data was tabulated and analyzed by the researcher to examine patterns and trends.

Follow-up interviews were then conducted with selected superintendents to ascertain their perceptions of the CSR mandate and how effectively their school system is meeting their facility needs. One of the key benefits of an in-person interview is the detailed findings that may be uncovered by the researcher (Marshall & Rossman, 1999).

School systems were not randomly selected for interviewing. Because of research questions five and six, it was important that school systems of different size and wealth be interviewed. However, the researcher was only able to select from the 24 superintendents who indicated their consent on their returned interview consent card.

Before selecting superintendents to interview, the researcher classified the 24 superintendents into groups based on the size (large, medium, or small) and wealth (high wealth, medium wealth, or low wealth) of their system. One superintendent was then randomly selected from each group, resulting in a total of six superintendents to be interviewed.

The standardized open-ended interview approach was used to interview the superintendents. Gall et al. (1996) stated that this type of approach “involves a predetermined sequence and wording of the same set of questions to be asked of each respondent in order to minimize the possibility of bias” (p. 310). An interview guide (see Appendix H) was developed prior to the interviews. The purpose of the interview guide was to provide a consistent reference point for soliciting information from respondents. It was used to direct the conversation toward topics and issues the researcher’s study is exploring (Hoepfl, 1997).

The results of the survey data analysis were used to develop a focused interview guide. The interview guide questions were designed to obtain information from the school superintendents regarding the CSR mandate, how it is affecting their facility-planning process, and their attitudes towards this mandate. The interview questions included structured and unstructured items in order to probe and clarify the superintendents’ attitudes toward the CSR mandate. The interview questions were submitted to the panel of experts for review. After approval from the panel of experts, a pilot interview was conducted with one of the five superintendents from the pilot study. The researcher reviewed the guidelines for conducting a research interview found in Gall et al. (1996) to prepare for the interview.

After conducting the pilot interview, the researcher learned that the Georgia School Superintendents Association's Spring Bootstrap Conference was going to be held in Macon, Georgia. Because of the close proximity of this conference to the researcher's residence, the researcher contacted the randomly selected six superintendents to see if they would be willing to be interviewed during the conference. All six agreed to the date and interview times were scheduled at the convenience of each superintendent.

Interviewees were assured of anonymity before beginning the interviews. Note taking and tape recording of the interviews were the methods used for preserving the information collected during the interviews. Hoepfl (1997) recommended tape recording the interview because it captures data more accurately than note taking and it also makes it easier for the researcher to focus on the interview. The researcher took a few notes in the event that the tape recorder had malfunctioned. Each interview lasted between 30 and 45 minutes.

To ensure consistency, the researcher conducted each interview using the interview guide developed prior to the interviews. The researcher, prior to data analysis, transcribed each tape-recorded interview. A follow-up letter was sent to all participants thanking them for participating in the interview.

Data Analysis

Survey data were used to collect information related to the research questions. The researcher analyzed the data to determine patterns and trends. Data on facility adjustments such as construction, renovation, and acquisition of portables were reported as frequencies and percentages. This information was summarized in tables. The data were then analyzed by system size and system wealth to determine if any differences

existed between systems of various size and wealth. The follow-up interviews provided additional information related to the research questions. Answers from the follow-up interviews were recorded on tape and in note form by the researcher and the responses were then transcribed. The researcher then studied the transcriptions to develop a response matrix based on emerging themes. The information shared in the interviews was used to help identify and clarify issues relating to the research questions.

Summary

This chapter contained a summary of the methodology that was used to complete this study. Quantitative and qualitative methods of inquiry and analysis were utilized in order to fulfill the goals of this study. In order to collect information necessary for this study, public school superintendents were chosen as the best possible respondents. Because no valid survey instrument existed, the researcher had to develop one. This comprehensive survey, developed by the researcher, was then mailed to all Georgia school superintendents except for the five that had participated in the pilot study. Follow-up interviews with six superintendents were also conducted. Once the surveys had been returned and all follow-up interviews were conducted, the researcher analyzed and reported the data obtained. The survey information obtained helped to clarify and identify issues related to Georgia's CSR mandate. Survey results and follow-up interviews also provided an understanding of the initial school district responses to the Georgia CSR initiative as well as the perceptions of superintendents regarding this mandate.

CHAPTER IV

REPORT OF DATA AND DATA ANALYSIS

This chapter contains a presentation of the data collected through surveys and interviews of Georgia school superintendents. The data were collected and tabulated as the surveys were returned and the interviews completed. In this chapter, each research question is presented followed by a review of the results from the statistical analysis of the responses. Tables are provided which summarize the responses obtained through the survey instrument.

Introduction

With the passage of HB 1187 in 2000, Georgia school systems were required to reduce their overall class sizes. This originally unfunded mandate drew criticisms from educational leaders around the state. Smaller class sizes were popular with both parents and teachers, but many superintendents were questioning where they would get the necessary space, funds, and teachers in order to comply with the mandate. This study was focused toward investigating the perceptions of Georgia school superintendents regarding the impact of the class size reduction (CSR) mandate on their school facility planning process.

Quantitative and qualitative research methods were used to address the research questions of this study. The study used survey and in-depth interview data collected from Georgia school superintendents. The researcher designed the survey with the assistance of a panel of experts. After pilot testing the survey with five school superintendents, the

remaining 175 Georgia school superintendents were sent a survey to complete. One hundred and nine surveys were returned to the researcher for an overall return rate of 62.3%.

After a suitable return rate had been achieved, follow-up interviews were conducted with superintendents who had returned their interview consent card. Twenty-four superintendents agreed to be interviewed. The researcher divided these superintendents into groups based on the size (small, medium, or large) and wealth (high-wealth, medium-wealth, or low-wealth) of their school system. One superintendent was then randomly selected from each group, resulting in a total of six superintendents to be interviewed.

After reviewing the results of the survey, the researcher developed an interview guide to use while conducting the follow-up interviews. The researcher designed the interview guide with the assistance of the panel of experts. After pilot testing the interview with a school superintendent from the original pilot study, the researcher then interviewed the six superintendents who had been selected. The data obtained from these interviews are also presented in this chapter.

In order to preserve anonymity, the names of the six superintendents interviewed were masked. For the purpose of this study, they were identified by the category from which they were selected: Superintendent A (large size system), Superintendent B (medium size system), Superintendent C (small size system), Superintendent D (high wealth system), Superintendent E (medium wealth system), and Superintendent F (low wealth system).

Research Questions

The following research questions guided this study. The main research question being addressed by this study was: What is the perceived impact of mandatory class-size reduction on school facility planning in Georgia school systems? The following subquestions were addressed in this research study:

1. What are the perceptions of superintendents regarding the impact of CSR on the availability of facilities?
2. What are the perceptions of superintendents regarding the measures school systems could use to address the immediate need for classroom space?
3. What are the perceptions of superintendents regarding the impact of CSR on the funding of facilities?
4. What are the perceptions of superintendents regarding the impact of CSR on short- and long-range facility planning?
5. Do the perceptions of superintendents regarding the impact of CSR vary by system size?
6. Do the perceptions of superintendents regarding the impact of CSR vary by system wealth?

Analysis of Data

In order to organize the data and focus the analysis of the research, this section of the research is organized around the research questions stated above. Survey data were analyzed using descriptive statistics to determine patterns and trends. This information was summarized in tables. The follow-up interviews provided additional information related to the research questions.

Research Question 1: What are the perceptions of superintendents regarding the impact of CSR on the availability of facilities?

The first research question was concerned with determining if the CSR mandate had created a need for additional classrooms. Survey items one and two addressed this research question. For survey item one, 74.3% of the 109 superintendents reported that the CSR mandate had resulted or will result in the need for additional classrooms.

One superintendent commented on his survey that in a growing system, the number of new classrooms needed grows because it will take more classrooms to house the additional new students as well as reducing class sizes. Another superintendent commented that CSR has had almost no impact on their system due to declining enrollment and that after the first year of phase-in for CSR they were already meeting the ratio for full implementation. All six superintendents who were interviewed reported that the CSR mandate had created a need for additional classrooms in their systems. Their different perceptions will be presented in more detail within the discussions of Research Questions 5 and 6.

Survey item two asked superintendents who responded affirmatively to item one to specify the number of additional classrooms that were needed by grade level. Seventy-two superintendents responded to this question. Although 81 superintendents had responded that they would need additional classrooms, nine failed to answer item two.

The majority of superintendents (93.1%) reported needing additional classrooms at the K-3 grade level. A total of 1165 classrooms, representing 51.5% of the total classrooms, were needed at this level. A total of 671 classrooms were needed at Grades 4-8 and 428 for Grades 9-12. This calculated out to a mean of 17.4 classrooms

($SD=35.77$) per responding system at the K-3 level, a mean of 12.9 ($SD=37.94$) at the 4-8 level, and a mean of 15.9 ($SD=42.53$) at the 9-12 level. One system reported a need as high as 250 at the K-3 level, 275 at the 4-8 level, and 225 at the 9-12 level. Table 2 presents a breakdown of additional classrooms needed by grade level.

Table 2

Classrooms Needed by Grade Level

Grade Level	<u>n</u> of Systems	% of Systems	Total Classrooms	<u>M</u>	<u>SD</u>	% of Total Classrooms
K-3	67	93.1	1165	17.4	35.77	51.5
4-8	52	72.2	671	12.9	37.94	29.6
9-12	25	34.7	428	17.1	42.53	18.9
Total			2264	31.4		100

Note. $N=72$

One superintendent commented on his survey that because his system was a fast-growth system, it was hard for him to separate need due to CSR and need due to new growth. Due to this, he was unable to answer item two. Another superintendent commented that his system was fortunate in that it had opened two new middle schools and moved grades 6-8 from K-8 schools. This gave his system the needed space to comply with the mandate.

With only one exception, the superintendents interviewed also reported the K-3 level as their level of greatest classroom need. One superintendent reported needing her

additional classrooms in Grades 4-8. The interview group as a whole reported a need of 78 classrooms at the K-3 level, 25 classrooms at the 4-8 level, and 16 at the 9-12 level.

Research Question 2: What are the perceptions of superintendents regarding the measures school systems could use to address the immediate need for classroom space?

The second research question was concerned with how systems were providing the additional classrooms that were needed as a direct result of CSR. Survey items three and four focused on this research question. When answering items three and four, respondents were allowed to check more than one response as seen in Tables 3 and 4.

Table 3 presents the various methods that school systems are using to provide additional classrooms. The most frequently utilized method of providing additional classrooms, as indicated by 92.6% of respondents, was through the construction of new classrooms. Renting/purchasing portables (46.9%), using floating teachers (45.7%), and the conversion of non-classroom space (38.3%) were other commonly utilized methods. Two methods noted in the review of literature, staggered/year round schooling and the leasing of spaces, were not used by Georgia school superintendents.

New construction was also the preferred method of all the superintendents who were interviewed. Renting/purchasing portables, converting spaces, and utilizing floating teachers were the only other methods being utilized by this group of superintendents.

Because not all school systems are able to build new classrooms, survey item four was developed to determine which type of spaces were being converted to address the immediate need for additional classrooms. Thirty-one superintendents responded that they had or would convert spaces to create new classrooms. Of the spaces converted to create new classrooms, teacher preparation rooms/lounges were the most prevalent with

Table 3

Methods Used to Provide Additional Classrooms

Method	<u>n</u>	%
New construction	75	92.6
Rent/Purchase Portables	38	46.9
Floating Teachers	37	45.7
Convert other spaces	31	38.3
Renovate old and unused school building	16	19.8
Share classroom space	13	16.0
Modified/parallel block scheduling	8	9.9
Staggered/year round schooling	0	0
Lease Spaces	0	0

Note. N=81

20 respondents reporting a total of 41 conversions. Multi-purpose rooms (16 conversions), art rooms (15 conversions), and music rooms (10 conversions) were also commonly converted spaces. Table 4 presents the type and number of spaces that have been or will be converted to classrooms because of CSR.

Of the superintendents interviewed, only two reported converting spaces to create additional classrooms. One superintendent had converted a library and a multi-purpose room while the other superintendent had taken an old band room and divided it into individual classrooms.

Table 4

Spaces Converted to Create New Classrooms

Space	<u>n</u> of Systems	% of Systems	Conversions	% of Total Conversions
Teacher prep room/lounge	20	64.5	41	37.6
Multi-purpose room	14	45.2	16	14.7
Art Room	12	38.7	15	13.8
Music Room	10	32.3	10	9.2
Computer Lab	6	19.4	6	5.5
Special Education Facility	5	16.1	4	3.7
Library	5	16.1	3	2.8
Administrative Office	4	12.9	4	3.7
Gym	2	6.5	1	0.9
Closets	2	6.5	7	6.4
Old Portable	1	3.2	1	0.9
Old Lunchroom	1	3.2	1	0.9
Total			109	100

Note. N= 31. Some respondents wrote “several” or “still counting” instead of an actual number.

Research Question 3: What are the perceptions of superintendents regarding the impact of CSR on the funding of facilities?

This research question was concerned with the effect of CSR on the funding of facilities. Survey items five, six, seven, and eight were designed to address this research question. Survey item five asked superintendents if the CSR mandate had created financial difficulties for their system. Of the 108 superintendents who responded to this question, 20.2% indicated that the mandate had created a large degree of financial difficulty for them. The majority of respondents, 60.6%, reported that it had created some financial difficulty for their system, while 18.3% responded that it had not created any financial difficulty for their system.

Of the superintendents interviewed, only one superintendent believed that the CSR had not created financial difficulties for their system. Two of the superintendents were emphatic that it had created a multitude of financial difficulties for their system. The rest of the interview group agreed that the CSR had created some degree of financial difficulty for their systems.

Survey item six asked superintendents whether or not they believed that the state provided sufficient funding to implement the CSR mandate. One hundred and six superintendents responded to this question. A majority of superintendents, 80.7%, felt that the state did not provide sufficient funding to implement the mandate. This was also the consensus of the superintendents who were interviewed.

Survey item seven asked superintendents to estimate the cost to their system of fully implementing the CSR mandate. Although 81 superintendents responded

affirmatively to survey item one, indicating a need for additional classrooms, only 80 superintendents responded to this question.

Estimated additional facilities' costs of \$1,000,000 -\$5,000,000 were indicated by 36.3% of respondents. Costs of less than \$1,000,000 were indicated by 32.5% of the respondents. Based on the analysis of this data, the majority of systems were able to fully implement the CSR mandate for \$5 million dollars or less. All of the superintendents who were interviewed also estimated their additional facilities costs as less than \$5,000,000. Table 5 presents the estimated additional facilities costs for those systems that responded to item seven.

Table 5

Estimated Additional Facilities' Costs

Costs	<u>n</u>	%
Less than \$1,000,000	26	32.5
\$1,000,000-\$5,000,000	29	36.3
\$5,000,001-\$10,000,000	10	12.5
\$10,000,001-\$15,000,000	6	7.5
\$15,000,001-\$20,000,000	2	2.5
More than \$20,000,000	7	8.8

Note. N=80

Because the CSR mandate was not fully funded by the state, survey item eight was developed to ascertain how superintendents planned to obtain the additional funds needed to comply with the mandate. Table 6 presents the methods that superintendents have used to secure additional funding. The most common method of obtaining funding was through the passage of a special local option sales tax (SPLOST), with 89.4% of superintendents reporting that they had used this method. Other commonly indicated methods included fund balances/fund equity (27.1%) and additional funding obtained from the state (23.5%). As seen in Table 6, respondents were allowed to check more than one response.

Table 6

Methods Used to Secure Additional Funding

Method	<u>n</u>	%
SPLOST	76	89.4
Fund balances/fund equity	23	27.1
Additional funding obtained from the state	20	23.5
Property tax increase	18	21.2
Bond Referendums	17	20.0
Redirect funding from other programs	17	20.0
Grants/private donations	6	7.1
QZAB	2	2.4

Note. N=85

One superintendent commented on his survey that the CSR mandate had added a significant financial burden to his system's local budget and he believes that local school systems are going to increase their millage rates significantly because of the expense of the CSR mandate. Another superintendent responded that their system had blended CSR funds along with their capital outlay earnings in order to maximize their SPLOST funds. This method has allowed his system to continue their facility improvements.

Obtaining additional funds through SPLOST was also the main funding method utilized by the superintendents who were interviewed. Two superintendents reported that they might have to resort to increasing property taxes if their SPLOST did not provide enough funds to allow them to comply with the CSR mandate.

Research Question 4: What are the perceptions of superintendents regarding the impact of CSR on short- and long-range facility planning?

Research question 4 was concerned with CSR's effect on superintendents' short- and long-range facility planning. To address this research question, survey item nine was developed. All one hundred and nine superintendents responded to this item. The majority of superintendents (77.9%) indicated that the CSR mandate had affected their facility planning. All of the superintendents who were interviewed felt that the CSR mandate had definitely affected their facility planning.

Table 7 presents the various ways that the facility planning process of superintendents has been affected by the CSR mandate. To determine this effect, respondents were allowed to check more than one response as seen in Table 7. Modifications to the Five-Year School Facility Plan were reported by 72.9%, while 61.1% indicated the need to reorganize their school construction priorities. Other

commonly cited effects included renovation and modification of school buildings (47.1%), purchasing of portables (41.2%), and purchasing of additional property/real estate (34.1%).

Table 7

Effects of CSR on Facility Planning

Effect	<u>n</u>	%
Modifications to the Five-Year School Facility Plan	62	72.9
Reorganization of school construction priorities	52	61.1
Additional renovation and modification of school buildings	40	47.1
The purchase of more portables to meet immediate needs	35	41.2
The purchase of additional property/real estate	29	34.1
Increased maintenance and repair of existing facilities	27	31.8
Cuts in preferred equipment and facilities to divert money for new classroom construction	17	20.0
A setback of the school facility program in my district	7	8.2
The construction of fast track relocatable classrooms	4	4.7
The delay of school facility replacement	3	3.5

Note. N=85

One superintendent commented on his survey that he was currently building new facilities with money from a SPLOST I and II and as a result was slightly ahead of projected growth. He believes that his facility planning process will be affected more by CSR in five years.

All of the superintendents who were interviewed felt that the CSR mandate had caused them to reorganize their school construction priorities. Because of this reorganization, three superintendents had to make modifications to their Five-Year School Facility Plan. Four of those who were interviewed reported that the CSR mandate had resulted in them purchasing additional property/real estate.

Research Question 5: Do the perceptions of superintendents regarding the impact of CSR vary by system size?

To address research question 5, respondents were classified into groups based on their size. Eighteen systems had a student population greater than 10,000 and as a result were identified as large systems. Fifty-nine systems with a total student population between 2,000 and 9,999 students responded and were classified as medium-sized systems. Thirty-two systems had a student population of less than 2,000 and were classified as small systems.

Survey item one addressed the need for additional classrooms because of the CSR mandate. One hundred percent of the superintendents from large school systems reported the need for additional classrooms. In systems of medium size, 74.6% indicated a need for additional classrooms, while 59.4% of small systems reported a need for more classrooms. Table 8 presents the need for additional classrooms based on system size.

Interviews with Superintendents A, B, and C revealed that the CSR mandate had created a need for additional classrooms in all of their systems. Superintendent A believed that the large size of his system (13,398 students) had created a greater need for classrooms than systems with fewer students. Superintendent B had 4,319 students while Superintendent C had 1,682 students.

Table 8

Additional Classroom Need Based on System Size

Size	<u>n</u>	%
Large (<u>N</u> =18)	18	100
Medium (<u>N</u> =59)	44	74.6
Small (<u>N</u> =32)	19	59.4

Survey item two asked superintendents to break down their need for additional classrooms by grade level. Based on an analysis of the data, the need for additional classrooms decreased as grade level increased regardless of the size of the system. Large systems reported a need of 754 classrooms at the K-3 level, 458 classrooms at the 4-8 level, and 284 classrooms at the 9-12 level. Medium systems reported a need of 333 classrooms at the K-3 level, 154 classrooms at the 4-8 level, and 134 classrooms at the 9-12 level. Small systems reported a need of 78 classrooms at the K-3 level, 59 classrooms at the 4-8 level, and 10 classrooms at the 9-12 level. Table 9 presents a breakdown of classes needed by grade level according to the size of the system.

It should be noted that one large system indicated 250 classrooms needed at the K-3 level, 275 classrooms at the 4-8 level, and 225 classrooms at the 9-12 level. This large value skewed the distribution and had a great effect on the mean and standard deviation as seen in Table 9. With this value removed from the analysis, the mean/SD for each grade level would be as follows: 13.7 mean and 21.31 SD for the K-3 level; 7.8 mean and 8.18 SD for the 4-8 level; 8.1 mean and 7.99 SD for the 9-12 level.

Table 9

Classroom Need by Grade Level Based on System Size

Grade Level	<u>n</u> of Systems	% of Systems	Total Classrooms	<u>M</u>	<u>SD</u>	% of Total Classrooms
K-3						
Large	14	100	754	53.9	67.14	64.7
Medium	36	81.8	333	9.3	9.3	28.6
Small	17	89.5	78	4.6	3.06	6.7
Total	67		1165	17.4		100
4-8						
Large	10	71.4	458	45.8	81.26	68.3
Medium	26	59.1	154	5.9	3.59	22.9
Small	16	84.2	59	3.7	3.59	8.8
Total	52		671	12.9		100
9-12						
Large	5	35.7	284	56.8	95.18	66.4
Medium	18	40.9	134	7.4	4.89	31.3
Small	3	15.8	10	3.3	1.15	2.3
Total	25		428	15.9		100

Note. Large N=14, Medium N=44, Small N=19

All three superintendents interviewed reported that the K-3 grade level was also where they needed additional classrooms. These findings were consistent with the data obtained from the survey. Prior to HB 1187, all three superintendents had already begun reducing class sizes at the K-3 level. The reason for these early reductions was that all three believed that smaller class sizes would lead to increased student achievement. They felt that their systems were not affected as much at this level as some other systems because of these pre-HB 1187 reductions.

Superintendent A commented, “We knew our people wanted good, quality schools and the key is smaller class sizes.” Superintendent A also reported a need for additional classrooms at both the middle and high school levels because of growth as well as the CSR mandate. His system is currently growing at a rate of 2.5% per year.

Superintendent B stated that his system had realized that it had a problem with their educational program delivery model several years ago, and as a result had started reducing class sizes prior to the CSR mandate. His system has added classrooms to all of his primary schools but one. “We have plans to add classrooms to this school as soon as we have the funds to do it” stated Superintendent B.

Prior to HB 1187, Superintendent C had already reduced classes at the kindergarten level but not in grades 1-3. He had to build eight classrooms for these grade levels. According to projections from the State Department of Education, his system earned 10 classrooms at the K-3 level because of the CSR mandate. He has already built eight of these classrooms. He is hoping to build a new primary school within the next year. Once this building is complete, he plans to bring Grade 6 back to the elementary school in order to bring some relief to his middle school.

Survey item three asked superintendents to report how they planned to provide the additional classrooms needed because of CSR. New construction was the preferred method of providing classrooms by large (100%), medium (93.2%), and small (84.2%) systems. Another commonly utilized method was the renting and purchasing of portables, as indicated by 66.7% of large, 40.9% of medium, and 42.1% of small systems. Floating teachers were used by 61.1% of large systems, 36.4% of medium systems, and 52.6% of small systems. Table 10 presents the methods used to provide additional classrooms based on system size. Respondents were allowed to check more than one response as seen in Table 10.

New construction was the preferred method of providing additional classrooms by all three superintendents who were interviewed. Superintendent B stated that he was currently building and planning additions to his elementary schools. He has completed additions at all of his primary schools but one. Superintendent C is planning on building a new primary school (PK-2) in the next three months. He hopes that this new school will be finished by 2004 so that his class size numbers will be low enough to be in full compliance with the mandate.

Superintendent A was also in the process of building new schools but would still need 50 to 60 more classrooms because of CSR. He planned on bringing in portables and renovating older schools as a short-term solution to this problem. He stated that he was going to rent the majority of these portables instead of purchasing them because he hoped to eventually eliminate portables from his school system. He laughed and commented "this may be totally unrealistic, a pipe dream, but it is something that I hope to accomplish".

Table 10

Methods Used To Provide Additional Classrooms Based on System Size

Method	Large (N=18)		Medium (N=44)		Small (N=19)	
	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%
New Construction	18	100	41	93.2	16	84.2
Rent/Purchase Portables	12	66.7	18	40.9	8	42.1
Floating Teachers	11	61.1	16	36.4	10	52.6
Convert Other Spaces	7	38.9	17	38.6	7	36.8
Renovate Old and Unused School Buildings	3	16.7	11	25.0	2	10.5
Share Classroom Space	4	22.2	6	13.6	3	15.8
Modified/Parallel Block Scheduling	3	16.7	4	9.1	1	5.3

Survey item four asked respondents to report what type of spaces had been converted to provide additional needed classrooms. Seven large systems, 17 medium systems, and seven small systems reported in item three that they had or would convert spaces. Large systems reported a total of 42 spaces converted. Medium systems reported a total of 46 spaces converted and small systems converted 21 spaces. Teacher prep rooms/lounges were the most commonly converted spaces with 18 converted by large systems, 19 by medium, and four by small systems. Multi-purpose rooms, art rooms, and

music rooms were other commonly converted spaces. Respondents were allowed to check more than one response as seen in Table 11, which presents spaces converted.

Table 11

Space Conversions Based on System Size

Space	Large (N=7)		Medium (N=17)		Small (N=7)	
	<u>n</u>	Conversions	<u>n</u>	Conversions	<u>n</u>	Conversions
Teacher prep room/lounge	5	18	11	19	4	4
Multi-purpose room	4	2	7	11	3	3
Art Room	4	5	5	5	3	5
Music Room	4	4	4	4	2	2
Computer Lab	3	3	1	1	2	2
Special Education Facility	2	1	2	2	1	1
Library	3	1	0	0	2	2
Administrative Office	1	1	1	1	2	2
Gym	2	1	0	0	0	0
Closets	1	6	1	1	0	0
Old Portable	0	0	1	1	0	0
Old Lunchroom	0	0	1	1	0	0
Total		42		46		21

Note. Some respondents wrote “several” or “still counting” instead of an actual number.

Of the three superintendents interviewed, only Superintendent C reported actually converting spaces to create additional classrooms. He has converted one library and one multi-purpose room at his elementary school. When asked why he chose these spaces he stated “because they were the most suitable for educating children once they were converted”.

Survey items five through eight were concerned with the effect of CSR on the funding of facilities. Survey item five asked superintendents if the CSR mandate had created financial difficulties for their system. In large systems, 11.1% reported that the CSR had not created financial difficulty for their system. In medium systems, 20.3% reported that the CSR had not created financial difficulty for them. In small systems, 19.4% reported that CSR had not created financial difficulty for them. Table 12 presents the breakdown of financial difficulty perceptions based on school system size.

Table 12

Financial Difficulty Perceptions Based on System Size

Perception	Large (<u>N</u> =18)		Medium (<u>N</u> =59)		Small (<u>N</u> =31)	
	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%
Yes, to a large degree	4	22.2	12	20.3	6	19.4
Yes, somewhat	12	66.7	35	59.3	19	61.3
No, not at all	2	11.1	12	20.3	6	19.4

Superintendents A and C both felt that the CSR mandate had created a large degree of financial difficulty for their systems. Superintendent A felt this way because his system is finishing up a SPLOST and cannot pass another one in time to build the classrooms that the state has allotted them. He was hoping that the legislature would provide some assistance to systems like his that are caught between two SPLOST's by giving them an additional year to use their CSR funds to build classrooms.

Superintendent C is having financial problems in his system because property taxes and a SPLOST do not bring in enough money to build the classrooms he needs. Because his system had already spent local money to reduce class sizes in kindergarten, he felt like there should be some type of repayment by the state for systems that were progressive and proactive prior to HB 1187.

Superintendent B reported limited financial difficulties because of the CSR mandate. In his county, a SPLOST brings in enough money for physical improvements yet he cannot use this money on teacher salaries. The financial problem for him has been finding a way to raise the money to cover the salaries of the teachers he has added because of the reduction in class sizes.

Survey item six asked superintendents whether or not they believed that the state had provided sufficient funding to implement the CSR mandate. An analysis of the data revealed that 94.4% of superintendents from large systems believed that the state did not provide enough money to implement CSR and as a result they had to acquire additional funding in order to meet this mandate. For medium systems, 79.7% believed there was insufficient funding while for small systems the percentage was 82.8%. Table 13

presents a comparison of the perceptions of insufficient CSR funding based on system size.

Table 13

Perceptions of Insufficient CSR Funding Based on System Size

Size	<u>n</u>	%
Large (<u>N</u> =18)	17	94.4
Medium (<u>N</u> =59)	47	79.7
Small (<u>N</u> =29)	24	82.8

Superintendents A, B, and C all commented during their interview that the current state allotment of \$54/square foot is not enough money to build a classroom.

Superintendent B commented that every time he has completed a classroom addition, state money was only half of what he actually needed. He also did not believe that the special funding appropriated for reducing class sizes provided superintendents with enough flexibility of use. He wanted to be able to pool his CSR funds and use them at the site where the need was most critical.

Superintendent C commented that smaller classes are better but that he needed additional money to lower his class sizes. He wishes that the legislature would change the way that they are funding schools because there is currently an inequity in funding among school systems. He commented that “if the state does not change the method of funding for school systems then the smaller systems are going to dry up”.

Survey item seven asked systems to estimate their additional facilities costs as a result of CSR. The majority of small systems (54.5%) estimated their additional costs as less than \$1,000,000. The majority of medium-sized systems (51.2%) estimated their additional costs at between \$1,000,000 and \$5,000,000. There was no clear majority for large systems. Five systems reported costs between \$5,000,001 and \$10,000,000 while five other systems reported costs of \$20,000,000 or more. Table 14 presents a breakdown of the estimated additional facilities costs based on system size.

Table 14

Estimated Additional Facilities Costs Based on System Size

Costs	Large (N=15)		Medium (N=43)		Small (N=22)	
	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%
Less than \$1,000,000	1	6.7	13	30.2	12	54.5
\$1,000,000- \$5,000,000	0	0	22	51.2	7	31.8
\$5,000,001- 10,000,000	5	33.3	5	11.6	0	0
\$10,000,001- 15,000,000	2	13.3	2	4.7	2	9.1
\$15,000,001- 20,000,000	2	13.3	0	0	0	0
More than \$20,000,000	5	33.3	1	2.3	1	4.5

All three superintendents reported that they had spent between \$1 and \$5 million on facilities as a result of the CSR mandate. Superintendent B commented that every time he has completed an addition, state money was half of what he needed. As a result, he had to come up with the extra money in order to complete his additional classrooms. Superintendent C remarked, “Smaller classes are better, but we need the money to do it. It is taking every penny we have to build a new school”.

Survey item eight was developed to determine how systems were obtaining the additional funding that was needed to implement the CSR mandate. Regardless of the size of the school system, the majority of systems reported obtaining additional funding through SPLOST with 94.1% of large systems utilizing this method, 91.1% of medium systems, and 82.6% of small systems. Table 15 presents a breakdown of methods used to secure additional funding based on system size. As seen in Table 15, respondents were allowed to check more than one response.

Superintendent A remarked that their funding situation was unpleasant because they were just finishing a SPLOST and they could not pass another one in time to build the classrooms that they had been allotted by the state. The money from their original SPLOST was already obligated and virtually spent. He was not sure how his system would provide the additional money needed to build their classrooms. He stated, “I do not want to ever do bond debt again. It is a thing of the past. We will only do short term bonds while waiting on our next SPLOST”. He was hoping that the legislature would help systems like his, that were caught between two SPLOST’s, by giving them an extra year to use the money that the state had allotted for additional classrooms.

Table 15

Methods Used to Secure Additional Funding Based on System Size

Method	Large (N=17)		Medium (N=45)		Small (N=23)	
	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%
SPLOST	16	94.1	41	91.1	19	82.6
Fund Balances/ Fund Equity	0	0	11	24.4	12	52.2
Additional Funding Obtained From The State	5	29.4	12	26.7	3	13.0
Property Tax Increase	2	11.8	9	20.0	7	30.4
Bond Referendums	4	23.5	10	22.2	3	13.0
Redirect Funding From Other Programs	2	11.8	11	24.4	4	17.4
Grants/Private Donations	0	0	3	6.7	3	13.0
QZAB	0	0	2	4.4	0	0

Superintendent A also commented about the paperwork that accompanied the HB 1187 Needs Analysis funding request. He said that this funding required more paperwork than a normal request for capital outlay funds. He felt like it was a “deliberate discouragement for systems to go through the process” and that “the current state allotment for building classrooms is a myth”.

Superintendent B is hopeful that his system's third SPLOST will be approved in June. He commented, "If the SPLOST passes then we will have the money necessary to do whatever we need to do. If the SPLOST doesn't pass then we'll have a problem". His system had a sizable bond debt prior to SPLOST and now his system is completely bond debt-free. He believes that SPLOST is a great way to raise money for physical improvements but unfortunately it cannot be used for teacher salaries. He stated, "In order to reduce classes not only do you need the extra classrooms but the teachers to teach in those classrooms. There is currently no way to raise the money for added teacher salaries. The current state formula does not cover these added costs". He remarked that his system does not have a high enough property tax wealth to cover all the additional expenses that come along with reducing class sizes.

Superintendent C remarked that the CSR mandate had created financial challenges for his system. He raised taxes to 12 mills in order to be eligible for low wealth funding. His system has also passed a SPLOST. However, he will have to use all of his SPLOST money to build his new primary school. He commented, "If we tax the people it's not enough. A mill and SPLOST just does not bring in enough money in our county". The state will provide \$2.1 million for his new primary school. However, his system will have to come up with \$3.9 million in order to finish it. He will have to use all of his SPLOST money for this one project. He believes that the state should have a way to repay systems that were proactive in reducing their class sizes prior to HB 1187. He thinks that there should be some repayment of local money.

Survey item nine questioned superintendents about the effect of the CSR mandate on their facility planning. For large systems, 88.9% of superintendents believe that the

CSR mandate has affected their facility planning while 67.8% of medium system superintendents, and 78.1% of small system superintendents believe that it has affected their facility planning. All three superintendents who were interviewed agreed that the CSR mandate had affected their facility planning process. Table 16 presents a comparison of facility planning affected by CSR based on system size.

Table 16

Facility Planning Affected by CSR Based on System Size

Size	<u>n</u>	%
Large (<u>N</u> =18)	16	88.9
Medium (<u>N</u> =59)	40	67.8
Small (<u>N</u> =32)	25	78.1

If superintendents responded affirmatively to item nine, they were then asked to specify the various ways that the CSR mandate had affected their facility planning process. Modifications to the Five-Year School Facility Plan and reorganization of school construction priorities were the most commonly cited effects. Modification of the Five-Year School Facility Plan was indicated by 81.3% of large systems, 80.0% of medium systems, and 68.0% of small systems. Reorganization of school construction priorities was indicated by 87.5% of large systems, 62.5% of medium systems, and 52.0% of small systems. Table 17 presents the various ways that the facility planning process of superintendents has been affected by the CSR mandate. To determine this effect, respondents were allowed to check more than one response as seen in Table 17.

Table 17

Effects of CSR on Facility Planning Based on System Size

Effect	Large (N=16)		Medium (N=40)		Small (N=25)	
	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%
Modifications to the Five-Year School Facility Plan	13	81.3	32	80.0	17	68.0
Reorganization of school construction priorities	14	87.5	25	62.5	13	52.0
Additional renovation and modification of school buildings	9	56.3	22	55.0	9	36.0
The purchase of more portables to meet immediate needs	8	50.0	16	40.0	11	44.0
The purchase of additional property/real estate	10	62.5	14	35.0	5	20.0
Increased maintenance and repair of existing facilities	2	12.5	14	35.0	11	44.0
Cuts in preferred equipment and facilities to divert money	3	18.8	10	25.0	4	16.0
A setback of the school facility program	2	12.5	2	5.0	3	12.0
The construction of fast track relocatable classrooms	0	0	0	0	4	16.0
The delay of school facility replacement	1	6.3	2	5.0	0	0

Superintendent A reported that his immediate short-term concern was to provide enough classrooms to meet the mandate's deadline. Because his system has a dedicated facilities person, the facility planning process of his system is in good shape. His system will not need to conduct major renovations for five years. He believes that his long-term facility planning process will be affected more by growth than the CSR mandate.

Superintendent B commented that "the CSR mandate has caused us to reprioritize things that we would have done". As a result, his system has revised their Five-Year School Facility Plan. The immediate need for classrooms has caused his system "to put on the back burner regular improvements such as roofs and heating/air unit replacement". These things have all been put off because of the additional classrooms needed at the primary level. He does not believe that the CSR mandate will hurt his system in the long run because his system is committed to planning ahead and should be able to meet the challenges associated with implementation as long as their new SPLOST is approved.

Superintendent C also had to revise his system's Five-Year School Facility Plan. His system had to divert money from other facilities and programs in order to build the additional classrooms required. Because his system is building a new school, regular maintenance of roofs and heating and cooling units may have to be delayed. He decided to build a new school because he had already added on to his elementary school twice. He acknowledged that a new school was more costly than just adding classrooms to an existing school, but he felt like it was in the best interest of his students to build a new school.

Research Question 6: Do the perceptions of superintendents regarding the impact of CSR vary by system wealth?

To address research question 6, respondents were classified into groups based on the wealth of their system. Twenty-three systems had general fund expenditures per FTE of \$6300 or more and were classified as high wealth school systems. Forty-seven systems had general fund expenditures per FTE between \$5600 and \$6299 and were classified as medium wealth systems. Thirty-nine systems had general fund expenditures per FTE of less than \$5600 and were classified as low wealth systems.

Survey item one addressed the need for additional classrooms because of the CSR mandate. In high wealth systems, 65.2% of superintendents indicated a need for additional classrooms. In systems of medium wealth, 76.6% indicated a need for additional classrooms, while 76.9% of low wealth systems reported a need for more classrooms. All three superintendents (D, E, and F) who were interviewed confirmed that the CSR mandate had created a need for additional classrooms in their system. Table 18 presents the need for additional classrooms based on system wealth.

Table 18

Additional Classroom Need Based on System Wealth

Wealth	<u>n</u>	%
High wealth (<u>N</u> =23)	15	65.2
Medium wealth (<u>N</u> =47)	36	76.6
Low wealth (<u>N</u> =39)	30	76.9

Survey item two asked superintendents to break down their need for additional classrooms by grade level. High wealth systems reported a need of 413 classrooms at the K-3 level, 343 classrooms at the 4-8 level, and 236 classrooms at the 9-12 level. Medium wealth systems reported a need of 403 classrooms at the K-3 level, 224 classrooms at the 4-8 level, and 145 classrooms at the 9-12 level. Low wealth systems reported a need of 349 classrooms at the K-3 level, 104 classrooms at the 4-8 level, and 47 classrooms at the 9-12 level. Table 19 presents a breakdown of classes needed by grade level according to the wealth of the system.

It should be noted that one high wealth system indicated 250 classrooms needed at the K-3 level, 275 classrooms at the 4-8 level, and 225 classrooms at the 9-12 level. This large value skewed the distribution and had a great effect on the mean and standard deviation as seen in Table 19. With this value removed from the analysis, the mean/SD for each grade level would be as follows: 14.8 mean and 16.37 SD for the K-3 level; 9.7 mean and 10.59 SD for the 4-8 level; 11.0 mean and no SD for the 9-12 level because only one high wealth system reported needing additional classrooms at this level.

Interviews with Superintendents D, E, and F revealed that the CSR mandate had created a need for additional classrooms in all of their systems. The K-3 level was where Superintendent D needed the majority of his additional classrooms. He did not need any additional classrooms in the 4-8 or 9-12 level. His system has been affected tremendously by the mandate because his system is growing at a rate of five percent per year. His system was already overcrowded prior to HB 1187.

Superintendent E needed the majority of her classrooms at the middle school level. Superintendent E shared that her system had reduced the K-3 grade level prior to

Table 19

Classroom Need by Grade Level Based on System Wealth

Grade Level	<u>n</u> of Systems	% of Systems	Total Classrooms	<u>M</u>	<u>SD</u>	% of Total Classrooms
K-3						
High	12	92.3	413	34.3	69.66	35.5
Medium	30	93.8	403	13.4	11.32	34.6
Low	23	92.0	349	15.2	31.58	29.9
Total	65		1165	17.9		100
4-8						
High	8	61.5	343	42.9	94.30	51.1
Medium	26	81.3	224	8.6	7.15	33.4
Low	16	64.0	104	6.5	8.91	15.5
Total	50		671	13.4		100
9-12						
High	2	15.4	236	118	151.32	55.1
Medium	15	46.9	145	9.7	9.66	33.9
Low	7	28.0	47	6.7	3.53	11.0
Total	24		428	17.8		100

Note. High wealth N=13, Medium Wealth N=32, Low Wealth N=25

the passage of HB 1187 and this was why her middle school level was more affected by the CSR mandate. She remarked that her “kindergarten and first grade class sizes are lower than ever but our middle school classes are experiencing growth due to out of county move-ins”. This increased growth combined with HB 1187 has created a need for more classrooms at this level in her system.

Superintendent F’s classroom needs were evenly distributed among all grade levels but he felt like the lower grades were probably his biggest problem area. He reported that the state’s projection of classrooms needed was one-third of the actual 18 classrooms that he needs for next year.

Survey item three asked superintendents to report how they planned to provide the additional classrooms needed because of CSR. New construction was the preferred method of providing classrooms by high wealth (73.3%), medium wealth (100%), and low wealth (93.3%) systems. The renting and purchasing of portables was another commonly utilized method as indicated by 46.7% of high wealth systems, 52.8% of medium wealth systems, and 40.0% of low wealth systems. Floating teachers were used by 40.0% of high wealth systems, 47.2% of medium wealth systems, and 13.3% of low wealth systems. Spaces were converted by 33.3% of high wealth systems, 33.3% of medium wealth systems, and 46.7% of low wealth systems. Table 20 presents the methods used to provide additional classrooms based on system wealth. Respondents were allowed to check more than one response as seen in Table 20.

Table 20

Methods Used To Provide Additional Classrooms Based on System Wealth

Method	High wealth (N=15)		Medium Wealth (N=36)		Low Wealth (N=30)	
	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%
New Construction	11	73.3	36	100	28	93.3
Rent/Purchase Portables	7	46.7	19	52.8	12	40.0
Floating Teachers	6	40.0	17	47.2	14	13.3
Convert Other Spaces	5	33.3	12	33.3	14	46.7
Renovate Old and Unused School Buildings	3	20.0	9	25.0	4	13.3
Share Classroom Space	2	13.3	4	11.1	7	23.3
Modified/Parallel Block Scheduling	1	6.7	6	16.7	1	3.3

New construction was the preferred method of providing additional classrooms by all three superintendents who were interviewed. Superintendent D commented that it was his “aim to not have any portables” in his system. Because his county is a small county area wise, he has had a difficult time finding land for new schools. As a result, he is going to increase the capacity of his schools by 300 students. He commented that he had discussed increasing the school capacity with his principals before recommending it to the school board. He stated that all of his principals told him that they would support his

recommendation as long as he promised to give them plenty of support, personnel, and facilities.

Superintendent E has utilized portables, space conversions, and floating teachers in order to reduce class sizes at her middle school. She is planning to add on to her middle school but must wait until they begin to receive money from a recently passed SPLOST. Within the next five years her system is also planning on building a K-5 school in the western end of her county. She stated that this new school will “free up some space at my other elementary schools”.

Superintendent F is presently building a 12-classroom addition at his elementary school. Because his middle school has reached its maximum, he will have to add two more portables there next year. To create space at his elementary school, he moved his entire Pre-K program into portables. Superintendent F commented that he preferred to reduce his class sizes through new construction but his system did not have enough money so he had to rely on alternative methods of providing classrooms such as portables.

Survey item four asked respondents to report what type of spaces had been converted to provide additional needed classrooms. High wealth systems reported a total of 22 spaces converted. Medium wealth systems reported a total of 37 spaces converted and low wealth systems converted 50 spaces. Teacher prep rooms/lounges were the most commonly converted spaces among high wealth and medium wealth systems, with 14 converted by high wealth systems and 18 by medium wealth systems. Art rooms were the most commonly converted spaces among low wealth systems with 10 total

conversions. Table 21 presents space conversions based on system wealth. Respondents were allowed to check more than response as seen in Table 21.

Table 21

Space Conversions Based on System Wealth

Space	High wealth (N=5)		Medium Wealth (N=12)		Low Wealth (N=14)	
	<u>n</u>	Conversions	<u>n</u>	Conversions	<u>n</u>	Conversions
Teacher prep room/lounge	3	14	8	18	9	9
Multi-purpose room	2	2	5	5	7	9
Art Room	2	2	4	3	6	10
Music Room	1	1	4	3	5	6
Computer Lab	1	1	3	2	2	3
Special Education Facility	1	1	3	2	1	1
Library	1	0	2	1	2	2
Administrative Office	0	0	1	1	3	3
Gym	0	0	2	1	0	0
Closets	0	0	1	1	1	6
Old Portable	0	0	0	0	1	1
Old Lunchroom	1	1	0	0	0	0
Total		22		37		50

Note. Some respondents wrote “several” or “still counting” instead of an actual number.

Superintendent E was the only superintendent out of this group that was going to convert spaces to provide additional classrooms. She has asked her middle school principal to do a complete study of his building to find any spaces that could be converted to classrooms. She remarked that some spaces that are too small for a regular classroom could be used for a special education class or a gifted class.

Survey items five through eight were concerned with the effect of CSR on the funding of facilities. Survey item five asked superintendents if the CSR mandate had created financial difficulties for their system. In high wealth systems, 26.1% reported that CSR had not created financial difficulty for their system. In medium wealth systems, 17.0% reported that CSR had not created financial difficulty for them. In low wealth systems, 15.8% reported that CSR had not created financial difficulty for them. Table 22 presents the breakdown of financial difficulty perceptions based on school system wealth.

Because Superintendent F's system is a low wealth system, he felt that the CSR mandate had resulted in a large degree of financial difficulty for his system. He did not have enough money to hire the additional teachers needed or build the extra classrooms he needs. Superintendents D and E felt that the CSR mandate had not been that big a financial burden for their systems. Superintendent D commented that the CSR mandate had been more of "a management burden than a financial one".

Table 22

Financial Difficulty Perceptions Based on System Wealth

Perception	High (N=23)		Medium (N=47)		Low (N=38)	
	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%
Yes, to a large degree	4	17.4	8	17.0	10	26.3
Yes, somewhat	13	56.5	31	66.0	22	57.9
No, not at all	6	26.1	8	17.0	6	15.8

Survey item six asked superintendents whether or not they believed that the state had provided sufficient funding to implement the CSR mandate. An analysis of the data revealed that 71.4% of superintendents from high wealth systems believed that the state did not provide enough money to implement CSR and as a result they had to acquire additional funding in order to meet this mandate. For medium wealth systems, 87.2% believed that there was insufficient funding, while for low wealth systems the percentage was 84.2%. Table 23 presents a comparison of the perceptions of insufficient CSR funding based on system wealth.

All three superintendents who were interviewed agreed that the state did not provide sufficient funding for systems to implement the CSR mandate. Superintendent D commented that he had applied for the additional state funding that was allocated for reducing class sizes, but that it would only provide 50% of what he actually needed. He

Table 23

Perceptions of Insufficient CSR Funding Based on System Wealth

Wealth	<u>n</u>	%
High (N=21)	17	71.4
Medium (N=47)	47	87.2
Low (N=38)	24	84.2

was disappointed that the governor did not seek input from the school superintendents before authorizing the reduction in class sizes. Superintendent F agreed with Superintendent D's assessment that the state money would only cover half of his actual costs. Superintendent F's system does not have the resources to make up the difference.

Superintendent E's system qualified for \$371,000 worth of state funding for additional classrooms at her primary and elementary schools. She was upset that the state had mandated that she could only use this money at these schools and not at her middle school. She does not want to use it at these schools because it would mean making them larger. She does not want these schools to be bigger. She believes that smaller schools provide a better learning environment. Her board also indicated that they would prefer not to add on to these schools because they would have to provide the other half of the money. She has to spend the state money by 2004. She commented, "I will probably lose every dime of it unless I give in and make my schools larger by building on classrooms that I don't need and I just don't want to do that. I feel like we have gotten the short end of the stick".

Survey item seven asked superintendents to estimate their additional facilities costs as a result of CSR. The majority of high wealth systems (53.8%) estimated their additional costs as less than \$1,000,000. The majority of medium wealth systems (63.2%) and low wealth systems (79.3%) estimated their additional costs to be less than \$5,000,000. All three superintendents interviewed also indicated that they had spent between \$1,000,000 and \$5,000,000 on facilities as a result of the CSR mandate. Table 24 presents a breakdown of the estimated additional facilities costs based on system wealth.

Table 24

Estimated Additional Facilities Costs Based on System Wealth

Costs	High (N=13)		Medium (N=38)		Low (N=29)	
	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%
Less than \$1,000,000	7	53.8	8	21.1	11	37.9
\$1,000,000- \$5,000,000	1	7.7	16	42.1	12	41.4
\$5,000,001- 10,000,000	2	15.4	5	13.2	3	10.3
\$10,000,001- 15,000,000	2	15.4	3	7.9	1	3.4
\$15,000,001- 20,000,000	0	0	1	2.6	1	3.4
More than \$20,000,000	1	7.7	5	13.2	1	3.4

Survey item eight was developed to determine how systems were obtaining the additional funding that was needed to implement the CSR mandate. Regardless of the wealth of the school system, the majority of systems reported obtaining additional funding through SPLOST with 60.0 % of high wealth systems utilizing this method, 97.4% of medium wealth systems, and 93.5% of low wealth systems. Table 25 presents a breakdown of methods used to secure additional funding based on system wealth. As seen in Table 25, respondents were allowed to check more than one response.

Superintendents D and E were confident that SPLOST funds would be their primary method of securing the additional funding that they needed in order to comply with the CSR mandate. Superintendent D commented that raising taxes was not a popular funding method with his board of education. Because his county is located in area of the state where a SPLOST brings in adequate funds, he does not believe his county will be participating in bond referendums or raising taxes.

Superintendent E stated that in about four years she would ask the voters in her county to approve the extension of their current SPLOST so that they can build a new K-5 school. She is very pleased with SPLOST as a funding option for her county. She stated that her board of education feels that they are close to their limit on the amount of tax they can levy without upsetting the citizens that elected them.

Superintendent F commented that in his system a mill does not generate enough money to build the additional classrooms that he needs. Therefore, he will have to rely on a SPLOST and a property tax increase. He remarked, "We may have to raise taxes to be in compliance". If these methods do not raise enough money, then he stated that he

might have to do a bond referendum or redirect funding from other programs. He stated, “I don’t know where we will get the money.”

Table 25

Methods Used to Secure Additional Funding Based on System Wealth

Method	High (N=15)		Medium (N=39)		Low (N=31)	
	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%
SPLOST	9	60.0	38	97.4	29	93.5
Fund Balances/ Fund Equity	6	40.0	10	25.6	7	22.6
Additional Funding Obtained From The State	2	13.3	10	25.6	8	25.8
Property Tax Increase	1	6.7	9	23.1	8	25.8
Bond Referendums	4	26.7	5	12.8	8	25.8
Redirect Funding From Other Programs	3	20.0	6	15.4	8	25.8
Grants/Private Donations	2	13.3	3	7.7	1	3.2
QZAB	0	0	2	4.4	0	0

Survey item nine questioned superintendents about the effect of the CSR mandate on their facility planning. For wealthy systems, 65.2% of superintendents believe that the CSR mandate has affected their facility planning, while 76.6% of medium wealth superintendents, and 76.9% of low wealth superintendents believe that it has affected their facility planning. All three superintendents who were interviewed agreed that the CSR mandate had affected their facility planning process. Table 26 presents a comparison of facility planning affected by CSR based on system wealth.

Table 26

Facility Planning Affected by CSR Based on System Wealth

Wealth	<u>n</u>	%
High (<u>N</u> =23)	15	65.2
Medium (<u>N</u> =47)	36	76.6
Low (<u>N</u> =39)	30	76.9

If superintendents responded affirmatively to item nine, they were then asked to specify the various ways that the CSR mandate had affected their facility planning process. Modifications to the Five-Year School Facility Plan and reorganization of school construction priorities were the most commonly cited effects. Modification of the Five-Year School Facility Plan was indicated by 73.3% of high wealth systems, 77.8% of medium wealth systems, and 76.6% of low wealth systems. Reorganization of school construction priorities was indicated by 66.7% of high wealth systems, 63.9% of medium wealth systems, and 63.3% of low wealth systems. Table 27 presents the various ways that the facility planning process of superintendents has been affected by the CSR

mandate. To determine this effect, respondents were allowed to check more than one response as seen in Table 27.

The CSR mandate has resulted in modifications to Superintendent D's Five-Year School Facility Plan and a reorganization of school construction priorities. His system has also hired the necessary teachers in order to comply with the mandate. He knew that he had four years to reduce his class sizes but he felt like they needed to go ahead and do it. He stated that, "We are hanging on in the short term to meet the long term".

Superintendent D stated that his system had recently hired an assistant superintendent for facilities to help with their facility planning process. He remarked, "This person knows the ins and outs of the state department. He knows how to go in and get the money that we are due. We took a major step when we hired him. He can look at our Five-Year Plan and he knows how to bring out the best so that we get what we are due". He believes that it is very important to have someone on staff that "you have confidence in to help the superintendent" and "who has experience with building schools and working with the state department".

Superintendent E did not revisit her current Five-Year School Facility Plan because it expires this year. In their next facility plan, her system will have to consider the implications of the CSR mandate along with the four-percent growth per year that they are experiencing. She also commented that a countywide moratorium on growth and subdivisions would be lifted this year and that was also going to affect her system.

Superintendent F had to resubmit his Five-Year School Facility Plan. He remarked that as far as his facility planning process was concerned, he was not really going to change anything because they had already decided prior to HB 1187 that they

Table 27

Effects of CSR on Facility Planning Based on System Wealth

Effect	High (N=15)		Medium (N=36)		Low (N=30)	
	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%
Modifications to the Five-Year School Facility Plan	11	73.3	28	77.8	23	76.7
Reorganization of school construction priorities	10	66.7	23	63.9	19	63.3
Additional renovation and modification of school buildings	5	33.3	21	58.3	14	46.7
The purchase of more portables to meet immediate needs	8	53.3	17	47.2	10	33.3
The purchase of additional property/real estate	6	40.0	13	36.1	10	33.3
Increased maintenance and repair of existing facilities	4	26.7	15	41.7	8	26.7
Cuts in preferred equipment and facilities to divert money	3	20.0	10	27.8	4	13.3
A setback of the school facility program	3	20.0	3	8.3	1	3.3
The construction of fast track relocatable classrooms	1	6.7	1	2.8	2	6.7
The delay of school facility replacement	0	0	2	5.6	1	3.3

wanted to reduce class sizes. He just expected the state to provide more money. He also mentioned that low wealth systems might have to go through litigation to get the state to help the poorer systems. He commented, "CSR is a very popular initiative, but it will not improve education because they cannot provide us with enough money to get the numbers low enough so that it will really make a difference".

Overarching Research Question: What is the perceived impact of mandatory class-size reduction on school facility planning in Georgia school systems?

To address the overarching research question, the researcher developed her survey and interviews around research questions one through four. These four research questions examined the following areas of facility planning: facility availability, funding, and short- and long-range facility planning. The researcher also examined how system size and wealth affected superintendents' perceptions.

The researcher found that Georgia school superintendents did perceive the CSR mandate as having an effect on the availability of facilities. A majority of school superintendents reported a need for additional classrooms, particularly at the K-3 level. The superintendents perceived new construction as the best method for providing these additional classrooms. In order to provide these additional classrooms, some superintendents had to convert non-classroom spaces into classrooms. Teacher preparation rooms/lounges were perceived to be the best spaces to convert into classrooms.

Superintendents also perceived the CSR mandate as affecting funding. The majority of superintendents felt that CSR had created some financial difficulty for their system and that the state did not provide sufficient funding to implement the mandate.

The majority of superintendents were able to estimate their CSR-related facilities costs at \$5,000,000 or less. Superintendents also had definite perceptions regarding what measures were best used to obtain additional funds. The majority of superintendents felt that a SPLOST was the best method for obtaining any additional funds that were needed to comply with the mandate.

The researcher also found that a majority of superintendents felt that the CSR mandate had affected their short- and long-range facility planning process. Modifications to the Five-Year School Facility Plan and reorganization of school construction priorities were perceived to be the most common ways that their facility planning process had been affected by the CSR mandate.

Perceptions of superintendents did vary based on system size. Large systems reported greater facility needs and costs than medium and small systems. Larger systems were more likely than smaller systems to purchase additional property/real estate. The larger systems were also more likely to reorganize their school construction priorities because of the CSR mandate.

Perceptions of superintendents also varied based on system wealth. High wealth systems had less facility needs and costs than medium and low wealth systems. Their perceptions regarding funding also differed from those of medium and low wealth systems. Medium and low wealth systems reported more financial difficulties than high wealth systems. The majority of medium and low wealth systems reported CSR-related facilities costs as greater than \$1,000,000. These systems also felt that the state did not provide sufficient funding to implement the mandate and as a result they were more likely than high wealth systems to pass a SPLOST to obtain additional funding. Medium

and low wealth systems also felt that CSR had more of an effect on facility planning than high wealth systems.

In order to answer the overarching research question, the researcher had to examine the data provided by the answers to research questions one through six. After studying these results, the researcher has concluded that Georgia school superintendents did perceive mandatory class-size reduction as having an impact on school facility planning.

Summary

The purpose of this study was to investigate the perceptions of Georgia school superintendents regarding the impact of the CSR mandate on their school facility planning process. Qualitative and quantitative research methods were used to carry out the research. This involved the use of survey and in-depth interview data collected from the superintendents. The survey instrument and interview guide were developed by the researcher and a panel of experts. One hundred and nine superintendents returned their surveys and six were selected for in-depth interviews based on either the size or wealth of their school system.

The survey data were analyzed using descriptive statistics to determine patterns and trends. Significant findings of the study were:

1. The majority of superintendents (74.3%) had to add classrooms because of the CSR mandate.
2. The majority of classrooms (51.5%) were needed at the K-3 level.
3. New construction was the preferred method (92.6%) of providing additional classrooms.

4. Teacher preparation rooms/lounges were the most commonly converted spaces with a total of 41 conversions.
5. The majority of superintendents (60.6%) reported that the CSR mandate had created some financial difficulty for their system.
6. The majority of superintendents (80.7%) felt that the state did not provide sufficient funding to implement the mandate.
7. The majority of systems (68.8%) were able to fully implement the CSR mandate for \$5,000,000 or less.
8. The most common method of obtaining funding was through the passage of a SPLOST, with 89.4% of superintendents reporting that they had used this method.
9. The majority of superintendents (77.9%) indicated that the CSR mandate had affected their facility planning process.
10. The majority of superintendents (72.9%) cited Modifications to the Five-Year School Facility Plan as the most common way that their facility planning process had been affected by the CSR mandate.
11. Larger systems needed the majority of all classrooms regardless of the grade level.
12. Regardless of the size of the school system, the need for additional classrooms decreased as grade level increased.
13. The majority of small systems estimated their additional facilities costs as less than \$1,000,000, whereas the majority of medium systems, estimated their

- costs at between \$1,000,000 and \$5,000,000. All large systems, except for one, estimated their costs at \$5,000,000 or greater.
14. Large systems were more likely to purchase additional property/real estate than medium or small systems.
 15. The smaller the system the less likely they were to reorganize their school construction priorities.
 16. High wealth systems reported less new construction of classrooms because they had less need for additional classrooms than medium or low wealth systems.
 17. Low wealth systems need more space conversions than high and medium wealth systems.
 18. High wealth systems were more likely to perceive the CSR mandate as causing no financial difficulty for their system than medium or low wealth systems.
 19. Medium and low wealth systems were more likely to report a perception of insufficient state funding than high wealth systems.
 20. The majority of high wealth systems reported their additional facilities costs as less than \$1,000,000 whereas the majority of medium and low wealth systems estimated their costs at between \$1,000,000 and \$5,000,000.
 21. High wealth systems were less likely to pass a SPLOST and increase property taxes than medium or low wealth systems but were more likely to receive grants and private donations.

22. High wealth systems were more likely to utilize fund balances/fund equity than medium or low wealth systems.
23. High wealth systems reported less of an effect on facility planning than medium or low wealth systems.
24. Low wealth systems were less likely than high or medium wealth systems to purchase portables to meet their immediate classroom needs.
25. High wealth systems were less likely than medium or low wealth systems to renovate and modify existing school buildings.
26. High wealth systems were more likely than medium or low wealth systems to view the CSR mandate as causing a setback of their school facility program.
27. Georgia school superintendents perceived mandatory class-size reduction as having an impact on school facility planning.

This chapter reviewed the purpose of the study, research questions, and procedures used to conduct the research. Conclusions, implications, and recommendations drawn from the data will be presented in the next chapter.

CHAPTER V

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

This chapter presents a summary of the study, an analysis of the research findings, and a discussion of these findings. Conclusions and implications, which were based on the results of the study, are then presented. The researcher's plan for disseminating the research findings is also reported. The chapter concludes with recommendations for further research.

Summary

The purpose of this study was to investigate the effect of Georgia's class size reduction (CSR) mandate on the facility planning process of school systems. The main research question being addressed by this study was: What is the perceived impact of mandatory class-size reduction on school facility planning in Georgia school systems? The following subquestions were also addressed in this research study:

1. What are the perceptions of superintendents regarding the impact of CSR on the availability of facilities?
2. What are the perceptions of superintendents regarding the measures school systems could use to address the immediate need for classroom space?
3. What are the perceptions of superintendents regarding the impact of CSR on the funding of facilities?
4. What are the perceptions of superintendents regarding the impact of CSR on short- and long-range facility planning?

5. Do the perceptions of superintendents regarding the impact of CSR vary by system size?
6. Do the perceptions of superintendents regarding the impact of CSR vary by system wealth?

The study utilized a descriptive research design, which combined quantitative and qualitative research perspectives. Quantitative data were obtained from the administration of a survey to Georgia school superintendents. Superintendents were chosen as the respondents because they are the individuals ultimately responsible for the implementation of the CSR mandate. Qualitative data for the study were obtained in the form of follow-up interviews, which provided clarification about superintendents' perceptions regarding the CSR mandate. The follow-up interviews conducted after the administration of the survey allowed the researcher to gather more in-depth information by directly contacting the participants.

Because no valid research instrument existed, the researcher had to develop and pilot test the survey before undertaking the research study. Five superintendents from the Middle Georgia School Superintendents Association agreed to participate in the pilot study. Their participation in the pilot study then excluded them from the research study. The remaining 175 Georgia school superintendents served as the participants for the research study.

One hundred and nine superintendents completed and returned their surveys. Follow-up interviews were conducted with six selected respondents from the research study who indicated on a returned interview consent card that they would be willing to

take part in a follow-up interview. Out of 109 participating superintendents, 24 superintendents returned their interview consent cards.

The researcher then divided these superintendents into groups based on the size (small, medium, or large) and wealth (high wealth, medium wealth, or low wealth) of their system. The researcher then contacted a superintendent from each category and scheduled interviews. Interviews were conducted at the superintendent's convenience.

A survey was used to collect data related to the research questions. The researcher analyzed the data to determine patterns and trends. Data on facility adjustments such as construction, renovation, and acquisition of portables were reported as frequencies and percentages. This information was summarized in tables in Chapter IV. The data were then analyzed by system size and system wealth to determine if any differences existed between systems of various size and wealth.

The follow-up interviews provided additional information related to the research questions. Answers from the follow-up interviews were recorded on tape and in note form by the researcher and the responses were then transcribed. The researcher then studied the transcriptions for emerging themes. The information shared in the interviews was used to help identify and clarify issues relating to the research questions.

Summary of Research Findings

The analysis of the data provided the significant research findings of this study. The following summary of the research findings is organized around the research questions.

Research Question 1: What are the perceptions of superintendents regarding the impact of CSR on the availability of facilities? The purpose of research question one was

to determine if the CSR mandate had created a need for additional classrooms. Of the 109 superintendents surveyed, 74.3% reported that the CSR mandate had resulted or would result in the need for additional classrooms in their school system. The majority (51.5%) of these additional classrooms was needed at the K-3 level.

Research Question 2: What are the perceptions of superintendents regarding the measures school systems could use to address the immediate need for classroom space?

This question was concerned with how systems were providing the additional classrooms that were needed as a direct result of CSR. The most frequently utilized method of providing additional classrooms, as indicated by 92.6% of 81 respondents, was through the construction of new classrooms. Renting/purchasing portables, using floating teachers, and the conversion of non-classroom space were other commonly utilized methods. Teacher preparation rooms/lounges were the most commonly converted non-classroom spaces.

Research Question 3: What are the perceptions of superintendents regarding the impact of CSR on the funding of facilities? This research question was concerned with the effect of the CSR mandate on the funding of facilities. Out of 108 superintendents surveyed, the majority (60.6%) reported that the CSR mandate had created some financial difficulty for their school systems. A majority of superintendents (80.7%) also felt that the state did not provide sufficient funding to implement the mandate. The majority of school superintendents (68.8%) reported that they would be able to fully implement the CSR mandate for \$5,000,000 or less. The most common method of obtaining additional funding was through the passage of a SPLOST, with 89.4% of superintendents reporting

that they had used or would use this method to obtain the additional funds needed to comply with the CSR mandate.

Research Question 4: What are the perceptions of superintendents regarding the impact of CSR on short- and long-range facility planning? This research question was concerned with CSR's effect on superintendents' short- and long-range facility planning. Of the 109 superintendents surveyed, 77.9% indicated that the CSR mandate had affected their facility planning. Item nine on the survey asked those superintendents who were affected to mark the various ways that their facility planning process had been influenced by the CSR mandate. Modifications to the Five-Year School Facility Plan were reported by 72.9%, while 61.1% indicated a need to reorganize their school construction priorities. Other commonly cited effects included renovation and modification of school buildings, purchasing of portables, and purchasing of additional property/real estate.

Research Question 5: Do the perceptions of superintendents regarding the impact of CSR vary by system size? To address research question five, respondents were classified into groups based on the size of their school system. The responses to the various survey items were then analyzed to determine if superintendents' perceptions vary based on the size of their school system. One hundred percent of superintendents from large school systems reported the need for additional classrooms while 74.6% of medium systems and 59.4% of small systems reported a need for more classrooms.

Large systems needed the majority of all classrooms regardless of the grade level. The majority of classrooms were needed at the K-3 grade level without regard to the size of the system. The size of the school system notwithstanding, the need for additional classrooms decreased as grade level increased.

Survey item three asked superintendents to report how they planned to provide the additional classrooms needed because of the CSR mandate. New construction was the preferred method of providing additional classrooms regardless of the size of the school system. For large and medium systems, renting/purchasing portables was the second most commonly utilized method of providing classrooms, while for small systems the utilization of floating teachers was the second most prevalent option.

Survey item four asked respondents to report what type of space had been converted to provide additional needed classrooms. Seven large systems, seventeen medium systems, and seven small systems responded that they had or would convert spaces to create additional classrooms. For large and medium systems, the most commonly converted spaces were teacher prep room/lounges. For small systems, however, art rooms were the most commonly converted space, followed closely by teacher prep room/lounges.

Survey item five asked superintendents if the CSR mandate had created financial difficulties for their system. The majority of superintendents, regardless of the size of their system, reported that it had created some financial difficulty for their systems.

Survey item six asked superintendents whether or not they believed that the state had provided sufficient funding to implement the CSR mandate. An overwhelming majority (94.4%) of large systems believed that the state did not provide enough money to implement the mandate and as a result had to acquire additional funding in order to meet the mandate. For medium systems, 79.7% believed there was insufficient funding, while for small systems the percentage was 82.8%.

Survey item seven asked systems to estimate their additional facilities costs as a result of CSR. The majority of small systems (54.5%) estimated their additional costs as less than \$1,000,000. The majority of medium-sized systems (51.2%) estimated their additional costs at between \$1,000,000 and \$5,000,000. There was no clear majority for large systems but all large systems except one indicated estimated costs of \$5,000,000 or greater.

Survey item eight was developed to determine how systems were obtaining the additional funding that was needed to implement the CSR mandate. Regardless of the size of the school system, the majority of systems reported obtaining additional funding through SPLOST. Large systems were the only systems that did not use fund balances/fund equity and grants/private donations to secure additional funding.

Survey item nine questioned superintendents about the effect of the CSR mandate on their facility planning. For large systems, 88.9% of superintendents indicated that the CSR mandate has affected their facility planning while 67.8% of medium system superintendents and 78.1% of small system superintendents indicated that it has affected their facility planning.

If superintendents responded affirmatively to item nine, they were asked to specify the various ways that the CSR mandate had affected their facility planning process. Size of the system notwithstanding, modifications to the Five-Year School Facility Plan and reorganization of school construction priorities were the most commonly cited effects. Increased maintenance and repair of existing facilities was not as prevalent among large systems (12.5%) as it was among medium (35.0%) and small (44.0%) systems. The data also indicate that the larger the system the more likely the

purchase of additional property/real estate. The construction of fast track relocatable classrooms was utilized by only small systems.

Research Question 6: Do the perceptions of superintendents regarding the impact of CSR vary by system wealth? To address research question six, respondents were classified into groups based on the wealth of their school system. The responses to the various survey items were then analyzed to determine if superintendents' perceptions vary based on the wealth of their school system.

Survey item one addressed the need for additional classrooms because of the CSR mandate. The need for additional classrooms was indicated by 65.2% of superintendents in high wealth systems, 76.6% of superintendents in medium wealth systems, and 76.9% of superintendents in low wealth systems.

Survey item two asked superintendents to break down their need for additional classrooms by grade level. High wealth systems needed the majority of additional classrooms at all grade levels. The majority of classrooms were needed at the K-3 grade level regardless of the wealth of the system. As seen in the comparison by system size, as grade level increased, classroom need decreased without regard to system wealth.

Survey item three asked superintendents to report how they planned to provide the additional classrooms needed because of CSR. New construction was the preferred method of providing classrooms by high, medium, and low wealth systems. For high and medium wealth systems, the renting and purchasing of portables was the second most commonly utilized method. For low wealth systems, space conversion was the second most commonly utilized method.

Survey item four asked respondents to report what type of spaces had been converted to provide additional classrooms. High wealth systems reported a total of 22 spaces converted. Medium wealth systems reported a total of 35 spaces converted, and low wealth systems reported converting 50 spaces. Teacher prep rooms/lounges were the most commonly converted spaces among high wealth and medium wealth systems. Art rooms were the most commonly converted spaces among low wealth systems. Wealthy systems were the only systems that did not convert administrative offices, gyms, and closets into classrooms.

Survey item five asked superintendents if the CSR mandate had created financial difficulties for their system. The majority of superintendents, regardless of the wealth of their system, reported that it had created some financial difficulty for their systems.

Survey item six asked superintendents whether or not they believed that the state had provided sufficient funding to implement the CSR mandate. For wealthy systems, 71.4% of respondents believed that the state did not provide enough money to implement the mandate. Medium and low wealth systems reported a perception of insufficient funding of 87.2% and 84.2%, respectively.

Survey item seven asked systems to estimate their additional facilities costs as a result of CSR. The majority (53.8%) of high wealth systems reported additional facilities costs of less than \$1,000,000, while the greatest number of medium wealth (42.1%) and low wealth (41.4%) systems estimated their costs at between \$1,000,000 and \$5,000,000.

Survey item eight was developed to determine how systems were obtaining the additional funding that was needed to implement the CSR mandate. Regardless of the wealth of the school system, the majority of systems reported obtaining additional

funding through SPLOST. High wealth systems were less likely to increase property taxes than medium or low wealth systems but were more likely to receive grants and private donations.

Survey item nine questioned superintendents about the effect of the CSR mandate on their facility planning. For wealthy systems, 65.2% of superintendents reported that the CSR mandate had affected their facility planning while a greater percentage of medium wealth superintendents (76.6%), and low wealth superintendents (76.9%) indicated this effect.

If superintendents responded affirmatively to item nine, they were asked to specify the various ways that the CSR mandate had affected their facility planning process. Modifications to the Five-Year School Facility Plan were the most commonly cited effect by all three categories of systems. Reorganization of school construction priorities was the second most commonly cited effect for all three groups.

Overarching Research Question: What is the perceived impact of mandatory class-size reduction on school facility planning in Georgia school systems? In order to answer the overarching research question, the researcher examined the data provided by the answers to research questions one through six. After studying these results, the researcher found that Georgia school superintendents did perceive mandatory class-size reduction as having an impact on school facility planning. The researcher found that Georgia school superintendents perceived the CSR mandate as having an effect on the availability of facilities, funding, and short- and long-range facility planning. The perceptions of superintendents regarding CSR's impact on facility planning also varied

by system size and wealth. The CSR mandate had the greatest impact on large systems and low wealth systems.

Discussion of Research Findings

This section will discuss how the current research findings relate to those reported earlier in the review of literature. This discussion has been organized around the following sections: availability of facilities, addressing facility needs, funding of facilities, and facility planning.

Availability of Facilities

Even though the majority of CSR research focuses on student achievement, many researchers have included in their studies how CSR affects the availability of facilities and funding. The CSR Consortium (2000) reported that the California CSR mandate had created a need for additional classrooms in many school systems. This was also the case in Georgia, with 81 out of 109 superintendents reporting a need for additional classrooms due to the CSR mandate. Georgia's A-Plus Education Reform Act mandated significant decreases in class sizes at the K-3 grade level (PAGE, 2000). This is reflected in the results of this study. The results indicated that the majority of additional classrooms were needed at the K-3 grade level.

A decrease in student population can result in a surplus of instructional spaces while an increase in enrollment can result in a shortage of space (Boynton & Cecil, 1996). Several systems in the current study reported that increases or decreases in enrollment were affecting their ability to comply with the CSR mandate. Those systems that were experiencing a decrease in enrollment did not need any additional classrooms because their numbers were already lower than the maximums mandated by the law.

However, for those systems that were experiencing an enrollment increase the CSR mandate created a facilities crisis for their systems.

Some school systems consider CSR to be such a worthwhile school improvement initiative that they will initiate a CSR effort of their own, even in the absence of state mandate. Several of the superintendents who were interviewed reported that they had already begun reducing class sizes in their elementary schools prior to HB 1187. They accomplished these reductions without any assistance from the state. Egelson, Harman, and Achilles (1996) found this to also be the case in Burke County, North Carolina. This school system also used their own funds to initiate a reduced class-size program at the elementary level.

Addressing Facility Needs

Rountree (1997) found that purchasing or renting portables was the most commonly reported method used to house additional classrooms needed due to CSR. Reconfiguring space was the second most popular option. This was not the case in Georgia where new construction was the preferred method of providing classrooms. Purchasing or renting portables was second followed closely by floating teachers. Molnar et al. (1999) found that some schools utilized floating teachers and shared classrooms to reduce class sizes. In Georgia, floating teachers were a more commonly utilized method than sharing classrooms.

Tressler (1997) found that because urban areas have limited space they often could not build additional classrooms in order to reduce class sizes. As a result, they often have to use year round schooling or portables to house their students.

Superintendent D commented that because his system was located in an urban area, his

system was out of space to build additional schools. He had to find alternative ways to provide the additional classrooms that he needs to reduce his class sizes. Therefore, he has added portables to the existing schools. The portables are a temporary solution until he can add on to his existing schools thereby increasing the capacity of these schools by at least 300 students. Year round schooling was not an option utilized by any of the superintendents that participated in this study.

Rountree (1997) found that systems had to be able to adapt in flexible ways in order to implement the CSR program. The researcher also found that Georgia superintendents were creative and flexible when trying to address their facility needs. Some systems reported converting closets into classrooms while other systems were renovating old portables and lunchrooms. Thirty-one Georgia superintendents reported reconfiguring space to create new classrooms. McRobbie's (1997) study found that CSR resulted in space being taken from special education, music, art, and computer labs. The present research study also supported this finding.

Prior research indicated that the lack of classroom space resulted in some schools modifying the traditional school schedule. Egleson, Harman, and Achilles (1996) as well as Cotton and Linik (2000) found that some schools dealt with the issue of space by implementing parallel or modified block scheduling. Eight school systems in Georgia reported using this method to provide additional classrooms.

For some schools CSR may result in a change in educational programming. Tressler (1997) found that some schools had relocated or eliminated existing programs because of CSR's effect on the availability of facilities. The current research supports

this finding. Georgia superintendents also reported eliminating or moving programs to create additional classrooms.

Funding of Facilities

The majority of Georgia superintendents perceived the funding allocated by the state to implement the CSR mandate to be insufficient. This was also the case in California as reported by Tressler (1997). Naik (1999) found that CSR mandates often create financial difficulties for some systems. Twenty-two superintendents in the present study indicated that the Georgia CSR mandate had created a large degree of financial difficulty for their system. Seven superintendents estimated their additional facilities costs for fully implementing the CSR mandate as greater than \$20,000,000.

Argon (1996) reported that schools are having to find alternative methods to raise money for construction projects. The Governor's Education Reform Study Commission's subcommittee on Funding (Georgia School Boards Association Report, 1999) recommended that there was a need for school systems to find alternatives for funding construction projects. The current research study revealed that Georgia school systems are no longer relying on traditional forms of funding such as bond issues and property tax increases. Instead they are using SPLOST and other alternative funding methods to finance their capital outlay projects.

Facility Planning

A thorough review of the literature revealed that the majority of CSR studies focused on the effects of CSR on student achievement. The researcher found very few studies that address the impact of CSR on facility planning. McRobbie (1996) conducted one such study. She found that effective CSR implementation required a comprehensive

facility planning approach. The present study revealed that the majority of superintendents believe that the CSR mandate has affected their facility planning process. The survey and interview data also supported McRobbie's finding that long range facility planning is needed to anticipate facility needs due to reductions in class sizes.

Rountree's (1997) study found that leaders needed to have firmly established goals and strategic planning processes in place in order to respond to the problems and demands of implementing CSR. The interview with Superintendent D supports this finding. His system has hired a facilities expert so that they may effectively evaluate their facility needs and establish objectives that will help them meet those needs. Superintendent A also has an assistant whose primary responsibility is facility planning.

Rountree also found that leaders had to employ strategic procedures that fostered communication and collaboration in order to find classroom space. Interviews with several superintendents revealed how important communication and collaboration are to implementing the CSR mandate. Superintendent D communicated his plan for increasing the capacity of his schools to his principals before actually implementing the increase. Superintendent E stated that she was working closely with her middle school principal in conducting a comprehensive study of his building in order to find any space that might be converted to classrooms.

Conclusions

Georgia school superintendents did perceive mandatory class-size reduction as having an impact on school facility planning. The CSR mandate affected the availability of school facilities, particularly at the K-3 level. New construction was the preferred method of providing additional classrooms.

Most superintendents felt the state had not provided sufficient funding to implement the mandate. SPLOST was the most common method superintendents sought for additional funding. Because of the mandate, most superintendents had to make modifications to their Five-Year School Facility plan as well as reorganize their school construction priorities.

The perceptions of superintendents regarding the impact of CSR varied by system size in certain areas. As system size increased, so did the estimates of additional facilities cost. The perceptions of superintendents regarding the impact of CSR also varied by system wealth in certain areas. High wealth systems were less likely to perceive the CSR mandate as causing financial difficulty for their system than medium or low wealth systems. The funding options utilized by high wealth systems differed from those of medium and low wealth systems. High wealth systems were less likely to pass a SPLOST or increase property taxes than medium or low wealth systems, but were more likely to utilize grants, private donations, and fund balances/fund equity to address their additional classroom needs.

Implications

This section will address the implications of the research. These implications have evolved from the research findings. As mentioned in Chapter I, research in the area of CSR and its relationship with the facility planning process is very limited. The majority of CSR research focuses on its relationship to student achievement. There have been over a thousand studies conducted that have examined the effect of smaller classes on student achievement. There have been very few studies conducted that have

documented the effect of CSR on the facility planning process of schools. This study helps to fill this void in the literature.

Eighty-one out of 109 superintendents in this study indicated that CSR had affected their facility planning. This study serves as a summary of CSR implementation methods throughout the state of Georgia. Educational leaders and policy makers can use this research to help them understand the impact of CSR on the facility planning process of schools. This study may also provide valuable information to school systems that have not yet begun to reduce their class sizes.

This study has helped to identify the challenges and areas of concern that are related to the CSR initiative. As of this date, no studies have been conducted that assess the effects of Georgia's CSR mandate on facility planning. This study should encourage other researchers to study the effects of the CSR mandate on the facility planning process in other states.

Because this study documents the challenges and areas of concern related to the CSR mandate, the results of the study can help leaders at the state government level improve the CSR initiative. Several superintendents commented about the lack of funding for teachers. They have been given money to build additional classrooms, but they cannot afford to hire the teachers to teach in those classrooms. School systems need to be allowed greater flexibility of use with CSR funding so that the additional money can be used for teachers and not just buildings. The legislature needs to be aware of this lack of money for hiring teachers so that additional funds may be appropriated to help schools fully implement CSR.

Because the CSR mandate was a partially funded mandate, many school systems did not receive enough money from the state to comply with all the provisions of the mandate. As a result, they had to obtain additional funds to fully implement CSR. The results of this study have shown that the majority of systems have obtained these additional funds through the passage of a SPLOST. Therefore, the CSR initiative may have been responsible for increasing the sales tax by one cent in many Georgia counties.

This study also provided valuable information about how systems are obtaining funds to meet their facility needs. This study has shown that high wealth school systems were less likely than medium or low wealth systems to impart educational costs on to their residents through a SPLOST or property tax increase. Several of the superintendents interviewed indicated that they would only pass a bond referendum to obtain funding as a last resort. This implies that bond referendums may no longer be a viable funding option for some school systems.

The state government should consider all the implications of any mandate on all school systems. Prior to authorizing a mandate, policy makers should determine the funding needed to support the achievement of their goals. This study will assist policy makers in planning and developing implementation strategies, and funding for future major reform efforts, especially those that affect the facility-planning process of school systems.

Dissemination

The researcher has identified three groups that would be interested in the results of this study. The first group is Georgia school superintendents. This study provided research that describes how schools are implementing the CSR mandate and how it is

affecting their facility needs and their facility planning process. This research will allow school superintendents to see what measures other systems are taking to implement the CSR mandate. Thirty-three of the 109 participating superintendents requested a copy of the results of this study. The researcher will send a copy of the results to these superintendents by regular mail or e-mail. The researcher will also share her results with the Georgia School Superintendents Association by submitting a proposal to present her results at their annual conference.

State and local governments should also be interested in the results of this study. Because no studies have been conducted that assess the effects of the CSR mandate on facility planning, policy makers and district leaders lack specific information about the challenges and concerns that school systems are facing as a result of this mandate. The results of the study can help leaders at the state government level improve the CSR initiative. Two members of the researcher's panel of experts were facility consultants from the Georgia Department of Education. They have asked that the researcher share her results with them so that they may share the results of this study with the Georgia Department of Education. The researcher will also share her results with the Georgia School Board Association so that they may disseminate the results of the study to their members. The researcher will submit condensed results of the study to educational research journals for publication.

Recommendations

Based upon the findings and conclusions of this study, the researcher makes the following recommendations:

1. Because this study was conducted during the initial implementation of the CSR mandate, more research is needed to further explore and investigate the issues and decisions which are relevant to the CSR mandate, because full implementation will not take place until 2004. The key elements of successful implementation efforts can be better summarized at that time.
2. Perceptions other than those of superintendents (e.g. state leaders, other administrators, and teachers) could be examined in order to compare and contrast their perceptions of the CSR mandate with those of superintendents.
3. Several low wealth system superintendents complained about the effect of unfunded or partially funded mandates on their systems. A study should be conducted that explores how unfunded or partially funded mandates are affecting Georgia's low wealth school systems. Research is needed to determine if these mandates are treating low wealth systems equitably.
4. Several superintendents were concerned about the effect of the CSR mandate on the current teacher shortage. They mentioned how hard it was to find qualified teachers to implement the CSR mandate. A study should be conducted to determine the effects of the CSR mandate on teacher availability and quality.
5. Because this study was conducted only within the state of Georgia, it may not be possible to generalize these findings to other states. Therefore, this study should be carried out in other states.
6. Because school systems are now able to pass a SPLOST to obtain funding for school facility improvements, a study is needed to determine if bond referendums are still a viable funding option for Georgia school systems.

7. Because school facilities have to be planned, designed, and constructed within the limits of available economic resources, an in-depth study should be conducted in the area of capital outlay prior to implementing an unfunded mandate in order to provide the necessary construction funds to meet the needs of school systems.
8. The Georgia legislature did not authorize money for an evaluation of The A-Plus Education Reform Act of 2000. A study should be conducted to determine the cost-effectiveness of this law. The Georgia legislature should appropriate money for a comprehensive evaluation of this law.

Closing Comments

Successful implementation of the CSR mandate has been a daunting task for some Georgia school superintendents. The CSR policy required a considerable commitment of facilities and funds. Therefore, it is important that the state of Georgia conduct follow-up studies to determine the lasting benefits of this very popular educational reform effort. Because effective, appropriate learning environments are needed to ensure that children receive a quality education, it is important that Georgia's governor, legislature, and educational leaders study the implementation issues and problems that are associated with mandating reductions in class sizes.

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APPENDICES

Appendix A

Survey Instrument and Research Question Correlation

Survey Instrument and Research Question Correlation

Survey	Literature Review Cites	Research Questions
Item #1	Rountree, 1997; Tressler, 1997	Question #1
Item #2	Rountree, 1997; Tressler, 1997	Question #1
Item #3	Cotton & Linik, 2000; Egleson & Harmon, 2000; Egleson, Harmon, & Achilles 1996; Molnar et al, 1999; Rountree, 1997; Sturm, 1997; Tressler, 1997	Question #2
Item #4	McRobbie, 1996; Rountree, 1997	Question #2
Item #5	CSR Research Consortium, 2000; Reichart, 2000; Rountree, 1997; Tressler, 1997	Question #3
Item #6	CSR Research Consortium 2000; Reichart, 2000; Rountree, 1997; Tressler, 1997	Question #3
Item #7	Earthman, 2000; Evans, 2001; Georgia Department of Education, 2001; Governor's Education Reform Study Education Facilities Committee, 2000; Kennedy, 2000; Nelson, 2001	Question #3
Item #8	CSR Research Consortium 2000; Reichart, 2000; Rountree, 1997; Tressler, 1997	Question #3
Item #9	Carey, 2000; McRobbie, 1996; Rountree, 1997	Question #4
Items #1-9	No major studies found	Questions #5 & 6

Appendix B

Class Size Reduction Survey Instrument

4. If you converted or plan to convert other spaces to create new classrooms to address facility needs associated with the CSR mandate, which and how many of the following have been or will be converted?

	Check (√) All That Apply	Number Converted
Library	_____	_____
Teacher preparation room/lounge	_____	_____
Administrative office	_____	_____
Art room	_____	_____
Music room	_____	_____
Multi-purpose room	_____	_____
Gym	_____	_____
Computer lab	_____	_____
Special education facility	_____	_____
Others (please specify)	_____	_____
_____	_____	_____
_____	_____	_____

Funding of Facilities

5. The CSR mandate has created financial difficulties for my district.

- Yes, to a large degree _____
- Yes, somewhat _____
- No, not at all _____

6. Insufficient state funding was available to implement the CSR mandate in my district; additional funding was required to meet the mandate.

- Yes
- No (If No, skip to Question 9)

7. What are your estimated additional facilities costs for fully implementing the CSR mandate?

Less than \$1,000,000	_____	\$10,000,001-\$15,000,000	_____
\$1,000,000-\$5,000,000	_____	\$15,000,001-\$20,000,000	_____
\$5,000,001-\$10,000,000	_____	More than \$20,000,000	_____

8. How did or will your district obtain the necessary funds to comply with the CSR mandate?

Please check (√) all that apply.

Bond referendums	_____
Property tax increase	_____
SPLOST	_____
Redirect funding from other programs	_____
Additional funding obtained from the state	_____
Fund balances/fund equity	_____
Grants/private donations	_____
Others (please specify)	_____

Facility Planning

9. Has the CSR mandate affected your facility planning? Yes _____ No _____
If yes, in what way? Please check (√) all that apply.

Reorganization of school construction priorities. _____

The purchase of more portable classrooms to meet immediate needs. _____

The construction of fast track relocatable classrooms. _____

Cuts in preferred equipment and facilities to divert money for new classroom construction. _____

The purchase of additional property/real estate. _____

A setback of the school facility program in my district. _____

Modifications to the Five-Year School Facility Plan. _____

Increased maintenance and repair of existing facilities. _____

Additional renovation and modification of school buildings. _____

The delay of school facility replacement. _____

Others (please specify)

Demographics

Please respond to the following demographic questions by placing a (√) by the category that best describes you.

1. My gender is: Male _____ Female _____

2. Number of years experience serving as a superintendent:

Less than 1 _____ 7-9 _____

1-3 _____ 10 or more _____

4-6 _____

3. Number of years experience as superintendent of your system:

Less than 1 _____ 7-9 _____

1-3 _____ 10 or more _____

4-6 _____

Comments:

Follow-up interviews will be conducted with selected superintendents to help ascertain their perceptions of the class size reduction mandate and how effectively their school system is meeting their facility needs. If you would agree to a short interview, please list your name, system, and telephone number or email on the enclosed postage paid pre-addressed card and return to me by March 31, 2002.

Appendix C
Panel of Experts

Panel of Experts

Dr. T. C. Chan
Professor
College of Education
Department of Leadership, Technology, and Human Development
Georgia Southern University

Dan Cromer
Educational Facilities Consultant
Georgia Department of Education

William A. Loudermilk
Educational Facilities Consultant
Georgia Department of Education

Appendix D

Cover Letter

February 26, 2002

Dear Superintendent,

Please allow me to introduce myself. I am currently employed as a science teacher at Bleckley County High School. In addition to teaching, I am also presently a doctoral candidate at Georgia Southern University, pursuing a degree in Educational Administration. I have enclosed a letter of support from my superintendent, Dr. Buster Evans. I recognize that your schedule is a busy one, and I will be most appreciative of your input and help in completing a short survey.

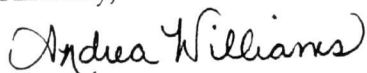
With the passage of the A Plus Education Reform Act, mandatory class sizes for Georgia school systems became a reality. As you are aware, there are several challenges associated with successful implementation of this mandate. If the class size reduction (CSR) mandate results in increased school construction and renovation, Georgia school superintendents will have to evaluate how they approach facility planning. Costs and implementation obstacles will have to be considered. The Georgia CSR mandate may affect long- and short-range facility planning. Your responses to my survey will provide insight on the CSR mandate and its effects on facility planning. It is my intention to determine the perceived impact of mandatory class-size reduction on school facility planning in Georgia school systems. Georgia superintendents will be the only group that I survey.

This letter is to request your assistance in gathering data to analyze this situation. There is, of course, no penalty should you decide not to participate or later withdraw from the study. If you agree to participate, would you please complete the following survey and return it in the enclosed pre-addressed stamped envelope by March 15, 2002. Your completion and return of the survey will indicate permission to use the information you provide in my study. Your responses are very important and will be kept completely confidential. The study will be most useful if you respond to every item on the survey. However, you may choose not to answer one or more of them, without penalty. If you would agree to a short interview, please indicate your consent by completing and returning the postage-paid, pre-addressed interview card.

I would like to share the results of my research. As school systems strive to reach the required mandated class sizes, the information gained from my study should prove quite useful. If you would like a copy of my results, please return the enclosed card with your name and address affixed. If you have any questions about this research study, please contact me at (478)-934-7711 or email me at andrea_williams@bleckley.k12.ga.us. If you have any questions or concerns about your rights as a research participant in this study, they should be directed to the IRB Coordinator at the Office of Research Services and Sponsored Programs at (912)-681-5465.

Thank you in advance for your help with my study.

Sincerely,



Andrea Williams
Doctoral Candidate
Georgia Southern University

Appendix E
Letter of Support

Bleckley County Schools

P. O. Box 516 • Cochran, Georgia 31014 • (478) 934-2821

L. C. (Buster) EVANS, Ed.D., Superintendent
ONETA KITCHENS, Secretary
LINDA B. DYKES, Bookkeeper

BOARD OF EDUCATION

WANDA BARRS, Chairman
CLIFF PAULK, Vice Chairman
WILLARD JOHNSON
GERALD SMITH
DEBORAH TURNER

February 4, 2002

Dear Friends and Colleagues,

Mrs. Andrea Williams, one of our most dedicated and professional educators in Bleckley County, is pursuing her doctorate in Educational Leadership from Georgia Southern University. Mrs. Williams' dissertation is on the topic of the impact of the class size reduction mandates on local school systems. This is a topic that has possibly impacted each of our school systems in Georgia, and to date, there is very little research available on how it has impacted systems.

Her research utilizes a very straightforward survey that takes just a few minutes to complete. I hope that you will spare this brief time to assist this most deserving educator in her research. Along with Mrs. Williams, I'd respectfully ask that you assist her by completing and returning the survey that you have received.

Thank you for your consideration and cooperation in this matter. I know that Mrs. Williams will appreciate your assistance in helping her to complete this worthy research project.

Sincerely,



L. C. (Buster) Evans, Superintendent
Bleckley County Schools

*a great
place
to learn*

Appendix F

Interview Consent Card

If you would agree to a short interview please list your name, system, and telephone number or email below. Your help will be greatly appreciated.

Name: _____

System: _____

Telephone Number: _____

Email address: _____

Please (✓) the appropriate box below:

I agree to be interviewed and would like to receive a copy of the results of this study.

I do not care to be interviewed, but I would like to receive a copy of the results of this study.

Appendix G

Institutional Review Board Approval Letter

Georgia Southern University
Office of Research Services & Sponsored Programs

Institutional Review Board (IRB)

Phone: 912-681-5465

Fax: 912-681-0719


Ovrsight@gasou.edu

P.O. Box 8005

Statesboro, GA 30460-8005

To: Andrea Williams
Leadership, Technology and Human Development

Cc: Dr. T.C. Chan, Faculty Advisor
Leadership, Technology and Human Development

From: Mr. Neil Garretson, Coordinator 
Research Oversight Committees (TACUC/IBC/IRB)

Date: February 25, 2002

Subject: Status of Application for Approval to Utilize Human Subjects in Research

On behalf of the Institutional Review Board (IRB), I am writing to inform you that we have completed the review of your *Application for Approval to Utilize Human Subjects* in your proposed research, "The Impact of Class Size Reduction on School Facility Planning." It is the determination of the Chair, on behalf of the Institutional Review Board, that your proposed research adequately protects the rights of human subjects. Your research is approved in accordance with the *Federal Policy for the Protection of Human Subjects* (45 CFR §46101(b)(2)), which states:

- (2) Research involving the use of ...survey procedures, interview procedures (as long as)
- (i) information obtained (either) is recorded in such a manner that human subjects ~~can~~ (cannot) be identified, directly or through identifiers linked to the subjects, ~~and~~ (or) (ii) any disclosure of the human subjects' responses outside the research could (not) reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

This IRB approval is in effect for one year from the date of this letter. If at the end of that time, there have been no changes to the exempted research protocol, you may request an extension of the approval period for an additional year. In the interim, please provide the IRB with any information concerning any significant adverse event, **whether or not it is believed to be related to the study**, within five working days of the event. In addition, if a change or modification of the approved methodology becomes necessary, you must notify the IRB Coordinator **prior** to initiating any such changes or modifications. At that time, an amended application for IRB approval may be submitted. Upon completion of your data collection, please notify the IRB Coordinator so that your file may be closed.

Appendix H
Interview Guide

Interview Guide

Superintendent: _____

Date: _____ Time: _____

Location: _____

1. Introductions and small talk to establish rapport.
2. Discuss confidentiality and anonymity.
3. Ask if interview may be tape-recorded. (Y or N)
*If yes, start tape recorder.
4. Explain the purpose and benefits of the study.
5. Pose the following questions:
 - (1) Why did you or will you have to add classrooms because of the CSR mandate?
 - (2) At which level (K-3, 4-8, or 9-12) did you have to add the most classrooms? Why?
 - (3) What were your average class sizes prior to implementing CSR?
 - (4) How did your system's projections for needed classrooms compare with the state's projections that were done for the purpose of funding through the special appropriation to implement HB 1187?
 - (5) What are your greatest facilities challenges in implementing CSR?
 - (6) If you built new classrooms, what factors did you consider in determining the location of new classrooms?
 - (7) If you were unable to construct new classrooms, which non-construction alternatives did you use and why?

- (8) If you converted or plan to convert spaces to create new classrooms, what factors did you or will you consider in determining which spaces to convert?
- (9) Has the CSR mandate created financial difficulties for your district? If so, how? If no, why not?
- (10) Do you believe that the state has provided sufficient funding for systems to implement the CSR mandate? If no, why?
- (11) If you had to obtain additional funds in order to implement CSR, what methods did you choose and why?
- (12) What effect has the CSR mandate had on your short-term and long-term facility planning?