

ABSTRACT

SCHMIDT, SYLVIA WEST. *The Promise of Practice: An Exploratory Study of All Male Middle School Classrooms.* (Under the direction of Dr. Lance Fusarelli.)

Recent state and federal legislation requires accountability from public schools for funds allocated to education and for student achievement. Laws permitted local education agencies to determine the best methods to enhance student learning. Some school systems made the decision to experiment with single gender education as one path for improving education for male and female students.

Male students have failed to achieve at the same level as female students in a number of academic areas in recent years. Concern about the gap in achievement between males and females has prompted school systems to establish single gender schools, and others to offer single gender classes for male and female students.

The purpose of this qualitative study was to examine any impact of the all male classroom on male academic achievement in two public middle schools. The impact was analyzed in terms of the overall perceptions of administrators, teachers, students, and parents who were involved in the program. Specific teaching strategies were analyzed to determine any benefits to male academic performance.

The results of the study indicated that overall perceptions were favorable toward the all male program. Success was determined by several factors including willingness to participate in class and response to specific teaching strategies used by teachers. Some annual assessment scores increased and composite and growth ratings improved over the most recent two year period.

Conclusions from this study suggest the continuation of gender based education as a means of addressing the needs of middle school male students.

The Promise of Practice: An Exploratory Study of All Male Middle School Classrooms

by
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BIOGRAPHY

Sylvia West Schmidt is a daughter, wife, mother, and educator. Education has been her career, working as a as a middle school teacher, elementary school assistant principal, and elementary school principal. One of her guiding beliefs is: Truly I tell you, if you have faith as small as a mustard seed, you can say to this mountain, ‘Move from here to there, and it will move. Nothing will be impossible for you.’

Matthew 17:20

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CHAPTER 1

INTRODUCTION

Academic achievement is a major concern for 21st century Americans. The emphasis on academic achievement has never been as important in the U. S. public education system as it is today. Legislation through No Child Left Behind has designed a system of numerous sanctions for public schools that fail to meet certain academic requirements.

Early public education in the United States was organized around the ideas of politicians and educators who believed that good reading skills should be required for men who had recently gained the right to vote. They would need to understand laws and issues of the day. The movement to establish common schools for the education of all citizens was emphasized by Horace Mann, the first U.S. Secretary of Education (Reese, 2005).

The Elementary and Secondary Education Act is the main federal education law, detailing federal requirements for the nation's public schools. ESEA was first enacted in 1965 and signed into law by President Lyndon B. Johnson. It is revised every five to seven years. The latest revision, passed by Congress in 2001 and signed into law by the Bush administration in 2002, is known as the No Child Left Behind Act of 2001.

In 1972, Title I of the Education Amendments to the Civil Rights Act of 1964 made discrimination on the basis of sex illegal. Equal consideration must be given to all male and female students in U. S. public schools. No single gender classes were permitted at that time.

In 1983, the *Nation at Risk Report* was released. It described the deplorable situation of American schools. Education had become inferior and students were failing to perform at levels that could compete with those in other nations. The report urged policymakers and

educators to raise academic standards and improve teacher quality. Following this report, an outcry was heard for more accountability for educators.

On January 8, 2002, President Bush signed into law the No Child Left Behind Act of 2001. It is the most sweeping reform of the Elementary and Secondary Education Act (ESEA) since ESEA was enacted in 1965. It redefined the federal role in K-12 education. It is based on four basic principles: stronger accountability for results, increased flexibility and local control, expanded options for parents, and an emphasis on teaching methods that have been proven to work (U. S. Department of Education, 2002).

NCLB compelled public schools to prepare students for academic success or face serious consequences. The national graduation rate in 2003 was 70%. The rate of female students who graduated was higher than the rate of males. Statistics indicated that 72% of female students but only 65% of male students graduated from high school. Female students graduated at a higher rate in each major racial group than male students (Green & Winters, 2006). In North Carolina, males dropped out in greater numbers than females in all ethnic groups. In 2004-2005, a total of 20,175 students dropped out of school. Of that number, 11,939 (59.18%) were male and 8,236 were female (40.82%). In 2005-2006, drop out statistics show that of 23,160 total students, 13,869 (59.8%) were male and 9,291(40.91%) were female. In 2006-2007, of 24,992 students who were considered dropouts, 14,768 (59.0%) were male and 10,224 (40.91%) were female. (Public Schools of North Carolina, 2008).

Males appear to perform less proficiently than females according to national and state assessment results. The National Assessment of Educational Progress measures the

achievement of students in reading and math annually. Scores from 2000, 2002, 2003, 2005, and 2007 indicated higher reading scores from 6 to 11 points for fourth and eighth grade female students than for males. Math scores were slightly higher by 1 to 3 points for males during the same period (National Center for Education Statistics, 2008).

North Carolina End of Grade testing in reading and math from 2003 through 2007 pointed to higher combined scores for females in grades 3 through 8 ranging from 2.5 points to 12 points. End of Course test results from students in grades 8 through 12 showed a smaller gap between male and female students during the same period. Female scores were .10 to .70 points higher in one two-year period, equal to the male scores one year, and -1.5 points during another year. The National Assessment of Educational Progress scores for 2002-2003 showed an overall 5% higher passing rate in reading and math for North Carolina females and a combined End of Grade and End of Course 4% higher passing rate for females (Public Schools of North Carolina, 2008).

Significantly, given this achievement gap, NCLB permitted schools to separate students into classes by gender (Logsdon, 2003). Schools that offer single gender classes must also offer coeducational classes on the same grade level. Students may not be assigned to a single gender class without the option of a coeducational class.

The public education system seeks innovative, effective methods of instruction. Reading and math are typically considered the most important subjects. The federal and state governments have spent billions of dollars in the pursuit of successful pedagogical techniques. School administrators and teachers are held accountable for student academic success.

One technique used to promote learning in some schools is the separation of students into classes by gender. Males and females learn differently and have various needs in the classroom (Sax, 2006). As of January, 2011, 524 public schools in the United States included some form of single gender education in the curriculum. That number included 103 single gender schools meaning that students attending any of those schools have all their school activities, including lunch and all electives, in a setting which is all boys or all girls. The data from these schools indicated that students performed at higher levels when they were a part of an all female or all male class (Sax, 2005). For example, the Thurgood Marshall Elementary School realized a major rise in test scores and fewer discipline referrals after becoming a “dual academy.” Results were sustained over a four year period (Sax, 2005).

Another example is the Woodward Elementary School in Florida which realized a great improvement in writing scores on the Florida Comprehensive Assessment Test. Fourth grade girls in coed classes were 59 percent proficient and boys 37 percent proficient. Fourth grade students in single gender classes showed a much different level of achievement on the same test. Girls scored 75 percent proficient and boys 86 percent proficient (National Association for Single Sex Public Education, 2008).

Some researchers focused on the poor academic performance of boys. The “boy turn” was the phrase given to a body of work that looked at those factors that contributed to poor male academic performance (Weaver-Hightower, 2003). Boys are a year and a half behind girls in reading and writing, less interested in school, and less inclined to go to college (Sommers, 2005).

A 2006 report states that female enrollment in colleges and universities increased over the last decade due to better academic performance in high school (Goldin, Katz, & Kuziemko, 2006). Smaller colleges first noticed the trend that has become obvious at large colleges and universities. Some institutions of higher learning have considered altering admission standards to favor males (Affirmative Action for Men, 2006). Males have consistently scored higher on both the critical reading and math sections of the SAT from 1972-2008. Females scored higher on the writing section each year since it was added in 2006 (College Bound Seniors, 2008). In 2003, 1.35 females graduated from four-year colleges and universities for every male who graduated and there were 1.3 female undergraduates for every male undergraduate (Francis, 2007).

The “feminization” of the teaching profession is thought to affect male academics. Most elementary teachers are female. The lack of male role identity for boys could affect their attitudes toward learning (Froese-Germain, 2006). Less than one fourth of elementary school teachers are male. The 2006 number of male teachers was the lowest in forty years nationally. National statistics indicated that 26,217 women and 9,315 men went into the teaching profession annually. In 2007, male teachers made up 21% of the three million teachers and only 9% of teachers at the elementary level were male (White, 2007). Kansas had the highest percentage of male teachers at 33% and Oregon the second highest at 31%. Less than 18% of teachers in Louisiana and Mississippi were male. High schools employed 50% of all male teachers (Newland, 2008).

South Carolina has attempted to increase the number of African-American male teachers in the state school system. Clemson University and three historically Black colleges,

Benedict College, Claflin University, and Morris College, formed the Call Me MISTER (Mentors Instructing Students Toward Effective Role Models) program. The goal was to prepare African-American males to become certified teachers in public elementary schools. The first class of MISTERS graduated in May, 2004. Call me MISTER was designed to encourage minority males to enter the teaching profession (Norton, 2005). A similar program, MenTeach, attempted to increase the number of male teachers in elementary school. It originated in Minnesota in 1979. The goal of this association was to better educate boys and help schools organize male mentors for male students (Nelson, 2002).

Separation of males and females for education was a worthwhile subject for investigation. It may be that both groups benefited from learning environments that addressed the special needs for each gender. The call for improvement in public education made it necessary to find the most productive classroom settings where students reached the highest levels of academic performance.

Statement of the Problem

The public school system in the U. S. has come under intense scrutiny in recent years. Reports of inferior academic performance by U. S. students made education a major topic of discussion for policymakers. On a national level, statistics indicated that 72% of female students and 65% of male students graduated from high school. Female students graduated at a higher rate in each major racial group than male students (Greene & Winters, 2006). The Public Schools of North Carolina report a greater number of males drop out of school before graduation than females. In North Carolina during the most recent three-year period, males dropped out at an average of 59% compared to females at 40% (Public Schools of North

Carolina, 2008). Performance on the End of Grade tests in reading and math is higher for females than males. In 2004-2005, males were 76.9% proficient and females 82.7% proficient in reading and math. In 2005-2006, males were 59.9% proficient and females 62.5% proficient in reading and math. During the 2006-2007 school year, males were 62.7% proficient while females were 65.2% proficient in reading and math as determined by the North Carolina End of Grade tests (Public Schools of North Carolina, 2008). All three years showed lower male scores for the performance composite than female scores.

The number of young men enrolled in colleges is little different today than it was in 1975, while the number of females attending college has increased significantly, leading to an even greater amount of concern about the education of boys (Weaver-Hightower, 2003). The number of women at all levels of higher education was almost 8 million, an increase of 3 million since 1975, compared to an enrollment of 6 million men in 1975 to 6.3 million in 1997 (Goldin, Katz, & Kuziemko, 2006). The National Center for Education Statistics followed student enrollment by gender at all institutions that issue degrees. From 1992 to 2000, the ratio of males to females fell from 82 to 78 males for every 100 girls. The projected numbers for 2012 are 74 males for every 100 females enrolled in these institutions.

The concept of masculinity affects the development of boys. During adolescence, boys become more confident. Kimmel found “that boys find their voices during adolescence, but they are the inauthentic voices of bravado, constant posturing, foolish risk-taking, and gratuitous violence” (p. 2). This often leads to the feeling that the male is capable of more than he is, and he overestimates his abilities. Boys may remain in more difficult courses longer than they should because it is difficult for them to admit their limitations. Boys are

more willing to participate in art or theatre in the classroom without females because there is no fear that their masculinity will be questioned (Hughes, 2007).

Literature in elementary school presents a picture of males as “aggressive, argumentative, and aggressive” according to a study of 97 stories in a number of reading series (Evans & Davies, 2000, p. 263). Textbooks play a role in teaching proper gender behaviors. Students learn about their society through literature selections found in state adopted textbooks. The stereotypical male characteristics were found in these stories while females were characterized as “affectionate, gentle, and understanding” (Evans & Davies, 2000, p. 263).

A number of physiological differences occur in males and females. These factors can present issues in the classroom that may prohibit learning. Girls develop their sense of hearing much earlier than boys that may result in girls needing a quiet atmosphere while boys enjoy louder surroundings. Teachers may speak to boys with greater volume. Girls have a more acute sense of smell that may result in some aromas to overwhelm them while the boys may notice nothing out of the ordinary. The nervous system of males is more influenced by the sympathetic division resulting in the need for excitement. The nervous system of females is more influenced by the parasympathetic division that leads to slowing down and feelings of stress and anxiety (Sax, 2006). Boys may be looking for the next adventure while the girls prefer calmness and routine. The classroom often reflects these natural physical differences. Boys need to be more active and less restricted in their movement. They have so much energy and real concentration problems. Some of the boys don't understand the effect they

have on the class as a whole. Disruptive behavior is often associated with male students (Allard, 2004).

Purpose of the Study

The purpose of this study was to examine the opinions, feelings, and perceptions of male students, parents, teachers, and administrators in single gender (male) classrooms in two schools. Male students often fail to achieve at the same level as female students and the rate of academic failure and school dropout is of growing concern. This qualitative case study approach explored the following research questions:

- Did participation in a single gender class affect the academic performance of middle school male students? If so, in what ways?
- What accounted for the impact of single gender classes on the academic performance of middle school male students?
- What types of learning strategies contributed to the academic performance of middle school male students?
- How did parents, students, teachers, and administrators view the all male classes?

Definition of Terms

Single gender class- a classroom of all male or all female students.

Single gender school- a school where all of the classes are divided by gender.

Academic success- scores of Level III or IV on End of Grade reading and math tests.

End of Grade Test- cumulative tests administered by the state of North Carolina annually in reading and math.

Dropout- a student who leaves school before graduation from high school.

ADHD- a mental disorder known as Attention Deficit and Hyperactivity Disorder that is most often diagnosed in children (disproportionately males). Symptoms include difficulty maintaining focus, paying attention, controlling behavior, and remaining in one position for a sustained period of time.

Significance of the Study

This research study was significant for several reasons. A great demand for accountability in public education exists in our nation. Schools are held responsible for the academic success of all students. End of Grade tests in reading and math that measure academic success indicate that males score lower than females and recent statistics indicated that males drop out of school at higher rates than females (Public Schools of North Carolina, 2008).

A shift in focus to the reasons for this lack of success is currently ongoing. Boys scored lower in areas of literacy, were more likely to be diagnosed with learning disabilities, and are placed in special education classes more often than girls. Male enrollment in colleges and universities has fallen behind females as a percentage of the student population since the early 1980's (Sommers, 2000; Tyre, 2008).

Our public school system must be aware of trends that lead to poor academic performance. The apparent crisis of males in our schools should be of major concern to educators and policymakers. The public school system may be failing our male students. It is essential that the system find methods to engage males and make education a rewarding experience for male students.

Organization of the Study

Chapter Two of this study summarized the research on single gender classes including factors that contribute to their success or lack of success. This chapter presented a review of the literature on the physical and psychological differences in males and females and the difficulties experienced by male students. A description of the research methodology used in this study was presented in Chapter Three. The findings of the study are presented in Chapter Four, followed by a discussion of the results and implications for policy and practice in Chapter Five.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

One major question involving the academic achievement of students in the United States that has become of major interest to educators is related to a difference in learning environments for males and females. The debate over differences in male and female achievement is ongoing. The public school system has included separate gender classes and coeducational classes, as well as single gender schools, throughout much of its history. The philosophy on the subject of best educational practices has changed over time. The recent focus on academic achievement has once again brought the subject of the separation of males and females in classrooms to the attention of educators.

Male students seem to be at some greater academic risk than females in recent years. Lower academic performance than females, higher dropout rates, greater numbers of referrals to special education programs, and diagnoses of Attention Deficit and Hyperactivity Disorder have brought awareness to the situation of male students.

In 2003, the national graduation rate was 70%. The rate of female students who graduated was higher than the rate of males. Statistics indicate that 72% of female students and 65% of male students graduate from high school. Female students graduated at a higher rate in each major racial group than male students (Green & Winters, 2006). In North Carolina, males dropped out in greater numbers than females in all ethnic groups over the last five years (Public Schools of North Carolina, 2008).

Males appear to perform less proficiently than females according to national and state assessment results. The National Assessment of Educational Progress measures the achievement of students in reading and math annually. Scores from 2000, 2002, 2003, 2005, and 2007 indicate higher reading scores from 6 to 11 points for fourth and eighth grade female students than for males. Math scores were slightly higher by 1 to 3 points for males during the same period (National Center for Education Statistics, 2008).

North Carolina State End of Grade testing in reading and math from 2003 through 2007 pointed to higher combined scores in for females in grades 3 through 8 ranging from 2.5 points to 12 points. End of Course test results from students in grades 8 through 12 showed a smaller gap between male and female scores during the same period. Female scores were .10 to .70 points higher in one two year period, equal to the male scores one year, and -1.5 points during one year. The National Assessment of Educational Progress Scores for 2002-2003 showed an overall 5% higher passing rate in reading and math for North Carolina females and a combined End of Grade and End of Course 4% higher passing rate for females (North Carolina Public Schools, 2008).

The 2006 edition of *The Praeger Handbook of Special Education* states that approximately two-thirds of the individuals who receive services under the Individuals with Disabilities Act are male, although males and females are equally represented in the school age population. A 1994 U. S. Department of Education Office for Civil Rights Elementary and Secondary School Compliance Report stated that males account for 69.3% of the Specific Learning Disabled students compared to 30.8% female. In the Mentally Retarded category, 59.0% are male and 41.6% female. The Emotionally Disabled

group is 79.4% male and 21.0% female. In 2003, the Office of Special Education reported that males are more often identified under the guidelines of the Individuals with Disabilities Education Act than females. Two thirds of students served by the program are male.

The most evident difference between males and females with ADHD is the higher rate at which males are diagnosed. Male-to-female ratios range from 4:1 to 9:1. Males of all ages tend to display, by far, more hyperactivity than females and slightly more symptoms of inattention than women. Approximately 10% of all males and 4% of females have been diagnosed with ADHD (Reid et. al, 2000).

A study published by researchers in 2006 at the University of Michigan and the University of Texas at Austin reported that ADHD is found more often in boys than girls, in Whites more than Blacks and Hispanics, and in affluent children more than poor children. One in three white boys in affluent suburbs is identified with the disorder. Sax (2007) discussed the results of studies by the University of Michigan, the Medical University of South Carolina, the University of Pittsburgh, and Brown University as well as studies completed in Sweden, the Netherlands, and Italy of short-term exposure of male laboratory animals to drugs prescribed for ADHD. Adderoll, Concerta, and Metadate, drugs often prescribed for a diagnosis of ADHD, have been linked to permanent damage to the brain's nucleus acumens that is responsible for "translating motivation into action" (Sax, 2007 p. 90). The number of prescriptions for Ritalin and Concerta increased by more than 500% between 1991 and 1999. Dexedrine and Adderoll prescriptions increased 2000% during the same period (Sax & Kautz, 2003). The conclusions could mean that boys who take these drugs even for a brief period of time will remain unmotivated into adulthood.

In conducting a one-year study of boys' achievement at various schools, Reichert and Hawley (2006) report that ninety percent of the students in the bottom quartile of their graduating classes even at the most prestigious schools are male. Boys get into trouble because they are not engaged in school, are more often identified as special education students, more often referred for disciplinary issues, and involved in school violence more often than girls. The research has found that once a boy is identified as a low performer, he will most likely graduate in the lowest quartile of his class.

Researchers have questioned the "fairness and justice" of the school experience for male students. A great deal of effort has been exerted in recent years to eliminate gender bias for females. The emphasis on fairness for girls has led to a lack of focus on what is happening to the boys. Many negative aspects of schools are associated with boys. It may be necessary to refocus on the treatment of boys in school to eliminate the barriers to their academic success. The school environment should welcome the male student and provide an environment that allows him to experience success (Reichert & Hawley, 2006).

The Organization for Economic Cooperation and Development completed a three-year study of five year old girls and boys in England, Canada, Australia, and France using the Program for International Student Assessment that measured literacy, math, and science abilities. Girls performed better than boys especially in reading and writing. The results were similar in all countries: boys needed additional academic help more often than girls, boys brought down test scores more often than girls, boys disliked school more than girls, and teachers felt it more difficult to deal with boys than girls (Gurian & Stevens, 2005).

As part of an effort to address some of these challenges, federal legislation under No Child Left Behind permits single gender educational opportunities. A minimum of 442 public schools in the U. S. provided opportunities for single gender education in the 2008-2009 school year. Most of these schools offered single gender classrooms within a coeducational school, and students participate in some coeducational activities. At present, 97 of these schools offer only single gender classes in an environment that is all male or all female (NASSPE, 2008). Educators continue to debate the effectiveness of the separation of males and females in schools.

A 2006 study completed in Wilmette, Illinois elementary and middle schools found that although there was no difference between boys and girls on intelligence tests, boys were behind girls in almost every subject area. The boys and girls performed fairly equally in the early elementary years, but by fifth grade, girls were performing at higher levels in reading, writing, math, and science. Boys were more likely to get grades of “C” and below. A third of the girls were more likely to receive an “A” in these subjects (Tyre, 2008).

Thurgood Marshall Elementary School in Seattle, Washington began separate gender classes in 2000 to raise achievement in a low-income district with a ninety-five percent minority student population. A lengthened school year and smaller classes were additional innovations established by the principal. Test scores on the fourth grade state reading achievement test were significantly higher in 2001 at 51% proficient and 2002 at 60% proficient than in 2000 at 27% proficient. Teachers of female classes report that the girls have developed greater confidence in speaking out in math and science. Discipline is more

of a concern in the male classes. Boys move more and must be reminded to abide by rules for participation (Schachter, 2003).

The review of the literature begins with the physiological differences between males and females and the impact on the effective learning environment, the dissimilarity in learning styles that may prohibit the male from peak academic performance, and the psychology of boys that influences their classroom behavior.

Physiological Differences

Males and females have a number of physical characteristics that may make it difficult for both to learn in the same environment. Distinct features make it easier for girls to experience success, while other factors contribute to the success of boys.

For example, the female sense of hearing is more developed at birth. As the child develops, the female is much more sensitive to sound than the male (Sax, 2005). The innermost part of the ear, the cochlea, is longer in boys resulting in a longer response time to sound. Girls' ears are structured so that they can hear lower sounds more clearly than boys (James, 2007). Teachers may need to speak louder to boys, while girls are more comfortable with a softer tone of voice.

In addition, the structure of the eye is different with binocular vision developing earlier in females. The retina is thicker in males and they usually have better vision and visual acuity than women. Females seem to prefer environments with more direct and indirect sunlight (James, 2007).

Further, the female sense of smell is much more sensitive, according to Dr. Pamela Dalton of the Monell Chemical Senses Center in Philadelphia (Sax, 2006). Boys rarely complain

about food that smells bad. Females may complain about the bad smell in a room while the males in the same room notice no unusual smells (James, 2007).

Evidence of differences in the male and female autonomic nervous system has been established since 2000. A study conducted by Joyce Evans (Evans et al., 2001) found that the nervous system of males responds to threats with sharpened senses and excitement. Females respond more often with the sense of being unable to move. The nervous system also controls comfortable personal temperature. Males prefer the cold while females respond better in warm temperatures.

The bundle of nerves that links the two sides of the brain (corpus callosum) is thinner in males than in females possibly resulting in less communication between the two sides of the brain in males. It may be the reason that males take a more linear approach to solving problems, while females often look at problems more holistically. Females usually learn to talk earlier and are more interested in subjects that deal with the humanities due to this view of problem solving while male interest is often more directed to the sciences (Skelton, Francis, & Srulvan, 2006)

The human brain has 100 billion neurons and one hundred million glial (connecting cells). The brain stem is the most primitive part of the brain that controls the fight or flight impulse. The limbic system is the area where emotions originate. Aggression may come from the brain stem or the amygdale located at the bottom of the limbic system and above the brain stem. Thinking occurs in four layers of the brain. The top layer is divided into the right hemisphere that is responsible for spatial skills, measuring, and determining direction and the left hemisphere that controls speaking, reading, and writing. Boys use the right hemisphere

more often than girls, and girls use the left hemisphere more often than boys (Gurian et.al, 2001). Girls are more proficient in reading, spelling, writing, and language fluency than boys. The male is most often identified as speech impaired (Moir & Jessel, 1991).

Researchers have used electrophysiologic imaging to examine the brains of males and females. They found that areas of the brain needed for language and fine motor skills develop in the brains of females approximately four years earlier than in males. The areas of the brain that control spatial relationships develop four years earlier in males than in females (Sax, 2005). Spatial skills are stronger in males that seem to be associated with the right hemisphere of the brain. More males are left handed due to the control that the right side of the brain has over the left side of the body. The right side of the brain develops earlier in males making it easier for them to locate items in space while ignoring distractions (James, 2007).

Studies at McMaster University found that women have a greater concentration of neurons in the parts of the frontal lobe and temporal lobe cortex linked to language processing and comprehension. These findings concerning the density of neurons in this area could explain reasons for the higher performance in verbal fluency for females than males. Animal studies reveal that cognitive abilities may be present at birth due to the activity of sex hormones during fetal development of the brain and may be less related to cultural influence or adolescent hormonal changes (Cahill, 2005).

Females learn to do most things earlier than males. As they reach puberty, the gap in verbal ability narrows as the boys move ahead in mathematical ability. Math classes begin to demand more theoretical applications and less computation at the middle school level.

Although boys may be identified as underachievers in the early years of school by a ratio of four to one, boys mature as their brains develop enabling them to master academic work (Moir & Jessel, 1991).

These factors should be considered when organizing classrooms. Males and females may not coexist easily. The types of tasks required by teachers could be defined by the varying degrees of ability of males and females to complete them. Teachers should be instructed in best teaching practices for both males and females focusing on those strategies that may be most effective in the all male or all female class.

Learning Styles

Girls are often more proficient in the areas of reading and writing than boys. Literacy presents problems for boys as they express dislike of English and foreign language because there are few rules in these subject areas. The hippocampus is the area of the brain where reading and writing is developed. It matures earlier for girls allowing them to be more cognitively ready to begin tasks in school. Girls are usually ready for school earlier than boys (James, 2007). Boys seem uncomfortable with the lack of concrete answers to questions that are present in subjects such as math and science (Weaver-Hightower, 2003).

Teachers describe male students as “closed off” to new ideas, “out of control,” and “immature” in a study of teachers’ relationships with students (Allard, 2004, p. 349). Boys showed difficulty managing the demands of school and displayed behavior problems in this study. Girls handled the work more easily than the boys. The four teachers interviewed for this study thought boys found movement necessary most of the time that they were in class.

Boys often learn best when using their hands and need concrete visual references.

Younger boys need more space than girls in a classroom. Boys find it necessary to spread out to complete those tasks that girls need much less area to complete. Boys may appear aggressive and less social when they push girls to the side as they prepare to work in groups (Hughes, 2006). Boys prefer to play with blocks and complete activities that require mathematical ability while girls often prefer the tasks associated with literacy.

Furthermore, boys respond more positively when lessons are divided into short, focused tasks with clear directions. The work should be designed to be completed in a specific period of time and be associated with one particular skill. Boys' efforts are greater when working in teams collaboratively completing assignments. Active engagement is necessary to keep boys involved with oral presentations of more interest than traditional paper and pencil assignments (Noble & Bradford, 2000).

An atmosphere of aggressive, competitive behavior is often found in all male classes. Teachers in a Northern Ireland study expressed the belief that boys' bad behavior affects girls' academic performance and may prevent them from experiencing academic excellence. Boys are more often reprimanded than girls. Bullying was a problem in the all male classes. Teachers revealed that single gender classes failed to positively affect boys' behavior (Gray & Wilson, 2006). Male teachers of all male classes reported that boys were more likely to make improper comments than when female students were present.

An English study (Younger & Warrington, 2002) indicated that teachers were more engaged in instructional questions in all male classes. Lessons were more structured, and a greater number of learning activities were available to boys. It has been recognized that male

students require more movement and less focus on one activity for a prolonged period of time.

Findings in a study of eighth grade science classes pointed out that lesson plans were identical for single gender and coed classes; however, the all female classes were conducted more informally than the all male classes. The single gender grouping of students failed to increase achievement or positively affect the classroom atmosphere. Teachers of all female classes felt that they could talk to female students in a more casual manner than the male students during class. Female teachers were closer to female students in the all female classes (Friend, 2006).

An Australian study of single sex instruction (Hoffman, Badgett, & Parker, 2008) found that students expressed a negative opinion of the all male or all female classes at the high school level. However, disadvantaged girls appeared to benefit most from this type of classroom setting. They displayed more risk taking behavior, became involved in more teamwork, asked more questions, and were more enthusiastic about learning than girls in coeducational classes.

According to Francis and Skelton (2005), the gender gap is a real concern in many countries. Girls perform better than boys due to their abilities in all areas of literacy. The 2003 Organization for Economic Cooperation and Development program for International Student Assessment study found that girls in 43 countries scored 32 points higher than boys in reading. Math and science performance is almost equal between boys and girls in England where 52% of boys earned grades of A, B, or C in science compared to 53% of girls, and 50% of boys earned grades of A, B, or C in math compared to 53% of girls. Canada has

initiated studies to find methods to engage boys more in the areas of literacy while Australia appropriated \$2 million in 2002 to study the gender equity education issue. The United States spent \$1.2 million to study single gender classes as a means of increasing boys' interest in school (Francis & Skelton, 2005).

Psychology of Boys

The concept of masculinity is an important part of our culture. The sense of power, bravery, courage, and confidence is important as boys learn about manhood. The “boy code” includes the four basic rules of manhood that are expected of males in American society. The first involves making sure that males are not involved with anything feminine. Wealth, power, and status are major life goals. Emotional feelings must be disguised at all costs. The fourth rule holds the belief that risk taking and daring behavior are necessary to masculinity (Kimmel, 2000). The idea of maintaining masculinity may encourage males to be overconfident. Although boys have traditionally excelled in the subjects of math and science, boys may remain in advanced courses longer than they should. Failure is not acceptable in the areas of math and science for the male student. Some males assume that they are capable of mastering these subjects when they are not. Grades of these boys fall while girls move toward higher grades in these subjects. Kimmel refers to the power of masculinity in giving boys this feeling of overconfidence in academics. The idea that the male dominates in society results in the male overestimation of academic skills and the lack of self-confidence common among many females. Boys often do not admit their lack of ability to master certain subjects making it difficult to perform well on assessments.

Although female participation in some subject areas may be less than males, they score higher on assessments.

Males may not develop emotional relationships that are considered healthy. Lack of this emotional development in addition to the feelings of power and privilege can lead to disrespectful attitudes and aggressive behavior (Flood & Shaffer, 2000). William Pollack, clinical psychologist and director of the Center for Men and Young Men at Harvard Medical School, describes the “Boy Code” as a set of rules that boys must live by in order to fulfill the demands of the stereotypical definition of acceptable male behavior (p. 58). These expectations may limit the natural conduct of males. Boys and their parents expect boys to act according to masculine standards. Failure to adhere to those standards may result in disapproval. Parents may offer nurture and comfort to the female children and expect the males to be tough and strong. Displays of emotion may be prohibited making the male feel embarrassed and resulting in the repression of sentimental feelings (Pollack, 1999).

Supporting Our Sons, founded by Pollack and Lisen Stromberg, a mother of two sons, emphasizes the need for parents and educators to understand how to maintain boys’ interest in school as well as the need for acceptable methods for boys to express their emotions safely (McManis, 2003; Tyre, 2008). One goal is to change the perspective of some male behavior from disruptive and aggressive to understanding that it could be normal male interaction. Unruly behavior may be an effort to maintain the masculine image to protect themselves from feelings of failure. Schools should find acceptable ways for boys to express feelings and experience success in the classroom. The active nature of males should be considered when arranging a classroom (Younger & Warrington, 2005). Suggestions to educators

include removing desks and replacing them with tables to facilitate more classroom interaction among boys and schedule five recesses within the school day to accommodate the needs of young male students (McManis, 2003).

Pollack states that empathy is necessary to communication with males. Parents may not use this emotional and intellectual skill effectively with boys (Pollack, 1999). It is very important that a boy's father develop close emotional bonds with his son. Relationships can be established through quiet discussions or "action empathy-action to connect emotionally" (p. 141) that involves a father and son in enjoyable activities. Males as well as females need empathy from both parents for emotional development.

Many boys grow up in homes without male influence. Whether the head of the household is female or the father works long hours away from home, the presence of males in the lives of boys is often weak. Boys need to understand the roles of males and may best be communicated by a male role model who can develop a close association with the boy (Tyre, 2008). The male teacher is a great influence on male students. A study of the 1988 National Education Longitudinal Survey using 25,000 eighth graders revealed that the effect of a female teacher in science, social studies, and English lowers boys' achievement by 4 percent of a standard deviation and raised girls' achievement by 4 percent of a standard deviation. The overall results of this study indicate that female students with female teachers and male students with male teachers positively affect achievement for both sexes 4 percent of a standard deviation (Dee, 2006). Boys who are taught by male and female teachers in elementary school experience feelings of less structured gender roles. These male students

expressed that authority and nurturing were characteristics of both male and female teachers and viewed themselves as more capable and more interested in achievement (Drudy, 2005).

Violence has become a major concern in schools. The majority of school shootings have been carried out by male students. Bullying is a problem that often leads to violence (Weaver-Hightower, 2003). Boys want to live up to their idea of what it looks like to be a man. Often this idea is impossible to attain. Some boys experience a great deal of emotional pain and find it necessary to protect themselves. Those boys who are not successful socially often get involved in physical aggression. In a study conducted at the University of Montreal of average thirteen year old boys from the time they were in kindergarten, boys who had academic problems and were not popular with others were often involved in physical aggression (Kindlon & Thompson, 2000). Schools should consider the development of practices to address these issues of masculinity and support the development of male students in an atmosphere that does not emphasize the role of masculinity.

Sometimes, these issues manifest themselves in incidences of teen suicide. The reports of teen suicide are alarming. Girls are more likely to talk about depression and sad feelings than boys. The male is encouraged to keep his emotions to himself. The Center for Disease Control released statistics showing a huge increase in suicide rates among teenage boys from the 1950's to the 1980's. Today, boys between the ages of 5 and 14 are three times more likely to kill themselves than girls in the same age group. Males between the ages of 15 and 19 are four times more likely to commit suicide than females (Tyre, 2008).

Academic Performance

A study of 518 students in an almost all white school district with a low number of economically disadvantaged students collected data from 253 boys and 265 females in fifth grade and again in seventh grade. The purpose of the study was to examine the male and female approaches to completion of assignments. Findings revealed that girls were more focused on mastery and less on performance, and the girls were less involved in disruptive classroom behavior. As a result, girls learned positive strategies to use in the study of mathematics, traditionally more of a stronger academic area for males, from fifth to seventh grade. Girls achieved higher grades in math, although they displayed some lack of confidence in their math abilities. Boys were more concerned with performance than mastery of the subject and more involved in disruptive classroom behavior. Boys displayed greater self confidence in math.

Kindergarten in U. S. public and private schools has become more academic over the last twenty years. The pressure on students to learn to read and write and perform mathematics operations in the early years has replaced much of the play that previously existed in kindergarten. Language development in the male five year old brain can be compare to that of the three and a half year old female (Fillion, 2008). According to Sax (2001), the kindergarten curriculum is designed to emphasize the strengths of the females. Sax, a physician and psychologist, advocates raising the admission age for kindergarten from five to six. Five year old boys would attend a kindergarten designed to meet the needs of developing gross motor skills and group work with less pressure on boys to perform tasks individually. Another more academic year of kindergarten would follow the less academic

year. The six year old boy would enter the same kindergarten class as the five year old girl. Boys would hopefully be more successful in kindergarten giving them more confidence about entering first grade.

The concern for the declining academic performance of boys has existed in Australia, Belgium, Sweden, and Germany as well as the United States since the mid-1990's. The Raising boys Achievement Project was conducted over a four year period in 50 English schools to study the differences in academic achievement between boys and girls on standardized tests and examine methods that may positively influence the academic achievement of boys. Literacy was the academic focus of the study that was based on the idea that boys do not perform as well as girls in this area. Classroom best practices for improving the boys' achievement included allowing them to talk about their reading and writing with partners, explicit activities, and creative tasks (Younger & Warrington, 2005).

The debate over the effectiveness of the single gender educational environment is ongoing. The public schools are under pressure to perform at higher academic levels each year. Educators spend a great deal of time investigating innovative methods to enhance student academic achievement. The learning styles of males and females are different. The opportunity for choice in the public school is important. Those students who feel that they learn more effectively in an all male or all female class should be given the chance to participate in this type of educational setting within the public school system.

In South Carolina, single gender schools were a main focus of former State Superintendent of Education Jim Res. The superintendent favored the choice program as an alternative to the voucher system proposed by former Republican Governor Mark Sanford.

David Chadwell was named the first state level educator to oversee the single gender initiative in South Carolina. Mr. Chadwell insists that the school principal and the faculty must be totally committed to the project, and the school's data must be reviewed to determine its need to use different teaching methods before making a decision to implement single gender classes. Mr. Chadwell's main responsibility was to provide the professional development to schools that are interested in beginning the program (McNeil, 2008).

Chadwell (2007) describes single gender instruction as an expansion of the differentiation necessary in best classroom practices today. A single gender program was implemented at Dent Middle School in Columbia, South Carolina in 2004. The TWO Academy is a magnet school that is designed to meet the needs of the whole child and reduce the stresses of adolescents by separating students into classes based on gender. The first year of the TWO Academy, passing scores on the state tests in Language Arts increased by 14%, in math 17%, in science 24%, and in social studies 19%, representing higher than average improvements statewide. The trend continued the next year. Chadwell recommends that to reach the students' greatest potential, boys should receive brief, specific instructions and work for short periods of time. Teachers should take more time to explain and discuss instructions, work on projects that connect to real life situations, and guide them through the progress of their work. The key to success is to prepare teachers adequately for best practices in teaching boys and girls.

The South Carolina Department of Education requested that students in single gender classes participate in a survey devised to measure student satisfaction during November and December, 2007. Approximately 1700 students from 31 different elementary, middle, and

high schools completed the survey. Results indicated that 64% of male students and 78% of female students believed that the single gender environment had improved their self-confidence, 70% of male students and 80% of female students thought that their ability to succeed in school had increased, 62% of male students and 69% of female students thought that their behavior was better, and 64% of male students and 69% of female students reported higher grades (South Carolina Department of Education, 2008).

Some believe that the assessments used to measure proficiency are more favorable to girls. The emphasis is on procedure and consistency of tasks rather than learning facts and competitiveness that are more favorable to boys (Newland, 2008). Boys prefer memorization of facts answering direct questions quickly and competitively while girls are more comfortable with questions that require more reflection (Francis & Skelton, 2005).

A California study conducted from 1998 to 2000 of 300 students in middle and high schools with single gender academies found that gender stereotyping, harassment, and academic achievement were present in these environments to the same extent that they are found in coeducational sites. Twelve schools were studied. The schools in the study were deficient in offering an equal education for both genders. The single gender schools proved unsuccessful in California. Difficulties with implementing a program that meets the social and emotional needs of both sexes and comply with the federal Title IX laws led to the lack of success of these schools (Zwerling, 2001).

The Raising Boys' Achievement Project found that in the United Kingdom on National Curriculum Tests, girls in primary school received an average of 8 points higher than boys in reading and writing. In mathematics, girls achieved an average of 2 points higher than boys

during the 2000-2004 period. Secondary school student results were more pronounced. Boys average 16 points lower in English, 1.1 point lower in math, and 1.6 points lower in science than girls (Younger & Warrington, 2005).

The Martin Luther King, Jr. Elementary School in Rochester, New York began offering some single sex classes in 1989. The school, located in the inner city, served a low income Hispanic-American and African-American population. The principal introduced single gender classes as a means of raising the achievement scores of this school, which was one of the lowest performing in the district. Test scores improved, absence rates were lower, there were fewer suspensions, and parent participation increased for students in the single gender classes. The school became the target of legal challenges by the American Civil Liberties Union and the National Organization of Women who questioned the separation of sexes in public school classes. This led to the elimination of single gender classes at the school. The progress of establishing single sex classes in public schools in Michigan, California, and New Jersey was stopped during the 1990's due to the actions of these groups (Datnow & Hubbard, 2002).

The American Association of University Women and the National Organization of Women have raised concerns about the equality of education received by students when they are separated. These organizations compare separation by sex to separation by race. The argument involves the lack of protection under the Fourteenth Amendment stating that the practice is prohibited by *Brown v. The Board of Education* (Hughes, 2006). Those who support the single gender class concept believe that "equal opportunity" (p. 2) for females

exists only in this setting. Those who oppose single gender classes consider separation on the basis of sex totally unequal and inferior for females (Salomone, 2003).

One study of fifth grade single gender classes found that the first year of the program was successful. Students, teachers, parents, and administration indicated their approval of this initiative at an elementary school in Mississippi during the 2004-2005 school year. Teachers reported that they were motivated by the progress made during the year to request that the single gender classes continue in the future. Students performed well, absences decreased, and fewer discipline referrals were made to administration (Gillis, 2005). Some insist that there is no real evidence that supports the claim that the single sex school or single sex classroom is responsible for academic improvement for males or females. The United States Department of Education chose not to totally support this initiative after it completed 44 studies on single gender education (Silva, 2008).

Summary

In conclusion, the differences between males and females are evident in many areas that affect the education of each group. The research literature indicates that there are some reasons for establishing single gender classes. The interests of both males and females may best be served in a classroom environment that is most advantageous for each group. This research study will contribute to the literature on the possible advantages of single gender classes and the benefits that result in higher academic achievement for students in the public school system.

CHAPTER III

METHODOLOGY

Introduction

“Qualitative inquirers seek to make phenomena more complex, not simpler. Qualitative research is context specific and must be conducted in the natural environment where ideas, people, and events occur in order to be fully understood” (Schram, 2006, p. 9). This study will examine the perspectives of male students, their parents, teachers, and administrators regarding factors in the classroom that contribute to or hinder the academic success of middle school male students.

According to Schram (2006), “The goal in constructing a conceptual or theoretical context for inquiry is to produce a coherent, focused, integrative, and contestable argument that is comprehensible to those unfamiliar with the topic” (p. 63). The issue of single gender classrooms has recently been the focus of some school systems that are in search of innovative methods to increase student academic performance. Some controversy exists concerning the separation of males and females and the effect of this separation on academic performance. Current concerns about declining male achievement, graduation rates, and college enrollment have increased the efforts to explain the situation (Weaver-Hightower, 2003). NCLB legislation signed into law in January, 2002 has made it legal to separate males and females for the purpose of education. Incentives in the form of federal funds were made available to school districts that created single sex schools (Logsdon, 2003). Positive results including increased test scores have been realized in some schools that have established all male and all female classes (Sax, 2006). Students in single gender classes

performed at higher levels due to fewer distractions encountered when the opposite gender is present. Teachers had the opportunity to design lessons to meet the needs of either males or females. Some criticism existed due to the separate but equal concerns dating back to *Brown v. Board of Education*. A Supreme Court decision in *U.S. v. Virginia* ruled in 1996 that the state of Virginia could not provide equal military training facilities for female at Mary Baldwin College and must admit them to Virginia Military Institute. Separate but equal facilities were not allowed under this ruling. Virginia Military Institute was the last all male public school in the United States. The concept of single gender education did not fall under the *Brown* ruling (Logsdon, 2003).

In an effort to understand the perceptions of stakeholders involved in single gender education (in this case, single gender all-male classrooms), qualitative methods were used to obtain the perspectives of teachers, parents of these students, school administrators, and the students themselves. The data collected in qualitative research was rich in description of people, places, and conversation. Research questions were formed to look at the complexity of topics in context (Bogdan & Biklen, 2003). The researcher sought to understand the behavior of a subject from his own frame of reference. Data was collected in natural settings with rich description of complex situations (Richards, 2005). The qualitative researcher was not looking for definite answers to problems but wanted to raise questions that may add a new perspective to problems (Schram, 2006). Perceptions of effectiveness are best addressed using a qualitative approach. School culture and climate are best described by those who experience it daily. “When you want to understand how people think about their world, a

researcher should become involved with them listening to conversations, and observing them in their routines” (Bogdan & Biklen, 2003, p. 113).

Research Design

This is a qualitative case study of two single gender (all male) classes in two schools. Administrators, teachers of all male classes, all male student focus groups, and parents from each school were interviewed. Participant observation and a review of documents including classwork grades, End of Grade test scores, school composite and growth ratings, and Adequate Yearly Progress reports were used to report findings. Fieldnotes were used to record classroom observations.

The researcher was aware of the “goodness of fit” between the research questions and the situation that you are trying to understand. The “responsiveness your research questions should address your problem, responsiveness of your research problem, purpose, focus, assumptions, and what implicit claim it makes of being an answerable question in the first place” (Schram, 2006, p. 81).

Research Questions

The following research questions were addressed in this study:

- Did participation in a single gender class affect the academic performance of middle school male students? If so, in what ways?
- What accounted for this impact?
- What types of learning strategies contributed to the academic performance of middle school male students?
- How did parents, teachers, and administrators view the all male classes?

Conceptual Framework

The researcher approached this study from the social constructivist viewpoint that “seeks an understanding of the world in which they live and work” (Creswell, 2007, p. 20). Individuals hold personal, varied meanings of their experiences. “The goal of the research is to rely as much as possible on the participants’ views of the situation being studied” (Creswell, 2009, p. 8). The role of an educator is to search for a better understanding of student needs. This study attempted to gain insight into the perspective of male students on those elements of instruction that contribute to their academic success.

No Child Left Behind has brought the academic achievement of students in the U.S. public school system to the nation’s attention. The demand that schools be accountable for academic performance has forced schools to address the weaknesses of students and move them forward. One successful strategy that has been used by some schools is the separation of students into classes on the basis of gender (Sax, 2006). The focus on declining male academic achievement has made the subject of single gender classes of interest on a national level. Males have not performed as well as females in literacy, appeared unengaged in school, were behind females in enrollment numbers in colleges, were suspended from school, identified as special education students, and dropped out of school at higher rates than females (Sommers, 2000).

The goal of this study was to provide a rich thick description of the factors that were present when middle school male students felt or did not feel academically successful. This research relied as much as possible on the participants’ view of the situation (Creswell, 2007). The opinions and feelings of their parents, teachers, administrators, and the students

themselves were described in the context of the school environment. The study was a descriptive case study design. “Case study research involves the study of an issue explored through one or more cases within a bounded system” (Creswell, 2007, p. 73). “The case study includes direct observation of events being studied and interviews of the persons involved in the events” (Yin, 2003, p. 8). This design used interviews, documents, and observations for a full interpretation of the situation. The interview questions were open ended to allow the participants to create their own meaning of certain situations (Creswell, 2007).

Parent and student focus groups were used in this study for observation of complexities that may arise from group interaction around the topic of all male classes. The focus groups added value to the triangulation of methods (Billson, 2004). The researcher served as moderator and developed the interview guide. Krueger (1998) outlined five categories of questions to maintain the direction for the conversation. Opening questions allowed each participant to introduce themselves and tell about something that they have in common. Introduction questions presented the topic and stimulated the discussion. Transition questions helped participants envision the topic and understand how others view it. Key questions were central to the study. Ending questions allowed discussion that participants felt were important and had not been identified by the interviewer.

Site Selection and Sample

Convenience sampling was used in this study. The researcher began the study with the idea of purposive sampling where “The inquirer selects individuals and sites for study because they can purposefully inform an understanding of the research problem” (Creswell,

2007, p. 125). The objective of this study was to examine the classroom environmental factors that affect the academic performance of middle school male students. Two South Carolina middle schools were selected as sites for the study. The schools are two of 125 schools in the state that offer single gender classes. Middle schools in the district scored below the state average on the Palmetto Achievement Challenge Tests in 2006 and 2007 (South Carolina Public Schools, 2008). Individual schools decided to initiate single gender classes based on the needs of the students. The Coordinator for Single Gender Initiatives provided introductions to middle school principals with single gender programs. Appeals for approval to conduct research in the schools were made to 10 principals in South Carolina and 4 principals in North Carolina. Responses to requests for access to schools were difficult to obtain. The principal at Northwood Middle School allowed the researcher to visit the school in April 2010. The principal at Oceanview Middle School granted permission to conduct the study in October 2010.

Participants were selected on the basis of their association with these classes. Seventh and eighth grade male students in all male classes, classroom teachers, school administrators, and parents were subjects of the study. Permission to conduct this study in the schools was obtained from the principals. All seventh and eighth grade male students in single gender classes were asked to participate in the study. Consent forms were given to each student. Students were required to have parent permission to take part in the study.

Principals in both schools were away from the building at the time of the scheduled interviews. The Assistant Principal at each school participated in the interview due to the absence of the principal. Teacher participation was voluntary. Students were required to

have parental permission to take part in an interview. Input from parents was requested in letter sent to parents explaining the purpose of the study. Several parents indicated by signatures that they would participate in interviews, however, only 3 parents were actually interviewed. The purposive sample that was planned originally became a convenience sample.

Data Collection

Data refers to the “rough material researchers collect from the world they are studying, materials the people doing the study actively record, and those things others have created and the researcher finds” (Bogdan & Biklen, 2003, p. 109). Data collection for this study included interviews, participant observation, and document analysis. An interview was the “most ordinary and most extraordinary of ways you could use to explore someone else’s experiences” (Richards, 2005, p. 38). Administrators, all male classroom teachers, parents, and a focus group of all male students from two middle schools were interviewed. “The interview may be seen as one of the 20th century’s most distinctive technologies of the self. The respondent is someone who can provide detailed descriptions of his or her thoughts, feelings, and activities if the interviewer listens carefully enough” (Gubrium & Holstein, 2003, p. 22).

Morgan (1997) asserted that the use of focus groups is a method of adding to data that has been gathered using other qualitative means including participant observation and interviews. Implementation of these combined methods helped better understand the subject under study.

It was important to the researcher that the individual and the focus group were comfortable sharing feelings and opinions. Validity of the findings was affected by the

freedom felt by group members to express their beliefs (Stewart, Shamdasani, & Rook, 2007). The group was composed of individuals who have something in common. Some individual responses were inhibited by the presence of other group members, while others exaggerated responses because others are present (Morgan, 1997). The goal of the focus group was to encourage self-disclosure (Krueger & Casey, 2009). It was important that participants share honest feelings and opinions in order to gather accurate data.

The responsibilities of the interviewer included: asking questions, listening, ensuring that the group discussion stayed on the subject, and regulated responses to allow each member to contribute to the discussion (Krueger & Casey, 2009). The interviewer organized the discussion topics into a guide that was followed with each group. The guide formed a structure that encouraged interaction and was used to compare responses. The interview guide set the agenda for the group discussion and came directly from research questions that directed the study (Stewart, Shamdasani, & Rook, 2007). The questions that were asked by the interviewer were carefully considered. The questions allowed the interviewer to move the discussion in a particular direction (Morgan, 1997).

The objective of the study was to describe the feelings, thoughts, and opinions of those who are closely associated with an all male middle school classroom. Individual interview guides were prepared for the students, the parents, teachers, and administrators. The interview guide for the student focus groups is found in Appendix A. The interview guide for the parent focus groups is attached in Appendix B. The interview guide for the teachers is attached in Appendix C. The interview guide for administrators is located in Appendix D. Fieldnotes were taken during each interview.

A review of documents included student classroom work samples, annual state test scores, school composite and growth rates, and school Adequate Yearly Progress reports. Some of these documents served “as sources of rich description of how the people who produced the material think about their world” (Bogdan & Biklen, 2003, p. 124).

The researcher acted as a participant observer. “Participation refers to the researcher being present as an engaged spectator who is experiencing, but not overly involved in what is happening around him or her” (Schram, 2006, p. 123). The researcher observed male participants interact with classmates and the teacher in the classroom. Interviews, fieldnotes from observations, and documents were reviewed to gain an insight into the experiences of those who are involved in the all male and coeducational classroom educational setting.

Data was collected in April, 2010 and October, 2010. Letters to parents explained the details of the study. Parents were asked to participate in focus group interviews. Several parents indicated that they would participate but were unable to keep the commitment. Two male teachers and two female teachers of all male classrooms were interviewed in the schools. One male assistant principal interview took place at school #1 and one male assistant principal interview took place at Oceanview Middle School. Fifteen seventh and eighth grade boys were interviewed at Northwood Middle School. Administrators and teachers arranged the schedule to allow them to be interviewed as one group. The interviews were scheduled for a thirty minute period to respect the time of each participant. Interview time with administrators was approximately thirty minutes. The interview with the seventh grade teacher at Northwood Middle School lasted approximately forty-five minutes. This teacher was the all male student coordinator for the school. He arranged the interviews with

staff and students. The eighth grade teacher interview remained close to the thirty minute period. Administrator and faculty interviews were held in a conference area in the administrative office suite. Each administrator and teacher was interviewed individually. The boys' focus group interview lasted approximately forty five minutes. The students reported to an empty classroom for the interview. The seventh grade teacher sat at the back of the room and observed. It seems that security concerns require a school representative to supervise students at all times. One parent agreed to a thirty minute interview at Northwood Middle School. One seventh grade male student was interviewed individually at Oceanview Middle School for approximately thirty minutes in the science classroom after all of the students left for other classes. The seventh grade teacher was present.

Seven seventh grade boys made up one focus group. The group was interviewed for approximately forty minutes in the media center with the media specialist at a desk nearby. No teacher was present. One group of ten eighth grade boys and another group of fifteen eighth grade boys made up two other groups. The first group of eighth grade boys was interviewed for approximately thirty minutes in the science classroom after other students had departed. The eighth grade science teacher was present. The second group of eighth grade boys was interviewed in an empty classroom on the same hallway as the regular science classroom for approximately forty minutes. The graduate student who assists the teacher was present during the interview.

Two parents from Oceanview Middle School were interviewed for approximately thirty minutes in an empty classroom during the school festival that was held during the evening. The researcher interacted with students and teachers during interviews and classroom

observations to gain insight into the all male classroom environment. Parent, teacher, and administrator interviews provided information on opinions about the all male classroom and its effect on the students. Focus group interviews revealed feelings of the male students about the single gender program. The data were compiled and analyzed in order to determine the perceptions of each of these groups on the all male classroom.

Data Analysis

Data analysis is the process of searching and arranging in a systematic way the interview transcripts, fieldnotes, and other materials the researcher collects in order to make findings. “Analysis involves working with the data, organizing them, breaking them into manageable units, coding and synthesizing them and searching for patterns” (Bogdan & Biklen, 2003, p. 147). Interviews, fieldnotes, and documents were coded to find themes and patterns. The most important information came from the interviews. The opinions, thoughts, and feelings of the individuals involved in this study provided the basis for findings. Codes or categories developed as the researcher went through the process of describing, classifying, and interpreting data (Creswell, 2007). Richards describes three types of coding in qualitative research. The terms, “descriptive, topic, and analytical” are used in qualitative research (p. 87). Descriptive coding involved storing information, topic coding labels information based on its subject, and analytical coding lead to the development of a theory (Richards, 2005). Words and phrases became coding categories. Bogdan and Biklen (2003) provided information about families and kinds of codes that may be used to sort facts. The development of these categories was very important. The data gathered from this study was manually coded.

Research Validity and Reliability

Is It Trustworthy?

Qualitative researchers tend to view reliability as a fit between what they record as data and what actually occurs in the setting under study rather than the consistency among different observations (Bogdan & Biklen, 2003). More recently, qualitative researchers are using the term trustworthy rather than validity and reliability because it more accurately captures how best to assess qualitative research. In sum, were the correct procedures followed and results presented in such a manner that readers believe that the study was conducted appropriately? Ensuring validity and reliability in qualitative research requires that the investigation is done in an ethical manner (Merriam, 1998).

A theory must be tested by replicating findings in other similar situations. Once these replications have been made, “the results might be accepted as providing strong support for the theory” (Yin, 2003, p. 37). Male students from all male classrooms who had similar perspectives regarding factors that positively or negatively affect academic performance helped to form a theory. If the results were the same in a different study, it would be a basis for future studies in this area.

Reliability refers to the ability of another researcher who could complete the same study and arrive at the same findings (Yin, 2003). This case study was organized to provide this opportunity to any researcher who investigated this situation.

Triangulating data sources involved comparing observational data with interviews and comparing what people said in public and private. The researcher contrasted the perspectives of people from various points of view (Patton, 2002). All data sources including interviews,

observations, and documents used in this case study were triangulated to verify consistency and strengthen internal validity.

Subjectivity Statement

The researcher who conducted this study is employed as a principal in the public education system. Personal bias influenced this study. This bias involved the desire for all students to have an opportunity to learn based on their individual learning style. As a middle school teacher and administrator with over twenty-five years' experience, I developed the belief that all students should not be taught using one method, one textbook, and one definition of academic success. I have not had any personal experience with single gender classes; however, I have closely observed the differences in academic performance, behavior, and attitudes between male and female students. The data that indicated the gap in achievement between males and females was distressing. One researcher guided this study and it was necessary to seek objectivity. "The quality of qualitative data depends to a great extent on the methodological skill, sensitivity, and integrity of the researcher" (Patton, 2002, p. 5).

Ethical Issues

Two accepted and official guidelines for ethics in research with human subjects include informed consent and protection of subjects from harm (Bogdan & Biklen, 2003). The researcher considered the intrusiveness of the questions for subjects. Individuals hold opinions and beliefs that they feel free to share while some of their viewpoints are held privately. The role of the researcher is to assure the participant that the potential for harm is

negligible and safeguards are in place to protect confidentiality. It is important to ensure that people are treated respectfully by presenting their responses accurately in print.

The researcher sought the approval of the North Carolina State University Institutional Review Board to conduct this study and followed all procedures to maintain the privacy and confidentiality of the study participants. Participants were asked to sign a consent form for participation in the study. Parents were asked to sign for minor children. No names were associated with the findings. All data was kept in a location away from the collection site in a secure setting. Participation was voluntary and any participant could have withdrawn from the study at any time without penalty.

Creswell (2009) cautions not to use results to the advantage of group or another. I attempted to look at all of the information collected in reporting findings. The interview guide contained questions that were designed to find out how those involved with the all male classroom felt about its success or lack of success. I tried to be open minded and review all of the data, including test scores that indicated a drop in student proficiency over the period that the single gender program had been in place.

Letters requesting permission to conduct the research were sent to the school principals (Appendices M and N). Letters signed by teachers (Appendix H), parents (Appendix E), students (Appendices F and G), and administrators (Appendix H) were obtained prior to interviews. A description of the study was sent to parents in a letter (Appendix I) with student permission forms.

Written consent was obtained from each student, parent, teacher, and administrator to participate in the study. Participation was voluntary. The following safeguards (Creswell, 2003, p. 198) were in place:

1. The research objectives were articulated verbally and in writing so that they were clearly understood by participants (Appendices E, F, G, and H).
2. Written permission to proceed with the study was received from participants (Appendices E, F, G, and H).
3. Approval to proceed with the research was granted by North Carolina State University Institutional Review Board (Appendices J, K, and L).
4. Participants were informed of the data collection methods (Appendices A, B, C, D, E, F, G, and H).
5. Consistent with the technique of member checking, transcripts of tape recordings and observation notes were made available to participants for review and comment. David Chadwell requested information gathered during the study. My response was to provide him with a copy of the study when complete. No other requests for information about the study have been made.

Limitations of the Study

Typical to qualitative research, findings are highly context and case dependent. Findings will be limited based on selectivity in the people who were sampled either for observations or interviews, or on selectivity in document sampling (Patton, 2002).

Only parents and teachers of students in all male classes were interviewed. The parents of these students approved of this initiative due to the fact that their permission was required in

order for their children to participate in an all male class. Teachers were selected by administrators to teach the all male classes based on their previous success with male students. Favorable biases toward administrators could have influenced their willingness to express themselves freely fearing that sharing any responses that could lead to a negative view of the program. Parents and teachers who held negative views of the program were not included. Large numbers of participants are desirable for a more balanced view of any topic, however; only a few responded to the request for an interview. More parent input could have enhanced insight into the subject providing opinions that were not expressed by participants. I made every attempt to ensure that the results were not used to the advantage of one group or another (Creswell, 2009).

The presence of a researcher in the classroom was a factor in classroom observations possibly modifying the regular environment. Gaining a true picture of the everyday interactions between students and teachers may have been difficult with someone from outside the school community visible to the class. Students and teachers could have acted differently due to the uncertainty about the real reasons for my visit and note taking. The small number of classroom observations could affect the accuracy of information. My schedule limited the number of visits that I could make to a neighboring state during the school day. Teachers and students could have formed a stronger bond with me if I had been in the school for a longer period of time, making them more comfortable with me. They might have been more willing to share more honest feelings if they felt that I was worthy of their trust.

Information was assembled from only two school sites. I experienced some difficulty obtaining permission to conduct research in South Carolina schools. Many attempts were made to contact principals with few responses. Consideration of the location of the schools in the same state public school system could limit the extent of information regarding single gender programs in general. Studies conducted in other states might yield broader results. The success of the program in other states could have encouraged South Carolina to look at single gender education to address gender gaps in learning. It would have proved interesting to compare the opinions about the all male classroom from this study to those from administrators, teachers, parents, and students from schools in another state.

This study was a case study design that could have been a threat to external validity. It was representative of only the situations at two middle schools. To facilitate triangulation, the researcher used information from the literature review to relate other findings to this study.

Summary

This chapter provided an overview of the research methodology used in this qualitative study. Individual interviews, observations, document analysis, and focus group and individual interviews were used in data collection. Concerns about ethical issues, the subjectivity of the researcher, and validity and reliability have been addressed. This study used qualitative methods to provide an understanding of the subject.

Chapter IV

FINDINGS

Data Collection

On October 25, 2006, the U. S Department of Education published new regulations that addressed single gender education in public schools. As a provision under NCLB, the new regulations allowed public schools to offer single gender classes if a justification for the classes was made, coed classes in the same subjects were offered at the same school or one nearby, and a review of the single sex classes was made every two years to determine continued justification for the classes (NASSPE, 2010). Although a number of groups including the American Civil Liberties Union and the National Organization of Women oppose single gender education, some school systems have implemented the program as a means of improving student achievement. South Carolina leads the nation in its commitment to single gender education.

The South Carolina Public School System maintains an extensive system of single gender schools. In September, 2009, 37 elementary schools, 41 middle schools, and 5 high schools offered single gender classes. Schools have various configurations of the program including schools that separate males and females in all classes to those who provide only a few single gender class choices.

A single gender coordinator oversees the program and conducts professional development for the school system. David Chadwell, who holds this position, is the author of a book on single gender education, *A Gendered Choice: Designing and Implementing Single Sex Programs and Schools*. Mr. Chadwell, a former teacher in a magnet school for middle

school boys, began work as the first person hired under the Office of Public School Choice at the South Carolina Department of Education as the statewide facilitator for public school single gender programs in 2007. Mr. Chadwell is now the Coordinator for Single Gender Initiatives for South Carolina Public Schools that features one of the largest single gender programs in the United States. Mr. Chadwell provided introductions to principals who agreed to allow their schools to participate in this study.

Findings are discussed in terms of the effect of the all male classroom on academics and behavior, characteristics of the all male classroom environment, and teaching strategies used to address the needs of the male middle school student. Perceptions of those involved in the program were analyzed to determine any benefits to male students in the all male classroom.

This investigation was a qualitative case study of the perceptions of middle school male students, their parents, teachers, and administrators about single gender education in all male classrooms. The case study analysis requires a detailed description of the case and its setting (Creswell, 2007). Yin (2008) explains the multiple case design as one that contains more than a single case and must be carefully selected so that it predicts similar results or predicts contrasting results. Each of the middle schools is the subject of an individual study, and the study includes two schools. Schools were selected for the study based on the implementation of a single gender classroom setting in two grade levels.

This study investigated any impact that participation in an all male class may have on academic success. Best practices for teaching the male student were examined. Opinions of those most closely associated with the male student in the single gender classes were reviewed to determine overall impressions about the effectiveness of the all male classroom.

Merriam (1998) describes data collection and analysis as “a simultaneous activity in qualitative research. Analysis begins with the first interview, the first observation, the first document read,” (p. 151). The researcher gained understanding of the perceptions of all male classrooms through the words of those involved in the experience. The researcher identified themes and used cross case analysis using first person accounts in interviews, classroom observations by the researcher, and document review that included South Carolina Annual School Report Cards, South Carolina School and District AYP Results, Palmetto Assessment of State Standards 2008-2010, and Palmetto Achievement Challenge test scores from 2007-2008.

Instrumentation

The researcher was the data collector. The qualitative data collection instruments included student focus group interviews (Appendix A), parent focus group interviews (Appendix B), individual teacher interviews (Appendix C), individual administrator interviews (Appendix D), observations, and some document review. The interview questions were designed to gain insight into how participation in the all male classroom affects academic and nonacademic performance, what impact the all male classroom has on academic performance, the nature of learning strategies used, and the overall perceptions of students, parents, teachers, and administrators of the all male classroom in a middle school. Interview questions were directed at finding answers to these questions. Student focus group interview questions were open-ended allowing the respondent to talk at length. Students were asked to describe their favorite and least favorite aspects of the single gender program and its possible influence on academics and behavior. Any information regarding the

specific characteristics of the all male classroom environment could impact academic performance. Administrators were asked to elaborate on their opinions about the emotional climate, discipline referrals, and academic performance related to the all male classroom. Teachers were asked to describe any teaching strategies used especially for the males to determine any differentiation of methods used for male and female students. Administrators and teachers were asked about the amount of professional development that they received before their assignment to an all male classroom to address the specific needs of male students. Parents were asked to compare the behavior and academic performance of their sons in a coed setting to an all male classroom to gain insight into their opinions of the single gender program.

Professional development questions were asked due to the importance of differentiating instruction communicated by two leaders in the field of single gender education. David Chadwell (2006) emphasized the need for educators to learn about the meaning of gender differences in the classroom. An understanding of male and female brains is stressed by Leonard Sax (2006). He comments:

Girls and boys play differently. They learn differently. They see the world differently. They hear differently. When I started graduate school in 1980, most psychologists were insisting that those differences came about because parents raised girls and boys in different ways. Today we know that the truth is the other way around: parents raise differently because girls and boys are so different from birth. Girls and boys behave differently because their brains are wired differently (p. 28).

An understanding of the characteristics of the male student could account for the unique classroom environment that exists when students are exclusively male.

Data Analysis

Data from interviews was reviewed and analyzed by the researcher. Repeating ideas result from grouping relevant text and may be organized into categories (Auerback & Silverstein, 2003). The categories of professional development, class schedules, academic performance, classroom environment, and parent involvement emerged during interviews as important elements in understanding how the single gender class affects academic and nonacademic performance of male students. Observation data were analyzed for the emergence of themes including better academic performance, a distinctly different classroom environment, and the use of specific teaching strategies in the all male classroom. Comparisons of themes were contrasted with the review of the research literature. Information regarding the advantages and disadvantages of single gender classrooms was provided in the review of literature. Leonard Sax (2006) points out the physical difference in males and females lead to the need for a variation in teaching styles and classroom environments. A report by Reichert and Hawley (2006) found that boys get into trouble because they are not engaged in school, and they are referred more frequently for discipline problems than female students. The review of literature supports the single gender classroom as a successful method of education. In some instances, academic performance has been found to be higher for males and females who were separated during instruction.

An analysis of student performance of seventh and eighth grade students at each of the participating schools over the most recent two-year period reveals overall improvement in

male test scores. Seventh and eighth grade students were organized into single gender classes in the school years 2008-2010. Test scores for male students improved in four areas during the period in School #1 and two areas in School #2. Information was obtained from end of grade test scores in reading, math, science, and social studies. Male and female academic performance is compared from 2008-2010. Although test scores do not reflect steady progress, administrators and teachers felt as though academic success was achieved by individual male students as a result of the all male classroom environment.

Teachers explained the types of methods used in the classroom that were designed to address the needs of male students including ball toss, group work, and learning games. The male classroom environment was described in detail by teachers and students as very different from the coed classroom. The lack of drama, willingness to take risks without fear of embarrassment, and general noise were discussed in each interview. For example, a parent related, "It seems to be that the boys work well together. There is no talk about fights or rumors being spread. It's just more about what we did in class today which is different from last year." A seventh grade teacher talked about a very different atmosphere in the boys' classes. He said, "The boys are more open in answering questions, more open to try, more responsive to things you want to do in class. That is the biggest thing I see, their willingness to participate away from girls." Another teacher talked about "some strategies that are particularly for boys." She thought "competitions and making things into a game is something that boys are more motivated to participate in than girls." An eighth grade teacher spoke about the male classes making reference to "a lot of talking and a lot of movement. The boys are much louder than if they were in a coed class."

Northwood Middle School

The school is located in a small city of approximately 35,000 residents in northeastern South Carolina approximately 60 miles from the Atlantic Ocean. Many outlying agricultural parcels of land are visible as one approaches the city. Numerous restaurants, shopping centers, and movie theaters are found throughout the area. The county is divided into 5 school districts with 20 elementary, 8 middle, and 5 high schools. Single gender programs are in place in 2 elementary schools, 3 middle schools, and 1 high school. Modern school facilities at Northwood Middle School include a large two-story building, a gymnasium, and sports fields. Front doors of the school open into a large reception area. A circular desk sits in the middle of the area with an attendant available for questions. Faculty, staff, and administration were friendly and accommodating. The principal responded immediately to my request to conduct research at the school with his approval and placed me in contact with the lead teacher who served as the all male student coordinator. This teacher offered his assistance in contacting the other teachers of all male students to determine their interest in participating in the study. We exchanged several emails and spoke on the telephone twice.

The office staff greeted me warmly upon my arrival. They knew about my visit and called for the teacher who served as my contact. He was very open, friendly, and seemed genuinely interested in telling the story of the single gender program at Northwood Middle School. A conference room had been reserved for the interviews. He arranged the interviews with the assistant principal, the other teacher, collected the permission forms from students whose parents had given permission for them to be interviewed, and spoke with parents

about their participation in the interviews. A schedule of classes was prepared for me to help plan observations.

The administrative team includes one male principal, one male assistant principal, and two female assistant principals. Sixty-one teachers make up the faculty. Most faculty members who teach single gender classes also teach coed classes due to scheduling issues. All students who are members of a single gender class must have parental permission. Single gender classes are generally smaller than coed classes. Not all parents agree for their children to be placed in the all male or all female classes. Scheduling classes with small numbers of students can be difficult with limited numbers of teachers.

The student body is made up of 763 students in seventh and eighth grade. Male students outnumber female students, 416 to 345. The school is 48% White, 49% African American, 2% Hispanic, and 1% Asian. Sixty percent of the student body is in the low socioeconomic category as determined by eligibility for subsidized meals. The school is in the second year of a single gender program. The school offers a choice of single gender and coed classes at each grade level in reading, math, science, and social studies.

The school has achieved an “average” rating for composite test scores and growth for 2009 and 2010. The composite test score rating was “below average” and the growth was “at-risk” from 2006 through 2008. The performance standards indicate a school’s standing for progress toward the 2020 South Carolina Performance Vision that states the expectation that all students in South Carolina “will graduate with the knowledge and skills necessary to compete successfully in the global economy, participate in a democratic society and contribute positively as members of families and communities.” The school met 19 of 21

AYP goals for the 2010 school year. The school appears to be making progress according to the South Carolina State Report Card. Although the school met 19 of 21 AYP goals that reflect a composite reading and math test score target for various subgroups, the report card would be a better indicator of growth and overall performance. AYP does not measure growth and does not provide an accurate representation of the educational program at any school.

The school began the single gender initiative in 2008. South Carolina performance and growth targets were not met prior to 2009. Administrators, teachers, and parents believed that the male students had improved their academic performance in this setting considering class assignments, weekly test grades, projects, and learning team products as well as end of grade test scores. They concur that the program has produced positive results.

Some of the male students were opposed to the continuation of single gender classes. Boys are disruptive and loud, according to some of the students interviewed. The sometimes “rowdy” environment was distracting and prevented them from completing assignments. Although the boys liked the lack of “drama” that the girls brought to the classroom, most of them did not favor the continued absence of females.

The Perceptions of Participants

The Administrator’s Story

Northwood Middle School

The principal was contacted for permission to visit the school and collect data for this study. A date was agreed on for the interview. When the researcher arrived at the school, I learned that the principal was away on an out of state field trip with students and teachers.

The Assistant Principal agreed to take the principal's place for the interview. An office assistant led the way to a conference room and invited us to sit at a large table with 6 chairs. She closed the door but sounds of a busy office were easily heard. The Assistant Principal turned off his cell phone and gave the researcher his full attention. He was a young man who was eager to talk about the single gender program at the school. When replying to a question about any differences that he had observed in coed and single gender classes, he referred to the all male class stating, "You can tell that they appreciate the way he treats them. I have seen it from an emotional standpoint. There are differences between the two. They key in on the items for boys." The concept was new to him coming from a high school administrative position in 2008. This administrator was animated when discussing fewer discipline problems that reached his desk noting, "Discipline referrals have decreased. The single gender teachers can handle more problems in the class without referring them to me. The single gender teachers do not refer as many students as those who teach coed classes."

Professional Development

In preparation for the inception of the single gender program, he explained that professional development was held in the summer for administrators and teachers. Teachers were chosen by administrators to teach the single gender classes. Sessions were conducted by teachers from a nearby middle school that offered all classes separated by gender. This particular school has won national awards for its single gender program. The Assistant Principal stated that the presenters "had the numbers to back up the success of the program," and they explained "how to wreck a program." All of the professional development offered

to faculty and staff was held during the summer. It appeared that there was no ongoing or embedded training during the school year.

Classroom Environment

The Assistant Principal related that, “It was very refreshing” to visit one particular all male classroom, a seventh grade science class. The boys responded well to the male teacher’s strategies. The teacher was described as operating in a military style, requiring the boys to stand to answer questions, calling them by their last name using the title, Mr., and handled most discipline problems himself. This teacher appealed to the interests of the boys resulting in overall fewer discipline problems and fewer referrals to the administration according to the Assistant Principal who pointed out that, “there would be a lot of things that he would have had to refer to me as an administrator that he can handle with the classroom.”

“Just separating boys and girls into separate classes doesn’t really make a difference,” he said, “You have to know how to teach them differently.” A variety of strategies that were presented during professional development sessions were implemented in the classrooms including frequent movement and assignments that encourage competition. He thinks that teachers are excited about using innovative methods to teach either gender but commented that, “They must understand that the requirements in an all boys’ class are different. You have to find the perfect teachers for these classes.” He explained that not all teachers were skilled in teaching the all male or all female classes adding “We observed teachers to see who did well with either the boys or the girls before we made decisions about who to ask to teach those classes”

Academic Performance

Since the school began the single gender initiative in 2007, test scores indicate that the academic performance of the boys has improved. The program was implemented as an alternative to traditional classes in an effort to improve test scores. As our conversation progressed, the Assistant Principal appeared pleased with the overall improvement of progress report grades as well as the annual test scores. He explained that the administrators “looked closely at the test scores” to determine the effectiveness of the program. He explained that test scores were not the only measures used to assess the program. Fewer discipline referrals and positive interaction between students and teachers were also considered.

A few male classes are taught by female teachers. The school’s objective is to have all male teachers of all male classes. Teachers were observed before the program began to determine which ones would be best suited to work with all male students. He explained

You have to have the right teachers in place. They must understand that the requirements in an all boys class are different. It is more strict. They appreciate it.

You have to find the perfect teachers for these classes.

Class Schedules

One problem that appeared of great concern to him was the issue of scheduling at single gender classes the middle school. He pointed out that, “All of the classes are not single gender.” A number of conflicts make it difficult to prevent the same group of students from moving through each class together during the day, however; he explained that administration is working on a plan to disperse the group of all male students at each grade

level. Students who are in the same classes together all day resemble a self-contained structure. The middle school does not advocate this method. The Assistant Principal stated that this structure leads to “discipline issues.” He talked the familiarity that exists among students often leading to an escalation of disagreements that begin small and escalate by the end of the day. If the students were separated during each class period, it would be easier for teachers to diffuse any problems that arise as the day progressed.

Parent Involvement

Parents are not “very vocal” concerning the all male classes. The Assistant Principal felt that parents favor the program due to the fact that they “must agree for their child to be in a single gender class.” General positive comments are made, but seldom are any specifics brought to his attention. Parents seem to accept decisions made by the school district. Few questions were directed to the administration regarding the program. To illustrate some degree of parent apathy, he explained that, “They are building new schools in some sections of town, and none here in the southern part. Our parents don’t say anything about it. Some would be saying plenty.”

Teachers’ Stories

Northwood Middle School

Two male teachers were interviewed individually. The first teacher had fifteen years’ experience as a teacher and held the position as coordinator of the all male program at the school. He met me in the main office area upon my arrival as an office assistant led us to a nearby conference room. I thanked him for the time he had taken to help me arrange my visit to the school. He told me that he was happy to share his impressions of the program that he

now headed up. The last two years, he had taught several all male classes in addition to several coed classes. At the end of our conversation, he motioned for the eighth grade science teacher to come and take a seat. We began the interview and he explained that he had sixteen years' teaching experience, and he was recruited to teach some of the all male eighth grade science classes. He also taught some coed classes. This was his second year as a teacher of some all male classes.

Professional Development

Both teachers had been selected by the administration to teach the all male classes. One of the teachers had attended a summer conference featuring the state Single Gender Coordinator and teachers from a neighboring single gender middle school that had received a national award. He described the conference as "intense" and provided "strategies to take back to the classroom." The other male teacher participated in a one-day seminar and read some articles in addition to training with the state Single Gender Coordinator to prepare to teach the all male class relating, "We had David Chadwell come in one day and go over some statistics and strategies that we could use in the classroom, and we had gone to the Teacher to Teacher Conference." The conference is held in a larger city in the state and attracts principals and teachers from as far away as Canada. Both teachers communicated their desire to continue to teach the all male class. Both teachers appeared to enjoy teaching all male classes expressing their opinions that the boys actually performed better academically in this setting. When asked about his plan to remain a teacher in the all male setting, one male teacher replied, "Yes, no doubt. We would like to expand the single gender program."

One teacher explained how he was approached by the principal who suggested that he would be an effective all male teacher

We want to start a single gender program. I think you would be good working with boys. I told him that I would be willing to try anything. Let's do it. That's how it came about. This is the second year. I have enjoyed it. I have been able to do things different than I would have done in a coed classroom. It has been a great experience.

Classroom Environment

The teachers explained they tried to teach the all male classes differently from the coed classes. One teacher talked about the structure he used at the beginning of the year relating that, "It's more like a military type atmosphere; they must stand to answer questions." He mentioned the ball toss to students to designate who would answer questions, his willingness to ignore finger tapping on the desks, and group work that facilitated movement throughout the class period. "When there is a key piece of information, I ask them to say it and clap three times to keep it in their minds," he said. The second teacher used group work with movement involved, the ball toss, and often used the Smartboard because, "you must keep them up and moving." Smartboard activities are designed to be interactive. Students leave their seats and touch the screen to indicate answers. He added that the atmosphere is "chaotic but productive." The boys' classes are louder than the coed classes, but this teacher stated that, "I can do more teaching." Both teachers commented on the lack of drama often created by the girls. One stated, "It is more successful for individual students in the class than for the class as a whole. The boys are not trying to impress the girls." It seems that for some boys, this setting provides them with a safe place to take risks that are involved in

learning. Students who would rather not ask questions than appear slow in comprehension of subject matter may benefit from an all male classroom. These teachers felt that the strategies they used with their students had helped most of them academically.

Academic Performance

Both teachers believed that the all male classroom had a positive effect on academics and behavior. Boys seem to be willing to take more risks answering questions. According to one teacher, “The guys, they don’t feel embarrassed if they do something that is not right.” Boys are most concerned about the judgment of the females and will not answer a question if there is any doubt about its accuracy. The other teacher said, “Overall, the boys perform better, turn in homework better, do better on assessments, and work together better.” He gave an example:

Boys want to get the assignment done as quickly as possible. I gave them a graphic organizer to work on. I showed them one from a previous year, all colored and neat. The boys did exactly and only what was required. They got it done, and turned it in. I teach a coed class as well, and I gave them the same assignment. The girls had to do it exactly like the model, everything perfect. It took them forever to get it done... a big difference.

One teacher explained that the boys often talked about their dislike of the all male classroom, but they admitted to higher achievement in the class. He had recently pointed out to a student that, “if you were in a coed classroom, you would not be as successful as you are now.” According to the teacher, the student agreed.

A three-year comparison of end of grade test scores for seventh and eighth grade students provide information on proficiency in core subject areas (See Tables 1 & 2 below).

Table 1

Percent Passing End of Grade Tests

School #1

Seventh Grade

	2007-2008		2008-2009		2009-2010	
	Male	Female	Male	Female	Male	Female
Reading	57.0	79.2	60.5	68.9	64.1	68.0
Math	64.7	74.7	61.0	62.3	62.4	62.9
Science	60.1	73.0	71.2	76.2	79.2	76.8
S. Studies	42.3	44.8	59.5	58.3	63.2	58.8

Table 2

Percent Passing End of Grade Tests

Northwood Middle School

Eighth Grade

	2007-2008		2008-2009		2009-2010	
	Male	Female	Male	Female	Male	Female
Reading	56.2	74.4	51.0	69.3	51.5	64.1
Math	60.4	61.9	44.5	55.3	53.5	58.5
Science	57.5	64.4	52.3	52.2	61.3	69.4
S. Studies	67.9	68.3	59.1	69.4	63.5	68.6

End of grade testing requires that students sit quietly and focus on long reading passages with numerous questions. The math assessment requires students to read problems and perform multi-step operations. Teachers explained that the best results for male students are realized when there is movement and a variety of learning tasks. The testing environment does not allow for deviations from silence and sitting in an upright position for periods up to two hours with one stretch break. Although test scores did not rise each year, the all male classroom setting was thought by administrators, teachers, and parents to have had some positive effects on academic achievement.

Administrators, teachers, parents, looked at daily work, progress report grades, class test grades, student satisfaction, and attitudes about school when expressing opinions about the all male classroom. The state school report indicated that the school had met composite test score and growth expectations for 2008-2009 and 2009-2010. The three year period before the school began the single gender program, the school's composite score rating was below average and the growth rating was at risk.

Table 3
Five-Year Ratings
Northwood Middle School

Year	School Rating	Growth Rating
2010	Average	Average
2009	Average	Average
2008	Below Average	At Risk
2007	Below Average	At Risk
2006	Below Average	At Risk

Some of the male students were opposed to the continuation of single gender classes. Boys are disruptive and loud, according to some of the students interviewed. The sometimes “rowdy” environment was distracting and prevented them from completing assignments. Although the boys liked the lack of “drama” that the girls brought to the classroom, most of them did not favor the continued absence of females. The boys might have been attempting to meet peer expectations that a teen male would be interested in girls.

Parent Involvement

Parents had not indicated negative feelings about the program to either teacher. An Open House had been held a few weeks before this interview. A number of parents had indicated an interest in the all male classrooms. According to one teacher, “I haven’t had a lot of parent feedback from the program, but I have not had any negative feedback, so....really all I can say is...we had our open house a few weeks ago, a showcase where parents come in and we show them what we have for the upcoming sixth graders. There were a lot of parents interested in the single gender program.” Parents whose sons were a part of the all male classroom were pleased about the positive conversations about school. A parent stated, “As a parent, I think that my son has done very well with it and enjoyed it. He has gotten along great with his peers. There have not been a lot of arguments or negative talk.” Most of the parent comments were positive.

Students’ Stories

Fifteen boys who obtained permission to participate in the focus group gathered in the science classroom immediately following the regular class period. The teacher instructed them to take seats immediately so that we would have sufficient time for the interview.

Teachers and administrators had combined seventh and eighth grade students for the interview. Most of them were reluctant to share answers at the beginning of the session. A few ventured to answer, and as the interview continued, more boys responded to questions. As they became more comfortable, several boys tried to answer at the same time. One teacher was present during the session.

Classroom Environment

The area that received the most response to the question dealing with the favorite part of the all male classroom was the lack of drama with no girls in the class. Responses included, "The girls don't get you involved in their problems," from one. Another said, "you are not embarrassed to answer questions." One stated that, "You can be yourself." Several boys talked at length about the "playing around," and the noise level in the classroom indicated by the comment, "Guys are just loud." The boys felt that it was often so loud that learning was difficult

They spoke about hands-on projects that were most interesting to them. One student explained that they could "dissect a frog" in their classroom without "screams" from the girls. The boys in this group preferred male teachers because they were more understanding and "not bothered as much." It appeared that the boys thought that the male teachers could handle the misbehavior as indicated by the statement, "Mr. Sullivan just writes us up." One student referred to the behavior of one of the female teachers. "She gets mad every day," he stated and added that they "had more fun in the male teacher's classes."

I asked if they thought that their parents liked the all male classroom, and the students who answered or shook their heads agreed that they did. Not all of the boys responded to every

question. Some questions elicited more response than others as some boys did not respond to any of the questions asked. Some responded that their parents wanted them “to do well” and “wanted what was best” for them. One student commented that his mother was “on and off” about her feelings regarding his involvement in the program.

When asked about their ideal place to concentrate and learn, most of the boys gave examples of a serene setting. Suggestions included, “the beach” and “somewhere quiet.” It was interesting that the boys would describe quiet areas as the best place to think since their classrooms had been portrayed as “noisy.”

Academic Performance

The boys had some understanding of the reasons for separating students by gender. They thought the school attempted to “see if your grades go up” and “if you do better.” About half of the boys’ hands were raised when asked if they had performed at higher levels since their placement in an all male classroom. When asked if they would like to take part in an all male classroom setting in high school, no hands were raised.

The boys talked about a field trip to the Citadel that had taken place earlier in the year. Male teachers had chaperoned the trip to the military college of South Carolina in Charleston. The students agree, “Yeah, it was a lot more fun because there was no girl drama. It was just the boys!” They were very excited about this adventure. Speaking of the program at the Citadel, one student stated, “They teach you to be a man there.” It was noted that female students are part of the student body at the Citadel.

Parent's Story

The gentleman introduced himself as the parent of a seventh grade boy. I thanked him for taking time to talk with me about his impressions of the all male classroom. He began by saying his son was enthusiastic about their all male classroom experiences. This parent whose son is in his first year of a single gender program never complains about classmates "bothering him." This student relates to his parent events of the day with no comments about "fights or rumors being spread." It is the parent's opinion that there is a different atmosphere than in previous years with coed classmates relating, 'It seems to be that the boys work well together, and "It's just more about what we did in class today which is different from last year." He is pleased explaining that his son has some interaction with girls, but he is with the same boys all day. "One thing I can say is that these boys get along great together. They form camaraderie, help each other out. They have formed friendships. It has been great for them."

The school does not separate male and female students for the entire day. "In their elective classes, they have girls, and they get that social interaction." The boys in all male classes remain together all day. The parent thought that in the ideal situation, the boys would not be in the same core classes all day in order to have a different mix of personalities. Academic performance was better in the all male class. The parent related:

His grades are better than they were last year. He is making honor roll three of the four nine weeks here. His grades in elementary school were not that great. He had to drop down a level in math last year because he couldn't handle it. This year he has made A's in math. I don't know if it is maturity or the all boys' class, but he has made

the honor roll all year.

The parent did not define success in terms of end of grade test scores. He was pleased that his son's grades were higher than the previous year, and he talked at length about the positive relationships that had developed among the boys in the all male classroom.

Observation Summary

Northwood Middle School

Researcher observations were conducted on three separate occasions in the all male seventh grade classrooms and three separate occasions in three eighth grade science classrooms for periods of approximately fifty minutes. Observations were conducted in the classrooms of the teachers who participated in the interviews.

During one visit to the seventh grade science classroom, the researcher took a seat in the back of the room to avoid distracting the students in order to obtain an accurate picture of an average class period. A few boys glanced my way briefly and asked questions about the notes I was taking. I repeated the assurances from the interview that no names would be used in my report. The answer seemed satisfactory as they directed their attention to the teacher.

Some of the students shuffled into the room dropping books on the tables and falling into the seats. A few sat in chairs pushing them back and placed their feet on the tables. Some of the boys sat on desks and lab tables. One student hid behind a large desk in the corner of the room as another student reclined on top of the table and appeared to be paying attention to the teacher who had taken a place at the front of the room obviously waiting for the boys' attention. A steady hum of noise was heard from many conversations among the boys.

Clothing includes jeans, knee length shorts, shirts with a variety of prints, and most of the boys wore flip-flop sandals.

The seventh grade classroom was large enough to accommodate a class of a greater number of students than the 23 that were present. Lab tables lined the sides of the walls. Equipment was stored in cabinets above the tables. Blinds remained closed throughout observation periods limiting any natural light into the classroom. Posters of science-related topics and rules for conduct were posted on the walls. The temperature in the classroom was very cool although it is a warm day.

The male teacher paced around the classroom asking questions of the students, stopped quickly, and threw a small ball to a student as he asked a question. The student caught the ball and answered apparently familiar with this method of subject review. Students were asked to remain standing if their answer differed from the one that had been given. Correct answers were affirmed by teacher comments such as “exactly right,” and “very good.” Incorrect answers are redirected to another student as the teacher asked, “Can you help him out with that one?”

A request for the students to answer a question in unison is met with a weak response from students. The teacher made the request a second time and seemed pleased with this louder response to the question. Several boys participated in side conversations that were not acknowledged by the teacher. At no time during observations did the teacher scold or reprimand the students in any way.

All students were asked to stand. The teacher stood in the center of the room and tossed a ball to one student as he asked a question. The student, caught the ball, answered the

question, and pitched the ball to another student as the next question was asked by the teacher. This procedure continued for about ten minutes as the boys laughed when someone missed catching the ball and cheered when someone answered a question correctly. The teacher began counting backwards from five signaling an end to the review and as the time for the boys to return to their seats. Some ran, some walked, and some slid across the floor and managed to reach their seats by the time the teacher reached zero.

The eighth grade classroom was smaller in size than the seventh grade classroom. Books were neatly arranged on shelves in three areas, several plastic bins labeled homework and classwork were visible on a table near the front of the room, and desks were lined up in straight rows. Posters of volcanoes, earthquakes, and the solar system filled all of the wall space. Plastic dinosaurs were suspended from the ceiling in one area. A replica of a space shuttle hung from the ceiling in another area. The temperature is very cool in this classroom on a very warm day. A Smart board is mounted on the wall at the front of the room.

Students entered the room quickly talking among themselves and were seated before the tardy bell rang. Several students sprawled out in the desks stretching their legs in front of them across the aisle. Others opened book bags rummaging for materials. The teacher announced a lesson review for a test to be administered later in the period as two boys carried on a side conversation.

Answers to teacher questions were blurted out without hands raised and were ignored by the teacher. He reminded them of the proper procedure of waiting to be called on before answering questions. Students responded correctly to several questions, as they returned to the previous habit of impulsively responding to questions.

One boy sat on a desk while his neighbor sat on the side of a desk in the middle of the room. Several boys walked around the room with no apparent purpose for getting out of their seats as the teacher continued the review never appearing displeased by any of the boys' actions. Some of the review questions were displayed on the Smartboard as students approached to touch the correct answers on the screen as they were called by the teacher. A steady hum of noise that included side conversations among pairs of students, discussion among groups, and talking to the teacher took place during this lesson review.

One student asked for a review of the operation of a seismograph. The teacher began a demonstration. The students converged on the area of the demonstration excitedly pushing and shoving each other. An interactive demonstration went on for approximately 10 minutes while the boys fired questions to the teacher. The demonstration ended, and students returned to their seats. Tests were distributed by the teacher. The room became silent as the students worked on the tests until the bell rang to end the period.

Students and teachers in both of these classrooms appeared to be very comfortable with each other. I made this assumption as my attention was drawn to the degree of patience the teachers displayed while the male students could have been considered disruptive by teachers in a traditional setting. Students responded to teachers respectfully. Lessons moved at a brisk pace. Students seemed engaged as teachers used active teaching strategies in all of their classes.

Oceanview Middle School

This middle school is located farther south in one of the oldest towns in the state with a population of approximately 16, 000 residents. A major tourist area near the Atlantic Ocean

is within 25 miles of the town. Many businesses and vacation homes are found in this suburban town. Few restaurants and shopping areas are visible to the visitor. The county school system includes 22 elementary, 10 middle, 12 high schools, one high school Academy for Arts, Sciences, and Technology, one high school Academy for Technology and Academics, and one charter school that serves grades kindergarten through grade eight. The Oceanview Middle School campus is in the center of town. It is the only school in the county that offers single gender classes. Facilities are recently constructed and include a two-story classroom building, gymnasium, and a large media center. A small reception area is adjacent to the administrative offices. The walls are colorful and natural light streams through many skylights. The faculty and staff were pleasant and helpful.

One male principal, one male assistant principal, and one female assistant principal serve as the administrative staff. The faculty consists of forty-seven teachers who teach mostly single gender classes. The student body is made up of 520 students in sixth, seventh, and eighth grades. The number of male students (268) is slightly larger than the female student population (252). The school is 54% White, 44% African American, and 2% Hispanic. Seventy-nine percent of the students are considered at a low socioeconomic level as determined by eligibility for subsidized meals. The school is in the third year of a single gender program. Each grade level is divided into single gender classes in the core subject areas of reading, math, science, and social studies. Band, music, art, and some remediation classes are coed.

The school achieved “average” ratings for performance composite scores and growth rating for 2009 and 2010. “Below average” and “at-risk” ratings were earned from 2006

through 2008. The school has met the performance standards for progress as determined by the South Carolina Performance Vision that outlines expectations by 2020. It failed to meet AYP goals for 2010, achieving 19 of 21 goals. Although the school has achieved average composite scores and growth rates, 2 of the 21 target goals were not met indicating that two subgroups failed to meet proficient standards.

Oceanview Middle School

The Administrator's Story

The principal at Oceanview was busy with a state level team the day I arrived. We had exchanged emails to schedule the most convenient date for my visit. I was unaware that he would be unavailable for an interview. The assistant principal accepted my invitation for an interview without hesitation. We walked to a conference room in the main office area. As we began our conversation, he explained that he was a retired middle school principal from a northern state and served as assistant principal for the past five years. The school was organized into single gender classes for seventh grade students in 2007-2008, eighth grade was added in 2008-2009, and sixth grade became a part of the program 2009-2010. As a former principal, the single gender program was “of great interest” to him.

Professional Development

Administrators chose teachers when the program began. After observations of teachers interacting with students, they decided to request that certain teachers become part of the program. The Assistant Principal said that they had chosen teachers who had been successful with either the all male or all female classrooms with one exception. Teachers attended summer conferences in the area to prepare them for teaching single gender classes. David

Chadwell, Coordinator for Single Gender Initiatives for South Carolina Public Schools, had come to the school to offer training. Teachers also participated in book talk sessions.

Teachers who were experienced with the program guided those new to working with single gender classes. Most of the professional development took place during the summer.

Classroom Environment

The emotional climate is calmer with “less drama with no girls” according to the assistant principal. He also noted that there is less boy drama in the all male classroom because “peacock feathers are not up,” and the boys get more work done. Fewer fights occur in the classroom as well as in the hallways. Fifty days into the school year, he had received only five referrals for disciplinary action related to male misbehavior.

Academic Performance

He talked about improved grades for boys in the first year of the program, and the trend continued as other grade levels were added. Boys are “less distracted and more focused on the work” according to his observations. They enjoy the classes and “look for ways to stay at school at the end of the day.” He was very enthusiastic about the program.

Parent Involvement

Parents were concerned about the kind of environment that might be created by the all male classroom. Last year, two parents complained about the lack of social interaction between males and females. Parents have the option to send their students to a nearby school that offers all coed classes. The assistant principal reported no negative comments this year. He also stated that parents who moved into the area from other states were very much in favor of the program.

Teachers' Stories

One female seventh grade math teacher and one female eighth grade science teacher were interviewed separately. I met the seventh grade teacher in her classroom upon arrival at the school. A student had been assigned to escort me to the classroom. The boys in the classroom paid little attention as I entered. Class ended a few minutes after my arrival, and we began the interview. The seventh grade teacher had twenty-eight years' experience. As we began the interview, she said immediately that, "In a boys' classroom it is going to be more physical. It is going to be louder. You have to be the right person has to be a boy teacher." Referring to a fairly short attention span for boys, she commented, "Chunking things is important. After a certain amount of time, you are going to lose them anyway. There is that certain time frame that you have to get it in. "

I visited the eighth grade science classroom during the teacher's planning time. The room was located on the second floor. We began the interview after students left for the next class. She shared that she had eight years' teaching experience.

Both teachers had been selected by the administration to teach all male classes the first year that the program was in place. The eighth grade teacher had previously taught seventh grade.

Professional Development

Teachers received training from David Chadwell through attendance at a conference and on site at the school. The eighth grade teacher shared, "David Chadwell came and spoke to us at the end of the year. I received a book about how boys think differently and teaching single gender classes. We had a book club about the book. That was about it."

Teachers experienced in single gender education provided some professional development. It appeared that any professional development on the topic of single gender education had taken place as the school began the program. No recent instruction was mentioned.

Classroom Environment

Both teachers talked about the noise level. One stated, “It is nonstop.” The other said, “It is going to be louder.” The eighth grade science teacher explained

In the all boys’ classroom, there is always noise. There is no other way to describe it. It is nonstop. It is us being loud in a lab. I allow them to release energy. It is typically a boy thing. They can be at their seats, and it doesn’t bother me some days as much as others, but they drum, they tap, and they move their feet.

Both talked about the need to keep them moving by playing games and using the ball toss to designate students to answer questions. The eighth grade teacher said

Competitions and making things into a game is something that boys are more motivated to participate in than girls. But then when you are doing rotations or throwing the ball around, and we do that when I am asking questions. The person who has the ball answers the question. Whoever has the ball gets to respond.

The seventh grade teacher said

They have to change direction often. They need to change every ten to fifteen minutes. Whether it’s throwing a ball or using the interact pad, or playing a game, that is what they like. Yesterday, as an example, a boy said he was tired. I told him to do 10 jumping jacks. He did. It woke him up.

The teachers try to make lessons engaging. “It is like a ticking time bomb. They are fidgety and need to change direction often,” the eighth grade teacher shared and added, “One of the negative things about teaching the boys is the touching, the playing, the constant horse playing.”

The seventh grade math teacher related that one successful strategy was group rotation. The assignments that included work at a computer station, a writing station, and a station that required the students to write riddles and puzzles using algebra were differentiated for each group. This teacher plays music as a signal to move to a different activity, stating, “believe it or not, sometimes they dance.” A sense of community is stressed in these all male classes to facilitate group work.

Table 4
Teaching Strategies

Method	Teacher #1 School #1	Teacher #2 School #1	Teacher #1 School #2	Teacher #2 School #2
Ball Toss	Yes	Yes	Yes	Yes
Group Work	Yes	Yes	Yes	Yes
Use of technology	Yes	Yes	Yes	Yes
Change activities frequently	Yes	Yes	Yes	Yes
Learning Games	Yes	Yes	Yes	Yes

As shown in Table 4 above, similar teaching strategies were used in the all male classes at both schools. Teachers understood the necessity of active learning for male

students. Tossing a ball to individual students as a means of designating someone to answer questions was used for review. Learning games were a popular method of engaging boys. Group work allowed them to converse with each other and move around the room. The interactive Smartboard and computer games provide opportunities to perform some hands-on tasks. Sax (2007 p.186) suggests that parents should visit the classrooms before enrolling their sons in school asking, “Is there a playful mood in the room? Do they have a chance to run around?” All of the teachers believed that the boys needed numerous chances to release some energy during a class period.

The boys enjoy these classes according to both teachers. On Fridays, students are allowed to choose their seating arrangement in the cafeteria. It seems that the boys choose to sit together, and the girls choose to sit together.

Academic Performance

The seventh grade teacher stated

There were gains last year. We looked at test data. Specifically my honors class, the majority of them were exemplary. And I was proud of them. I did have single gender last year. I don't think they are where they want them to be, but they did make gains. On the other hand, she continued, ‘I had some that did not do a thing. I feel like I had discipline problems in there.’ She thinks that girls are “a distraction because of their age.”

When asked about parent response, she stated

Middle school students are changing emotionally and physically. The focus on the strategies necessary to keep boys motivated is the key to raising their achievement.

What I have heard is positive. At first people were sketchy, and I understand why. They are single gender anyway in PE in middle school. They have already gotten a taste of it. Now it is in academics. I tell them it is about learning strategies. It is not just about separating them at all. That is not it. It is not about separation. It is the learning aspect and the strategies that we choose to teach with.

The eighth grade science teacher has seen slightly better achievement in the all male classes but is doubtful about the school as a whole. Some of the boys definitely benefit from the organization of the class. She commented that, "we haven't been doing it long enough to come to that determination." Both teachers expressed a desire to continue working in the all male classroom.

The female teachers seemed somewhat less enthusiastic about the all male classroom than the male teachers. The single gender concept was appealing to them, but the boys seemed to overwhelm them with their behavior. Classroom management was difficult for both female teachers.

Table 5
Percent Passing End of Grade Test Scores
Oceanview Middle School
Grade 7

	2007-2008		2008-2009		2009-2010	
	Male	Female	Male	Female	Male	Female
Reading	86.1	74.4	62.8	60.0	59.8	63.9
Math	86.1	83.1	66.0	76.1	62.6	58.8
Science	50.0	45.9	74.5	67.6	76.9	68.9
S. Studies	58.8	51.6	51.6	49.3	48.4	56.7

Table 6
Percent Passing End of Grade Test Scores
Oceanview Middle School
Grade 8

	2007-2008		2008-2009		2009-2010	
	Male	Female	Male	Female	Male	Female
Reading	68.1	92.6	69.7	65.6	46.4	61.6
Math	64.3	78.0	67.4	62.9	56.7	55.6
Science	42.4	72.3	68.2	63.3	50.0	58.5
S. Studies	56.4	56.5	62.2	64.6	54.9	62.5

As shown in Tables 5 and 6 above, test scores declined for male students in most areas over the three year period. End of grade testing is only one measure of academic success. A change in the end of grade test following the 2007-2008 school year may have been one reason that some scores dropped. End of grade tests are designed to assess student knowledge over one school year and are composed of lengthy reading passages and usually no less than 60 questions. Reading tests are administered in one day while math tests assess student knowledge using word problems with multiple steps required to find the correct answer.

Teachers talked about the need to keep the male students moving as learning is chunked into segments of fifteen to twenty minutes. It was mentioned that the boys were “fidgety” and needed to “change direction” often. The testing environment specifies silence as students remain in seats for 90 to 120 minutes with possibly one stretch break during the period.

The faculty at this middle is composed of all female teachers with one exception. A study of 25,000 eighth grade students indicated that the effect of female teachers for male students can lower academic achievement (Drudy, 2005).

Administrators, teachers, and parents were of the same opinion that academic achievement had improved for some boys. None of the groups defined success in terms of standardized test scores. Opinions were apparently based on classroom performance, daily work, progress report grades, contentment with school eagerness to learn, and building of relationships. End of grade test results reflected a students’ performance on one day and may be considered as only one portion of a student’s academic achievement. All were in agreement that the program should continue.

Table 7
Five-Year Ratings
Oceanview Middle School

Year	School Rating	Growth Rating
2010	Average	Average
2009	Average	Average
2008	Below Average	At Risk
2007	Below Average	At Risk
2006	Below Average	At Risk

The school began the single gender program in 2007 with seventh grade students. Eighth grade was added in 2008, and sixth grade became single gender in the core subject areas in 2009. As shown in Table 7 above, composite and growth goals were “below average” and “at risk” from 2006 through 2008. Goals in both areas were met in 2009 and 2010. An improvement in school composite scores and growth occurred the last two years.

Administrators, teachers, and parents indicated that they believed single gender classes improved academic performance, and each group conveyed a sense of satisfaction with the program. The students were not pleased with the absence of girls in the classroom. The idea of high school classes without female students was considered impossible by the male students who participated in the focus group interview.

Parental Involvement

According to the teachers interviewed, parents of students at this school seemed concerned about the single gender initiative at first. It was a new concept, and the parents

had some doubts. The teachers think that the parents have “come around” now that the school is in its third year of the program. An expansion of the program indicated overall parental approval of the program.

Students’ Stories

Two groups of seventh grade boys and two groups of eighth grade boys participated in the focus group interview. Most of the boys were eager to share opinions about their experiences in an all male class. Some of the boys who had not received written parental permission expressed disappointment at their inability to be a part of the group. The first interview took place in the seventh grade classroom immediately following class. The second group of seventh grade boys was released to go with me to the media center located in another area in the building. Upon entering, I noticed that it was empty with the exception of the media coordinator. We moved to the back of the area as the boys scrambled to get chairs and arrange them around the one that I had chosen. The eighth grade boys were interviewed in empty classrooms. The eighth grade science teacher was present for one interview and her graduate assistant was present during the second.

One positive aspect of the all male classroom according to one student was, “You get to be in class with your friends,” and another said, “I have a higher chance of getting into a class with my friends.”

They articulated general displeasure at the lack of any female presence during most of the day. The subject of girls was at the heart of much of the discussion. One student commented, “I like together better.” Several boys agreed, “Yeah. Yeah.” When asked if anyone preferred an all male class, a loud, “No” was heard. Another opinion regarding the benefits of females

in the class was offered, “There are more distractions with the all boy classes. The boys are more rowdy than the girls who just sit back and learn.”

The boys desired female classmates, but they also expressed relief that girls were not present. One young man commented, “There is not as much pressure,” and another stated that there were “fewer distractions” with no girls in the class. They agreed that there was less embarrassment about incorrect answers when in the company of all males as one student explained

Yes, it is easier to be wrong in an all boys’ class than in a class with boys and girls. If you like a girl, and she is sitting behind you and you give a wrong answer you are going to be humiliated. But in a boys’ classroom, you are not embarrassed.

Most of the boys had no knowledge about the selection process for the single gender classes. Some said that boys were just placed in those classes for no apparent reason. Another said, “They want your grades to get better.” Others felt that their parents were responsible for the decision to include them in the classes. None of the boys felt any connection with the decision to be a part of the single gender program. When asked if they would like to continue in this setting in high school, there was complete agreement from one group of eighth grade boys that no one wanted to be included in any all male classes after middle school. The other eighth grade group agreed that they would like to continue in the all male setting for high school.

The response to the question regarding their ideas about the best place to concentrate and learn included a number of quiet places. One student said, “The beach”; another stated, “the

library,” and “in my room” from one student. No student expressed the thought that the classroom was the best place to learn.

Academic Performance

Opinions differed on the subject of academics. Responses included great improvement, no change, and a decline in grades when comparing experiences in the coed setting to the all male classroom. “They are better. There are no distractions by the girls,” one student stated. Some agreed that the boys concentrated on work more without the presence of females. It was pointed out that some students worked hard to make good grades regardless of the composition of the classroom.

Classroom Environment

The respondents agreed that the all male classrooms are “rowdy,” and their classmates “talk too much.” One student stated, “There is not as much pressure” to answer questions correctly. It is apparent that the inclusion of females in the class can be an intimidating factor. Comments including, “It is easier to be yourself,” and “it is easier to be wrong in the class with all boys” were made during the interview. The boys concur that more work is done in the classroom without females.

The subject of fighting was raised by a student. He talked about the number of “play fights” that were common during the day. Other boys chimed in about “real fights” that had required the attention of an administrator. Another comment, “They are like lions, they want to be dominant,” indicated the need for some boys to establish superiority among their classmates. It was explained that some of the boys wanted to establish a hierarchy placing themselves at the top. This discussion centered on the fact that the boys were uncomfortable

in a situation that allowed someone to establish supremacy over others. The common feeling indicated that the all male environment encouraged some of the male students to behave in this manner.

The level and frequency of loud talking and other elements of noise prevented some of the boys from completing work. Some mentioned the ease of getting off task and involved in activities that were not related to academics. It seemed as though it was difficult to remain engaged in learning when other boys were “playing around.”

Respondents agreed that the “drama” associated with female classmates contributed to the ability of male students to focus on assignments. Boys felt more freedom to ask questions with an all male audience. One boy remarked, “Not as much pressure,” and another said, “Not as many distractions.” When asked if grades had improved in an all male class, one student said, “My grades are getting better.” Another replied, “I had a girls’ and boys’ class. I made C’s and D’s. Since last year I have been making A’s and B’s [in the single gender classroom].”

Parents’ Stories

Two parents participated in this interview after school hours during a school festival. They met me in an empty classroom on the main hallway. I explained in detail that I was interested in their opinions about the all male classroom. When asked what she knew about the single gender program before her son was enrolled, her reply was that “I was in favor of it from the beginning, and I liked what I heard.” The parents seemed to favor the idea that students were allowed to socialize in coed settings including the cafeteria and recess. The

conversation centered on the attention paid to academics in the classroom and less worry about girls. One parent whose son was in the second year of the program commented:

There is more freedom for the child. He is not afraid to ask questions. It is much more focused. He seems to like it a lot. He is not as shy being in a class like this. He seems very comfortable. I think they learn better this way.

The lack of females was a very positive aspect of the classes according to parents. Students have the opportunity to excel without “the intimidation” of female presence in the classroom. Another parent explained:

I think this is the greatest thing that has ever come out. I feel like the attention span is stronger. It seems like a better learning environment. You don’t have the pressures of trying to impress the person of the opposite sex.

When asked if they would like to continue the all male classroom setting in high school, he answer was, “most definitely.”

The parents did not mention end of grade test scores during the discussion with their opinions of the success of the all male classroom. They stated that their sons felt less peer pressure when they asked questions possibly resulting in a better understanding of information presented by the teachers. The classroom atmosphere seemed to be an important component of learning for their children.

Observation Summary

Observations were conducted by the researcher in a seventh grade math class and an eighth grade science class. In order to remain unnoticed, the researcher took a seat in the back row of each classroom during the visits. The classrooms were large and well lighted.

The seventh grade classroom was furnished with one teacher desk, twenty-six student desks, an audio-visual cart containing a laptop computer and an LCD projector, a Smartboard, and three bookcases. An image of a geometric figure filled the screen as class started. Students' attention was directed to the screen. The task of locating the correct number of triangles was assigned. The class was told to work in pairs to complete the assignment. Students were asked to call out numbers from one to twenty-six. Even numbered students took a seat. Odd numbered students were instructed to walk around while music played. When the music stopped, the student sat down in the desk closest to him. Each student was given a problem to work using scientific notation. Each pair of students completed his problem and his partner's problem. The time limit was set at one minute. Students worked feverishly. At the end of one minute, music began. Students left their partner and moved to another partner. The music stopped, and the procedure began again. Even numbered students were told to stand. They moved around to various odd numbered partners. Problems were collected by the teacher at the end of the exercise.

At some point during this class period, there was constant talking by two or more students. Warnings were given by the teacher to "get quiet." The noise would subside briefly. Within two minutes, the talking began again. Several boys told each other to "shut up."

A bell signaled class change. One group of boys raced to the window to look outside while another group left the classroom. Other students entered. It was explained that a school wide reading period had begun. Boys took books out of their desks and read. Two

boys met at a bookcase and started a conversation loud enough to be heard in any area of the room.

The teacher moved a chair to each student's desk and recorded their answers to her comprehension questions about the book they had selected to read. The room was quiet for a short period. The boys at the bookcase continued talking, and others began their own conversations. A bell sounded after forty-five minutes. Boys left the classroom quickly.

Lab counters with sinks and cabinets located above the workspace lined the walls of the eighth grade science classroom. Twenty-seven students sat in chairs at lab tables in the center of the classroom. Lab Expectations, Classroom Safety Rules, and the Scientific Method were displayed on some of the wall space.

Students entered the classroom talking. The teacher talked over the noise. A graduate assistant was present to help facilitate the lab assignment. The graduate student from a nearby college is pursuing a master's degree in marine science. The college requires that students in the program work in the middle and high schools as part of the curriculum. He provided materials for lab experiences that do not occur as a regular part of the eighth grade science course of study. Recently, the students have dissected a shark under his supervision.

Groups were formed, materials collected, and work began on drawing contour lines on a flat surface. Colored water was used to outline land forms. The teacher poured the water from a large container into smaller beakers for each group. One student was overheard talking to another group member, "I'll give you five dollars if you'll drink this." Another student commented, "We already tried it."

Most of the boys are off task. They wander away from their group to other groups. One or two students work diligently on the assignment. Each member has been assigned a role. Written documentation of the lab is expected. It is unclear if the work is given to the teacher. Clean up began amid general noise. The bell sounded. Students ran for the door.

Summary of Classroom Observations

Classrooms were busy with teachers keeping a brisk pace. The boys were never quiet. Learning strategies involved movement for the students. It was not required that they be seated longer than five minutes in any of the classes. Teachers kept reminding students of assignments that were due at the end of the period and to remain on task. The female told the students to lower the noise level several times during the observations.

The boys laughed, worked for short periods, and talked to different groups of students. The noise level from many student conversations was a factor in all of the classrooms. Although some of the students referred to noise as a distraction, most of the boys participated in some form of talking during class. “Playing around” was mentioned by a number of students; however, it was not evident during the observations. Movement, interactive games, and technology-related tasks dominated instructional time. Students were allowed to stand, walk around, talk to partners, and use “hands on” activities.

Cross Case Analysis of Data

Comparison of School Demographics

Two middle schools were purposefully selected for the study since they offered a single gender program for seventh and eighth grade students. The study was conducted to determine what impact, if any, the all male classroom had on student academic achievement.

The perceptions of those involved with the program, administrators, teachers, parents, and students, would provide insight into any influence realized from this classroom setting.

Schools were located in South Carolina in cities or towns of less than 40,000 residents. The student body of 763 students at Northwood Middle School is 48% White, 49% African American, 2% Hispanic, and 1% Asian with a 60% low socioeconomic population determined by eligibility for subsidized meals. The Oceanview Middle School is similar with 54% White, 44% African American, and 2% Hispanic with a 79% low socioeconomic group of 520 students. Since both schools are composed of similar subgroups, results should not be influenced by unequal representation of any one subgroup. The schools were not chosen using any racial or economic criteria. The common factor for selection was the implementation of a single gender program.

Northwood Middle School housed seventh and eighth grade students. Single gender classes had been available for two years while coed classes were also in place. Oceanview Middle school included sixth, seventh, and eighth grade students in the third year of the single gender program. Parent permission was necessary for students in both schools to enroll in the single gender program. Northwood Middle School offered two single gender classes at each grade level while Oceanview Middle School separated all of the core classes by gender.

Professional Development

Teachers should be introduced to the most effective teaching methods for the all male or all female classrooms before implementing the single gender program. The physiological and psychological differences in males and females as well as learning styles should be the basis for professional development for all teachers taking part in the initiative. Northwood Middle

School teachers attended summer conferences lead by teachers from other schools with single gender programs and the Coordinator for Single Gender Education. Oceanview Middle School teachers attended summer conferences and participated in book studies. It appeared that both schools were involved in minimal professional development. Teachers did not mention ongoing, embedded instruction that would have possibly enhanced their knowledge of practices designed to target specific needs of male and female students in a separate setting. Younger and Warrington (2001) suggest that there are dangers in implementing single sex classes without appropriate staff development programs that address teaching learning strategies. The preparation of teachers at both schools could benefit from more extensive professional development

Classroom Environment

Noise and constant movement were evident in the all male classrooms at both schools. Male teachers at Northwood explained that they used different strategies including nontraditional review practices that involved throwing a ball to students as a signal to answer a question, rising from a seated position to answer a question when called on, clapping hands to emphasize important points, and giving boys frequent opportunities to move around the classroom. During classroom observation, the researcher noticed that both classrooms featured smooth transitions, uninterrupted direct instruction by teachers, and no reprimands by the male teachers.

A steady hum of conversation and frequent movement were evident in both Oceanview classrooms. Female teachers of the all male classrooms talked about specific teaching strategies that had been successful with students including lessons that involved changing

seats after several minutes to stations with various activities, ball toss to students as an indication to answer questions, and learning games. During observation in these classrooms, the researcher noticed some off task behavior, some difficulty for teachers to maintain uninterrupted instruction, and many teacher requests to reduce noise levels and concentrate on assigned tasks.

Teachers in both schools used similar teaching strategies in an atmosphere of varying levels of student voices and a good deal of movement. Students had more freedom to move around the classroom and carry on side conversations without reprimands in male teachers' classes. It was difficult to determine if students' attention to direct instruction was better in male or female teachers' classes.

Academic Performance

A study of 25,000 eighth grade students revealed that the effect of a female teacher reduced male achievement test scores 4 percent of a standard deviation (Dee, 2006). At Northwood, end of grade test scores improved for seventh grade male students in reading, math, science, and social studies over the two year period that the single gender program had been in place. Eighth grade end of grade scores for males improved in all subjects over the same period. School ratings for composite scores and growth moved from below average and at risk to average from 2006-2008 to 2009-2010.

Oceanview realized a drop in scores in end of grade male scores in all subject areas over the three year period that the single gender program had been in place. Annual assessments were changed from the Palmetto Achievement Challenge Test to the Palmetto Assessment of State Standards at the state level in 2008-2009. Scores may be lower on new assessments

than more familiar tests. Annual school ratings moved from below average 2006-2008 to average 2009-2010 and growth rating from at risk 2006-2008 to average 2009-2010. Both schools showed improvement in the Five Year Ratings.

It could be that male students taught by male teachers performed at higher levels. Male teachers may deal with emotional issues of boys including a possible lack of emotional development that can lead to disrespectful attitudes and aggressive behavior (Pollack, 1999). Male teachers may have a better understanding of male behavior and not classify it as disruptive or aggressive but normal.

Parent Views

The parent interviews at both schools indicated positive feelings about the single gender program. Boys were more focused and earned better grades in the all male classes possibly due to the absence of female distractions. Each parent indicated that their sons were less intimidated and more comfortable in this setting expressing a desire to see the program expanded to a high school in their attendance area.

Chapter Summary

The data indicated a number of positive effects of the all male classroom structure. Academic performance on some of the end of grade tests at both schools and academic and growth ratings improved over a five year period for both schools. It was mentioned that the absence of females contributed to student academic success, and the learning strategies used by teachers that were designed specifically to meet the needs of male students contributed to improved achievement. Teachers of the all male classes adapted the environment to encourage the students to work on assignments using methods that appealed to their learning

styles. According to most research, boys learn best when they use their hands, and they need concrete and visual references (Hughes, 2000). Boys work better when lessons are divided into short tasks, are more productive when they work in teams, and active engagement is necessary (Noble & Bradford, 2000). Movement and less focus on one activity for a prolonged period of time is recommended (Younger & Warrington, 2002). Teachers reported using these methods in implementing lessons and, it was observed that these strategies were used in the classrooms.

From the perspectives of some of the interview subjects, the presence of females in the classroom appears to negatively affect male performance. One of the schools was working out scheduling issues to make the complete separation by gender a reality.

Administrators and teachers were enthusiastic about the single gender program and were convinced that male academic achievement had advanced after boys were placed in classes together. None of the groups interviewed defined success as high scores on annual assessments. Male students found some features that they enjoyed about their classes. Some believed that they had earned better grades in an all male environment. Parents indicated that their sons were comfortable in this environment; in one case the parent realized improvement in report card grades, and those interviewed indicated a number of advantages of the program.

It is difficult to determine if the single gender initiative would be effective in every school. Educational progress in South Carolina has been sufficient to persuade the state to expand the number of schools that offer this alternative to traditional coed classrooms. Both schools that participated in the study improved composite scores and growth ratings over a

five year period. School systems throughout the nation are searching for more effective teaching and learning strategies. The single gender option is worth consideration.

Chapter V

DISCUSSION OF FINDINGS

Overview of the Study's Findings

The search for improved methods of educating students in the United States is ongoing. Concern over the high school dropout rate and the declining ability of American students to compete academically on an international level (PISA, 2009) has increased the sense of urgency among educators to find more effective instructional strategies. The task of preparing students for success intellectually, economically, and socially in their adult lives is a topic of state and national legislative action.

One innovative method of instruction that has been reintroduced into school systems in the United States is separation of students into classes by gender. Many states have implemented some form of single gender education in the public school system. All male and all female classes were generally accepted as the appropriate structure for schools early in the nation's history.

Although some resistance to the single gender format has been raised by equal rights' groups, national legislation provides the framework for all male and all female classes. A need must be identified that could be met by all male and all female classes. The gap between academic achievement of boys and girls presents such a need. Boys perform at lower levels in a number of academic areas. It has been my experience to arrange tutoring for academic support for boys more often than girls. Boys appear to be less developmentally ready than girls for any number of learning tasks that are expected of them at the kindergarten and first grade level. It would be a worthwhile option to offer an all male

classroom to young boys who are developing skill that they will need for a lifetime. Some school systems offer all male and all female schools. Others make all male and all female classes available, while core single gender classes at one or more grade levels may be in place at various locations.

Public schools in South Carolina have established an extensive single gender initiative among schools in the system. The program expanded from 70 schools in 2007 to 125 in 2010 (NASSPE, 2010). A sufficient amount of success has been realized, and participation by all schools in the system is encouraged. Support is provided to the schools by the state department of public instruction in the form of a statewide single gender coordinator.

The 2010 *Report on the Annual Survey of Single-Gender Programs in South Carolina Public Schools* found that more than 65% of students indicated single gender classes had improved their academic performance and attitude. Other findings reported that 83% of students thought single gender classes increased the likelihood that they would graduate from high school, 75% thought the program increased their self-confidence, 76% indicated an increased ease of learning, 77% reported increased class participation and willingness to work with others, and 80% indicated a positive image of self as student. Survey questions revealed that 80% of parents indicated that single gender classes were a factor in their child's improvement and played a role in their successful completion of high school.

The single gender initiative is at varying stages of implementation in the public schools of South Carolina. The single gender school model with all students enrolled in single gender classrooms has been put into place by two middle schools in the system. All of the other schools in the state are coed schools offering single gender classes. The middle schools in

this study offered single gender as well as coed classes. Northwood Middle was in its second year of single gender classes in seventh and eighth grade. Oceanview Middle was in the third year of single gender classes in eighth grade, the second year in seventh grade, and the first year in sixth grade.

It is uncertain why North Carolina would not incorporate single gender programs into more schools than presently offer the program. Male dropout rates and test scores have been and continue to be higher than female rates. A number of choice programs exist in schools with an emphasis on math, science, classical, and language immersion. While there are few schools scattered across the state that provide the opportunity for all male or all female classes, it is a program that could support struggling male students at all levels. End of grade test scores did not indicate that the single gender program is successful for male students. Test scores are a measure of a particular group of students on a particular day or days in an entire school year. Groups of students are weaker in some areas than others in certain school years. As an educator begins to deliberate on the effectiveness of the program, it would be wise to view all of the aspects of the all male classroom as recounted by those who were a part of the program and investigate reasons why administrators, teachers, parents, and some students are in favor of its growth and further development.

It may be difficult to effectively evaluate single gender education because in the single gender structure, boys in the all male setting have frequent breaks with lessons designed for maximum activity and movement. End of grade test sessions require students to remain seated silently for long periods of time, allowing students only one or two stretch breaks.

This atmosphere is very different than the regular classroom environment, and male students may not perform at their highest levels.

Administrators, teachers, and parents expressed support for the all male classroom. Generally, it was the opinion of the adults that the lack of focus in a coed middle school class hindered learning. Administrators felt that the atmosphere in the single gender classes was better than in the coed classes. Fewer discipline referrals were made after the students were separated. Teachers were selected by administrators to teach the all male and all female classes.

Teachers enjoyed the all male classrooms but pointed out the dissimilarity of the environment in comparison with the coed classes. The higher noise level, the necessity of frequent movement, and specific learning strategies designed to meet the needs of the male students were discussed by teachers. Adapting to this high energy classroom was vital to success for both students and teachers. Most learning takes place during some type of active learning strategy. Boys thrive in the classroom that allows them to work in short time segments and be physically active. Each teacher wanted to continue working in the all male classroom.

Parents who agreed to be interviewed felt that male students maintained focus on the learning and were not distracted by female issues common in the coed classroom. The boys appeared less intimidated and more content at school than in coed classes according to parents who expressed a desire that their sons could continue in the all male curriculum.

The students were not in unanimous agreement that their grades had improved as a result of the all male classroom atmosphere. It seems that some achieved better grades, some

remained at the same level, and some said that their grades declined. Some consider the classroom to be too disruptive to satisfactorily complete work. Others enjoy the freedom that is present without girls. Most of those interviewed admitted that “trying to impress girls” was an important part of the coed classroom. They were “able to learn and concentrate and not afraid to ask questions.” The boys found it difficult to reach consensus on their preference of all male or coed classes.

Parents thought that continuing the program beyond middle school would be an advantage for male students. One parent stated, “The boys were more focused, concentrated more on work, and were not worried about the girl that might have been sitting near him in a coed class.” It was pointed out by parents that the boys did not feel intimidated and were less shy in a class with all males.

Male students listed a number of positive aspects about working with boys during the school day but also spoke negatively about the lack of females in their classes. The lack of drama that exists with female students and the absence of pressure to impress girls were mentioned several times by the male students who took part in the interviews. One student explained, “You can learn and concentrate without being afraid to ask questions.”

Parents felt that their children had made progress during the time that they had been involved in the program noting that their sons were more at ease asking questions in class. Parents did not use test scores to evaluate the success of the all male classroom.

Administrators made references to decreased discipline problems and higher test scores in some areas. Opinions regarding the program favored its continuation as an alternative to the traditional methods of educating middle school students.

Connections to the Research

The single gender initiative has seen a recent resurgence in American public school systems due to the demand for improved academic achievement and concern for the perceived decline of academic achievement of boys relative to girls. The United States has allocated over one million dollars to study single gender classes as a method of getting boys more interested in school (Francis & Slater, 2005). Over the past fifty years, the majority of college students have shifted from male to female. The percentage of male college students was 70% in 1942. By 2006, the percentage had dropped to 42% (Sax, 2007).

The male-friendly environment includes many opportunities for movement (Allard, 2004). Boys reacted positively to movement around the classroom during observations by the researcher. Teachers explained the positive effects of spending short, focused time periods on one task, and then moving on to another. Active engagement kept most boys involved in the lesson, a finding consistent with research by Noble and Bradford (2000). According to Sax (2007), boys need real life experiences. Technology is important in preparing students for life in the 21st century, but computers do not give students authentic knowledge. When students are asked to do things that they are not interested in, they often lose motivation to learn (Sax, 2007).

Teachers in the all male classrooms planned lessons carefully to appeal to the learning styles of male students. Behavior that could be considered unruly in a coed classroom was accepted by teachers who recognized it as normal male interaction. They planned a variety of learning tasks that would accommodate the need for ongoing activity. This finding is also

consistent with research suggesting that it is important to allow male students freedom during instruction (Younger & Warrington, 2005).

Administrators and teachers followed the recommendations of David Chadwell, Coordinator of Single Gender Initiatives for South Carolina. Boys received brief, specific instructions and worked for a short period of time before changing activities. Professional development that targets best teaching and learning practices for single gender classes is necessary for teachers, according to Chadwell. Although both schools that participated in this study had received instruction from Mr. Chadwell, it appeared that no consistent schedule of professional development addressing single gender education had been made available for either school.

In the research, male teachers emerged as a great influence on male students and positively affected male academic achievement (Dee, 2006). In this study, student interviews disclosed a preference for male teachers by some students. Boys felt that male teachers were more understanding and tolerant than female teachers. According to one student, "We have more fun in the men teachers' classes. The male teachers are not bothered as much." The tapping, drumming, and generally constant movement of male students were ignored by the male teachers. They continued with the lesson regardless of distractions. Few references were made to loud talking, students who were off task, or constant drumming and tapping movements. Female teachers, however, made frequent comments about similar behavior.

The role of some boys in the all male environment is to become a dominant figure among his peers. Interviews with some of the boys indicated distress about the possibility of finding themselves the victim of the male classmate who desires superiority. The Boy Code

(Pollack, 1999) is the name given a set of rules that defines proper male roles in our society. Males may be encouraged to exhibit characteristics that can be labeled tough and strong. This philosophy may or may not explain why a particular male student seeks to gain the position as leader using intimidation. Some of the male students were uncomfortable as they discussed peers who attempted to achieve an elevated status at the expense of fellow classmates. Students who displayed this trait were viewed negatively.

Implications for Research

Most studies in the area of single gender education support the concept of separating males and females during instruction. A number of school districts have reported success in raising achievement among students in all male or all female classes. Few studies focus on negative aspects of the program.

Positive effects of the all male classroom on the education of African American and Latino boys have been revealed in a recent study that explains that the needs of these students are sorted into the categories of social, emotional, and academic needs (Fergus et. al, 2009). Boys in these minority groups responded well to efforts at relationship building of the teachers and administrators. Teachers who are instructed in cultural sensitivity are seen as vital to the success of these schools. The dynamic leaders of these schools target the specific needs of African American and Latino male students who often fall into the low socioeconomic category (Fergus & Noguera, 2010).

The two schools in this study provide some reason to believe that all male classrooms produce some encouraging outcomes for male students of other races and socioeconomic levels. The racial composition at one school was equally divided between African American

and White students while the other school had only a slightly higher number of African American students. Over half the students at one school and three fourths of the students at the second school were considered in the low socioeconomic category. Some benefits may have been realized by non-minority and average or above socioeconomic categories of male students as indicated by composite and growth ratings from both schools. A nurturing environment with attention to academic needs could benefit all male students. More research over time would produce more accurate findings.

One negative feature of the single gender classroom could arise as the boys in the all male classroom become comfortable with the type of behavior that is distasteful to girls. The boys seem to accept the loud talk and horseplay as usual although some boys thought it caused problems. The girls might be used to sitting quietly, taking notes, and establishing a calmer atmosphere that adjusting to a coed class could be difficult. Learning could be halted for a period of time when the opposite gender is reintroduced in a coed class. A study based on the behavior of males and females placed in coed classes after single gender education for several years could provide information on any lack of social maturity experienced by students in this setting

The schools in this study planned to continue and expand the program. Funds must be available to offer students and parents the opportunity to choose coed classes at the same school or a school nearby. One North Carolina school district found it necessary to eliminate the program entirely due to budget considerations. School systems that have realized gains from a single gender structure may consider budget reductions in other areas in order to

maintain a successful curriculum. State level educators may find it necessary to reduce spending in other state agencies to meet the educational needs of its students.

Male students may attempt to establish superiority in the classroom by using aggression against other students. Bullying is a problem that often leads to violence (Weaver-Hightower, 2003). Boys in the interview reported one classmate who had attempted to elevate himself to a position of authority in the group causing some to fear him. Male students may use the all male setting to their advantage. Girls may be more likely to report bullying behavior than boys. The subject of male aggression may be explored further to determine if the all male setting contributes to incidences of bullying.

Most of the research focuses on single gender classes that include academic data from all male and all female classes. Emphasis is placed on problematic issues faced by males as they progress through school. More research needs to be conducted to explore the reasons for the disparity between male and female academic performance. The research does not present opinions of students about reasons for their personal success or lack of success as a result of involvement in all male or all female classes.

A larger study would yield more conclusive data. Relatively few respondents from only two middle schools could provide correlations to issues that are experienced generally by those involved in the program. Including a greater number of schools in the study may have resulted in information that did not surface in this study. Interview data from those who had more experience with the single gender initiative would have been helpful and lent greater confidence in the results (or possibly disconfirming the results). Outcomes from academic

testing over a longer period of time would produce a better viewpoint on the sustained success or lack of success of the program.

Administrators and teachers should continue to communicate with parents about the foundation for the single gender structure. Research should be shared with parents to keep them informed about reasons to support the program. The schools should schedule regular discussions with parents about the progress that their children have made as a result of their involvement in the program. Parents should fully understand why schools have chosen to offer single gender education. It is necessary that parents feel that they may choose to enroll their children in the program with a complete understanding of its advantages and disadvantages.

Administrators should continue to seek the most skilled teachers for single gender classes. Teachers should desire to teach either all males or all females. The male teacher is a most important influence on male students. It is reported by the National Education Longitudinal Survey that a study of 25,000 students revealed higher scores for males who are taught by male teachers and females who are taught by female teachers (Dee, 2006). Male students in this study indicated a preference for male teachers. It is recommended that, whenever possible, male teachers should be assigned to all male classes.

This study was directed at middle schools. Further research might use similar methods for study of single gender programs at elementary and high schools. Coordination between elementary and middle school programs in the same or in neighboring districts could provide more targeted instruction for males and females as they progress through school. Strategies directed at meeting the developmental needs of young male students could be the basis of a

more extensive program that would continue into middle and high school. South Carolina currently offers single gender classes at five high schools in the system. The program at the high school level could possibly help reduce the dropout rate among male students.

Graduation rates indicate fewer male students in all major racial groups complete high school (Green & Winters, 2006). Using best teaching practices that address the needs of male students could motivate them to remain in high school until graduation. Negative attitudes expressed by some male students could be detrimental to single gender programs at the high school level. If male students enter high school single gender classes with distaste for the all male classroom, it could prove difficult to continue the program. It could be that peer pressure influenced the male students to speak out against single gender classes.

The Report on the Annual Survey of Single-Gender Programs in South Carolina Public Schools issued in October 2010 found that the majority of respondents answered that the single gender program had improved their academic performance. Male students, parents of male students, and teachers of male students expressed less enthusiasm for the program than female students, parents of female students, and teachers of female students. Investigation into the reasons for this outcome, which partially contradicts the findings of the present study, could result in a better understanding of the perspectives of male students and those closely associated with them.

A comparative study of single gender programs in North Carolina and South Carolina is needed because states have various standards to determine academic success. This situation could cause misunderstandings of the single gender assessment and evaluation. It would prove interesting to investigate the reasons for the expansion of single gender education into

125 South Carolina schools and the relatively few North Carolina schools that offer this curriculum.

Researchers might track a cohort of male students who had been assigned to an all male classroom in middle school through high school to compare academic performance with that of male students who had been in coed classrooms to determine any differences in report card grades, standardized achievement test scores, and college entrance exams. Statistics reveal a lower number of male students attend colleges and universities in recent years. The number of male students from all male classes in middle or high school who are accepted into institutions of higher learning might be compared with those from coed classes. Information on long term benefits might be realized from this type of study.

Implications for Practice

A decline in male standardized test scores, greater numbers of male dropouts, and fewer male students entering colleges and universities are causes for distress among educators. A search for more effective teaching and learning strategies is ongoing among those who have realized the existence of an educational crisis in the American public school system. Student engagement is an integral factor in successful academic performance. Exploring the individual learning requirements of males and females may be one method used by educators to raise the level of student interest in academics. As one teacher in the study noted:

Professional development for teachers of single gender classes should be studied carefully to ensure that the most appropriate, effective practices are used. Teachers should be well prepared to deliver instruction to students in single gender classes. Professional development would be most successful if it was embedded in the daily routines of teachers and ongoing

throughout the school year. Guidance should be provided consistently to teachers in order for them to help students attain their highest level of achievement. If administrators and teachers continue to try to find the most effective methods to provide authentic learning experiences for males that connect them to new learning, it could positively influence their academic performance.

The costs of organizing a single gender program may prohibit some schools from exploring the concept. Administrators and teachers must be trained in the best practices for single gender education with ongoing professional development. Most schools request parent permission to enroll students in the program. If a low number of students choose to enter the program, teachers in those classrooms do not serve the maximum number of students reducing efficient use of funds. Educators must make difficult financial decisions with limited resources. A thorough investigation of the possible benefits to students should be made to ensure allocations are used wisely.

School administrators should carefully consider the personalities of teachers who are selected to teach the single gender classes. Some research indicates that male students achieve at higher levels with a male teacher. Some male students indicated a preference for male teachers during interviews in this study. It may be that male teachers should be considered first when looking at teaching assignments. Female teachers should possess the personality to accept the diverse emotional and academic needs of male students before they are assigned to teach the all male class.

All forms of assessment should be examined to determine any overall benefits to students in a single gender program. One assessment should not be the deciding factor in labeling the

program a success or failure. Administrators and teachers should keep accurate records of various assignments in order to make judgments about the effectiveness of a single gender setting compared to a coed setting.

Individual subgroups should be examined to determine any advantages the all male classroom has on racial, ethnic, socioeconomic, and possibly students with disabilities. Improved academic achievement and higher numbers of high school graduates could result from a single gender structure. Some research (Fergus & Noguera, 2010) indicates that all male classes produced positive results for African American and Latino boys. The response to their social, emotional, and academic needs proved successful. This study could provide a framework for future investigation.

High dropout rates among boys, a high poverty rate among minority males, a large number of mainly males arrested by juvenile authorities, and gang activity involving large numbers of minority male students prompted officials in Albany, New York to establish the all male Green Tech High School. The young men who attend the school have little chance of graduating from high school and possibly will go on to spend part of their adult lives incarcerated (Green Tech High, 2010). Based on studies that indicate higher performance levels in all male settings, the district has decided to address student needs through this program. Future study of this plan or similar plans would be enlightening to educators. Reports on any reduction in the discouraging statistics would provide some basis for discussion about the expansion of the program into other high schools.

Conclusions

This study utilized a qualitative approach to investigate the perceptions of participants related to their experiences with the all male classroom in middle school with emphasis on any benefits to academic performance. Qualitative data included individual interviews, focus group interviews, classroom observation, and document review. The data was analyzed by the researcher.

Perceptions of administrators, teachers, and parents indicate some positive feelings regarding the program although end of grade test scores from both schools do not indicate higher passing rates during the time that the single gender program has been in place. This fact could be a cause for some who attempt to evaluate the program's effectiveness. It would be difficult to use the results from one annual test to assess a student's knowledge for an entire school year. End of grade tests are composed of lengthy reading passages with numerous questions from each passage as well as many word problems requiring multiple steps to reach answers. Silent testing periods last for 90 to 120 minutes with extra time allowed if needed with one or two brief stretch breaks. These conditions are in direct opposition to information that has been suggested as best practices for male students. Work should be designed to be completed in a specific period of time and be associated with one particular skill. Boys' efforts are greater when working in teams collaboratively completing assignments. Active engagement is necessary to keep boys involved with oral presentations of more interest than traditional paper and pencil assignments (Noble & Bradford, 2000). Male classrooms are characterized by the use of movement, frequent assignment change, and

consistent noise. These classrooms conditions may actually contribute to low test scores for male students who are required to sit without movement for extended periods of time.

The all male classroom provided an environment for improved academic performance for some male students. Positive aspects of the all male environment included; fewer discipline issues reported by administrators, and male students were thought to concentrate more according to teachers, students and parents.

End of grade test scores for male students did not rise in every subject area over a three-year period. School #1 showed growth overall from 2008-2010 at both grade levels. School #2 showed growth for seventh grade male students from 2008-2010. Eighth grade students showed no improvement in scores over the same period. Administrators, teachers, and parents insisted that boys had experienced individual academic success when all academic work was considered.

Students appeared to enjoy their classes. Most boys were engaged in learning tasks and comfortable with teachers and classmates. The noise level was high in the classrooms. Boys referred to “loudness” and teachers mentioned the noise level in interviews. The male sense of hearing is less acute than the female, according to Sax (2007). This could account for the distinct noise level difference noted by teachers.

Teachers adapted teaching methods to meet the cognitive, physical, and psychological needs of male students. Hughes (2000) reports that boys learn best using hands-on tasks and concrete visual references. Competitive behavior was present in the all male class. Teachers planned lessons that involved movement, timed learning assignments in the form of games, and created collaborative learning groups. Teachers understood that these accommodations

impact the learning of male students. Although teachers understood the need to use best practices designed to meet the needs of male students, extensive professional development is necessary for best results. Reference is made to “dangers in implementing single sex classes without coherent staff development programs (Younger & Warrington, 2002, p. 371).

Professional development for teachers should be directed at best practices for gender specific learning, involve coaching embedded in the routine, and provide opportunities for reflection.

Educators are held accountable for the education of students. Current state and national legislation has permitted educators to explore innovative teaching strategies to meet the needs of an ever-changing society. Researchers have discovered that the brains of males and females are very different. Findings from other studies have provided information that relates to the cognitive, social, and emotional development of males and females. Gender-based education is the result of attempts made by educators to find ways to meet the growing need to improve academic achievement. This study investigated the perceptions about single gender education as it relates to the all male classroom. This subject is open to further research as the demand for more effective learning strategies and improved academic performance increases.

Final Thoughts

Educators and parents appeared enthusiastic about the single gender program. Administrators and teachers supported the program. Statistics reveal lower test scores, greater dropout rates, and a declining male enrollment in colleges and universities. As a teacher and school administrator, I have realized that many male students are not motivated to reach high levels of academic achievement. It is alarming to think about the bleak future

for males who have minimal education. The single gender initiative seems to be meeting the need for a new method of educating male students.

References

- Affirmative Action for Men. (2006, March 27). *Inside Higher Education*. (2006). Retrieved October 16, 2008 from <http://www.insidehighered.com/news/2006/04/26/gender>
- Allard, A. (2004). Speaking of gender: Teachers' metaphorical constructs of male and female students. *Gender and Education, 16*, 347-363.
- Auerbach, C., & Silverstein, L. B. (2003). *Qualitative data: An introduction to coding and analysis*. New York: New York University Press.
- Benson, G. A., Pomerantz, E. M., Ryan, A. M., & Patrick, H. (2006). Sex differences in math performance: The role of children's approach to schoolwork. *Developmental Psychology, 42*, 11-26.
- Billson, J. M. (2004). *The power of focus groups: Focus on education*. Barrington, RI: Skywood Press.
- Bogdan, R., & Biklen, S. A. (2003). *Qualitative research for education: An introduction to theories and methods*. New York: Pearson.
- Bursztyn, A. M. (Ed.). (2006). *Praeger handbook of special education*. Westport, CT: Praeger Publishers.
- Cahill, L. (2005). His brain, her brain. *Scientific American*, April. Retrieved from <http://www.sciam.com/article.cfm?id=his-brain-her-brain>
- Chadwell, D. (2010). *A gendered choice: Designing and implementing single sex programs and schools*. Thousand Oaks, CA: Corwin Press.

- Chadwell, D. (2007). Engaging the differences between boys and girls. *Middle Matters*, 15(4). Retrieved October 19, 2008 from www.chadwellconsulting.com/Middle%20Matters%20Article.pdf
- College Bound Seniors. (2008). *Total Group Profile Report, 2008* [Data file]. Available from www.collegeboard.com
- Creswell, J. (2007). *Qualitative inquiry and research design: Choosing among five approaches*. Thousand Oaks, CA: Sage.
- Creswell, J. (2009). *Research design: Qualitative, quantitative, and mixed method approaches*. Thousand Oaks, CA: Sage.
- Darlington, C. L. (2002). *The female brain*. New York: Taylor & Francis.
- Datnow, A., & Hubbard, L. (2002). *Gender in practice and policy: Perspectives on single sex and coeducational schooling*. New York: Routledge Falmer.
- Dee, T. (2006). How a teacher's gender affects boys and girls. *Chromosome*. Retrieved October 27, 2008 from www.educationnext.org.
- Drudy, S., Martin, M., Woods, M., & O'Flynn, T. (2005). *Men and the classroom gender imbalances in teaching*. New York: Routledge.
- Elementary and Secondary Education Act. (1965). Retrieved April 1, 2008 from <http://www.ed.gov>.
- Evans, L., & Davies, K. (2004). No sissy boys here: A content analysis of the representation of masculinity in elementary school reading textbooks. *Sex Roles*, 42, 255-270.
- Evans, J. M., Ziegler, M. G., Patwardhan, A. R., Ott, J. B. Kim, C. S., Leonelli, F. M., &

- Knapp, C. F. (2001). Gender differences in autonomic cardiovascular regulation: Spectral, hormonal, and hemodynamic indexes. *Journal of Applied Physiology*, 91(6), 2611-2618.
- Fergus, E., Scieurba, K., Martin, M., & Nogurea, P. (2009). Single-sex schools for black and latino boys: An intervention in search of theory. *In Motion Magazine*. Retrieved March 14, 2011 from: http://www.inmotionmagazine.com/er/fsm_09.html
- Fergus, E. & Noguera, P. (2010). Theories of change among single-sex schools for black and latino boys: An intervention in search of theory. *Metropolitan Center for Urban Education*. Retrieved March, 14, 2011 from: www.steinhardt.nyu.edu/metrocenter
- Flood, C., & Shaffer, S. (2000). Safe boys, safe schools. *Women's Educational Equity Act Digest*, 3-5.
- Francis, B., & Skelton, C. (2006). *Reassessing gender and achievement*. New York: Routledge.
- Francis, D. R. (2007, January). Why do men outnumber women in college? *National Bureau of Economic Research*. Retrieved February 2, 2009 from <http://www.nber.org/digest/jan07/w12139.html>.
- Friend, J. (2006). Research on same-gender grouping in eighth science classrooms. *Research in Middle Level Education Online*, 30. Retrieved February 1, 2009 from <http://web.ebscohost.com/www.lib.ncsu.edu:2048/ehost/detail?vid=6&hid=102&sid=40b>
- Frose-Germain, B. (2006). Educating boys: Tempering rhetoric with research. *McGill Journal of Education*, 41, 145-154.

- Gibb, S. J., Fergusson, D. M., Horwood, L. J. (2008, November 1). *Effects of single-sex and coeducational schooling on the gender gap in educational achievement*. The Free Library. Retrieved October 18, 2009 from [http://www.thefreelibrary.com/Effects of single-sex and coeducational schooling on the gender gap...-a0189289833](http://www.thefreelibrary.com/Effects+of+single-sex+and+coeducational+schooling+on+the+gender+gap...-a0189289833)
- Gillis, M. G. (2005). *Gender-based education: The pilot year on single-gender classes at a public elementary school*. Unpublished doctoral dissertation, Mississippi State University, Mississippi.
- Goldin, C., Katz, L. F., & Kuziemko, I. (2006). The homecoming of American women: The reversal of the college gender gap. *Journal of Economic Perspectives*, 20(4), 133-156.
- Gray, C., & Wilson, J. (2006). Teachers' experiences of a single-sex initiative in a co-education school. *Educational Studies*, 32, 285-298.
- Green Tech High Charter School, 2010. Retrieved from March 21, 2011 from: <http://www.greentechhigh.org/boys.html>
- Greene, J. P., & Winters, M. A. (2006). *Leaving boys behind: Public high school graduation rates*. Manhattan Institute for Policy Research. Retrieved February 19, 2008 from http://www.manhattaninstitute.org/html/cr_48.htm
- Gubrium, J., & Holstein, J. A. (2003). *Postmodern interviewing*. London: Sage.
- Gurian, M., Henley, P., & Trueman, T. (2001). *Boys and girls learn differently: A guide for teachers and parents*. San Francisco: Jossey-Bass.
- Gurian, M., & Stevens, K. (2005). *The minds of boys: Saving our sons from falling*

- behind in school and life*. San Francisco: Jossey-Bass.
- Hoffman, B. H., & Badgett, B. A. (2008). The effect of single-sex instruction in a large, urban, at-risk high school. *The Journal of Educational Research*, 102, 15-35.
- Hughes, T. (2006). The advantages of single-sex education. *National Forum of Administration and Supervision Journal*, 23, 5-14.
- Hyman, J. J. (2009). *Can all male high schools boost African American boys' graduation rates?* Retrieved October 10, 2009 from <http://villagevoice.com/2009-07-28/nes/canall-male-classrooms-boost-african-american-graduation-rates/>
- James, A. (2007). *Teaching the male brain. How boys think, feel, and learn in school*. London: Corwin Press.
- Kaestle, C. (1983). *Pillars of the republic*. Canada: Harper Collins.
- Kimmel, M. (2000). What about the boys? *Women's Educational Equity Act Digest*, 1-2.
- Kindlon, D., & Thompson, M. (2000). *Raising Cain: Protecting the emotional life of boys*. New York: Random House.
- Kleinfeld, J. (1998). *The myth that schools shortchange girls: Social science in the service of deception*. Retrieved January 29, 2008 from <http://www.uaf.edu/northern>.
- Krueger, R. A. (1998). *Developing questions for focus groups (focus group kit)*. Thousand Oaks, CA: Sage.
- Krueger, R. A., & Casey, M. A. (2009). *Focus groups: A practical guide for*

applied research. Thousand Oaks, CA: Sage.

Logsdon, E. C. (2003). Chalk talk “no child left behind” and the promotion of single sex public education in primary and secondary schools: Shattering the glass ceiling perpetuated by coeducation. *Journal of Law and Education*. Retrieved Feb. 6, 2009 from

http://findarticles.com/p/articles/mi_qa3994/is_200304/ai_n9199030/

McManis, S. (2003, July 13). Breaking the ‘boy code’ new movement advocates adapting schools and society to what works for boys. *San Francisco Chronicle*, p. E2
Retrieved October 27, 2008 from

<http://www.sfgate.com/cgi-bin/article.cgi?file=/chronicle/archive/2003/07/LV265801>.

DTL.

McNeil, M. (2008). Single-sex schooling gets new showcase. *Education Week*, 1-3.

Retrieved September 24, 2008 from http://www.edweek.org/ew/articles/2008/05/0736singlegender_ep.h27.html

Mead, J. (2003). Single-gender "innovations": Can publicly funded single-gender school choice options constitutionally justified? *Educational Administration Quarterly*, 39(2), 164-186.

Mead, S. (2006). Evidence suggests otherwise: The truth about boys and girls.

Education Sector. Retrieved February 1, 2008 from

<http://www.educationsector.org/analysis>.

Merriam, S. B. (1998). *Qualitative research and case study applications in education*.

San Francisco: Jossey Bass.

- Moir, A., & Jessel, D. (1992). *Brain sex: The real difference between men and women*. New York: Doubleday.
- Morgan, D. L. (1997). *Focus groups as qualitative research*. Thousand Oaks, CA: Sage.
- National Association for Single Sex Public Education. (2008). Retrieved October 16, 2008 from <http://www.singlesexschools.org/home.php>
- National Association for Single Sex Public Education. (2010). Retrieved February 8, 2011 from <http://www.singlesexschools.org/schools-schools.htm#29>
- National Center for Education Statistics. (2008). Retrieved October 16, 2008 from <http://nces.ed.gov/nationsreportcard/nde/viewresults.asp>
- National Urban League (Producer). (1992). *African American male immersion schools: Segregation? separation? or innovation?* New York: Paragon Cable.
- Nelson, B. G. (2002). Importance of men teachers and reasons why there are so few. *National Association for the Education of Young Children*. Retrieved October 19, 2008 from www.MenTeach.org.
- Newland, M. (2008). *Betrayal of boys: A new report says white boys need father figures at school. But the male education crisis is far more disturbing*. Retrieved October 16, 2008 from <http://www.dailymail.co.uk/femail/article-1038112/Betrayal-boys-Why-male-education-crisis-far-complex-disturbing.html>
- Noble, C., & Bradford, W. (2000). *Getting it right for boys and girls*. London: Routledge.
- Norton, R. (2005). A program that trains, certifies, and secures employment for African-American men as teachers. *The Black Collegian Online*, November.

- Retrieved January 20, 2009 from
<http://www.black-collegian.com/career/career-reports/Mister-grad05.shtml>
- Ogren, C. A. (2005). *The American state normal school: "An instrument of great good."*
New Yrk: MacMillan.
- Patton, M. Q. (2002). *Qualitative research and evaluation methods*.
Thousand Oaks, CA: Sage.
- Pollack, W. (1999). *Real boys: Rescuing our sons from the myths of boyhood*.
New York: MacMillan.
- Public Schools of North Carolina. (2008). Retrieved October 16, 2008 from
<http://www.ncpublicschools.org>.
- Reese, W. (2005). *America's public schools from the common schools to no child left behind*. Baltimore, MD: Johns Hopkins University Press.
- Reichert, M., & Hawley, R. (2006). Confronting the "boy problem": A self-study approach to deepen schools' moral stance. *Teachers College Record*, 108(10), 3-17.
- Reichert, M., & Kuriloff, P. (2004). Boys' selves: Identity and anxiety in the looking glass of school life. *Teachers College Record*, 106(3), 544-573.
- Reid, R., Riccio, R., Kessler, R., DuPaul, G., Powers, T. J., Anastopoulous, A., Atkinson, D., & Noll, M. B. (2000). Gender and ethnic differences in ADHD as assessed by behavior ratings. *Journal of Emotional and Behavior Disorders*, 8(1), 38-48.
- Richards, L. (2003). *Handling qualitative data: A practical guide*. Thousand Oaks, CA: Sage.

- Riordan, C. (1990). *Girls and boys in school: together or separate?* New York: Teachers College Press.
- Sabbatini, R. M. (1997). Are there differences between the brains of males and females? *Mind and Behavior*. Retrieved October 12, 2009 from <http://www.ceresbrainente.org/br/n11/mende/eisntein/cerebro-homens.html>
- Salomone, R. C. (2003). *Same, different, equal rethinking single-sex schooling*. New Haven, CT: Yale University Press.
- Sadker, M., & Sadker, D. (1994). *Failing at fairness: How our schools cheat girls*. New York: Touchstone.
- Sax, L. (2006). Six degrees of separation: What teachers need to know about the emerging science of sex differences. *Educational Horizons*, 190-198.
- Sax, L. (2005). The promise and peril of single-sex public education. *Education Week*, 34-48. Retrieved January 29, 2008 from <http://www.singlesexschools.org/edweek.html>.
- Sax, L. (2007). The boy problem. *School Library Journal*, September, 40-43. Retrieved March 8, 2008 from <http://www.slj.com>
- Sax, L., & Kautz, K. J. (2003). Who first suggests the diagnosis of attention-deficit/hyperactivity disorder? *Annals of Family Medicine*, 1, 171-174.
- Sax, L. (2007). *Boys adrift: The five factors driving the growing epidemic of unmotivated boys and underachieving young men*. New York: Basic Books.
- Sax, L. (2001). Reclaiming kindergarten: Making kindergarten less harmful to boys. *Psychology of Men and Masculinity*, 2, 3-12.

- Sax, L. J. (2008). *Women graduates of single-sex and coeducational high schools: Differences in their characteristics and the transition to college*. UCLA, Graduate School of Education & Information Studies.
- Schachter, R. (2003). The single-sex solution. *District Administration*, 39(4), 20-24.
- Schram, T. H. (2006). *Conceptualizing and proposing qualitative research*. Upper Saddle River, NJ: Pearson.
- Seale, C. (2004). Validity, reliability, and the quality of research. In C. Seale (Ed.), *Researching society and culture* (pp. 71-82). London: Sage.
- Silva, E. (2008). Boys and girls are more alike in school than they are different. *Education Sector*. Retrieved October 14, 2008 from <http://www.educationsector.org/analysis>.
- Skelton, C., Francis, B., & Srulvan, B. (2006). *The SAGE handbook of gender and education*. Thousand Oaks, CA: Sage.
- Sommers, C. (2005). The war against boys. *The Atlantic.com* Retrieved February 14, 2008 from <http://www.theatlantic.com/doc/200005/war-againstboys>.
- South Carolina Department of Education. (2008). South Carolina Student Survey on Single-Gender Education. Retrieved October 9, 2008 from www.sceducationchoice.com/choice/SingleGenderSurveyReport2008.pdf
- South Carolina Department of Education. (2010). Report on the Annual Survey of Single-Gender programs in South Carolina public Schools. Retrieved February 1, 2011 from www.ed.sc.gov/.../SingleGender/documents/edited/2SGISurveyReport11-02-10.pdf

- Span, C. (2002). Black Milwaukee's challenge to the cycle of urban miseducation: Milwaukee's African American immersion. *Urban Education, 37*(5), 610-630.
- Sparling, S. (1993). African American male-only schools: Is that the solution? *Childhood Education*. Retrieved October 9, 2009 from http://www.thefreelibrary.com/_/print/PrintArticle.aspx?id=13796047
- Stewart, D. W., Shamdasani, P. N., & Rook, D. (2007). *Focus groups: Theory and practice*. Thousand Oaks, CA: Sage.
- Swanson, D. P., Cunningham, M., & Spencer, M. B. (2005). Black males' structural conditions, achievement patterns, normative needs, and "opportunities." In O. S. Fashola (Ed.), *Educating African American males: Voices from the field* (pp. 229-250). Thousand Oaks, CA: Corwin.
- Thiers, N. (2006). Do single sex classes raise academic achievement? *Educational Leadership*. Retrieved November 10, 2008 from <http://www.csub.edu/~cgavin/mycourses/anthro4.pdf>.
- Tyack, D. (1974). *The one best system: A history of urban education*. Cambridge, MA: Harvard University Press.
- Tyre, P. (2006). *The trouble with boys*. New York: Crown.
- United States Department of Education. (2008). Retrieved April 15, 2008 from <http://www.ed.gov/programs/readingfirst/legislation.html>
- United States Department of Education. (1983). *A nation at risk* (1983). Retrieved March 4, 2008 from <http://www.ed.gov/pubs/NatARisk/>
- United States Department of Education. (2002). *No Child Left Behind*. Retrieved

- March 6, 2008 from <http://www.ed.gov>.
- United States Department of Education. (2008). *Early implementation of public single sex schools: Perceptions and characteristics*. Retrieved September 11, 2009 from <http://www.ed.gov/about/offices/list/oped/pss/reports.html>.
- United States Department of Education Office of Civil Rights Compliance Report. (1996). Retrieved October 31, 2008 from <http://www.ed.gov/about/offices/list/ocr/AnnRpt96/edlite-a96rpt01.html>
- Urban, W. J., & Wagoner, J. L. (2009). *American education*. New York: Routledge.
- Willard, E., & Brainerd, E. (1990). *A plan for improving female education and Mrs. Emma Willard's life and work in middleburg*. Marietta, GA: Larlin.
- Weaver-Hightower, M. (2003). The "boy turn" in research on gender education. *Review of Educational Research*, 73, 471-498.
- White, J. (2007). Male teacher shortage hits home. *The Daily Campus*. Retrieved March 23, 2009 from www.menteach.org/news/male_teacher_shortage_hits_home
- Yin, R. (2003). *Case study research: Design and methods* (3rd ed.). Thousand Oaks, CA: Sage.
- Younger, M. & Warrington, M. (2001). Single sex classes and equal opportunities for girls and boys: Perspectives through time from a mixed comprehensive school in England. *Oxford Review of Education*. 27 (3), 339-356.
- Younger, M., & Warrington, M. (2005). *Raising boys' achievement*. Department of Education and Skills. Retrieved October 18, 2008 from www.dcsf.gov.uk/research/data/uploadfiles/RR636.pdf

Zwerling, E. (2001). California study: Single sex schools no cure-all. *Women's eNews*.

Retrieved October 30, 2008 from

<http://www.womensenews.org/article.cfm/dyn/aid/571/>

APPENDICES

APPENDIX A
INTERVIEW GUIDE
STUDENT FOCUS GROUP

Script: Would you talk to me about what it is like to be in an all male class? I am a graduate student at North Carolina State University working on a doctorate degree. I am doing research on all male classes at the middle school level. Would you be willing to answer a few questions for me?

You will be identified only as a male student in my report. I may use some of your answers in my report, but you won't be graded or get into trouble for any of your answers. You may answer none, any, or all questions.

1. What do you like best and least about your all male classroom?
2. How did you become a part of this class?
3. What do you know about all male or all female classes? Why do you think that your school offers this type of class to students?
4. Which type of classroom do you prefer, all male or coed? Explain your choice.
5. Describe your academic performance when you were in a coed class and now that you are in an all male class. If there has been a change, why? If there has been no change, why not?
6. How does the behavior of your classmates affect your work? Give details.
7. Describe your idea of the perfect place to concentrate, pay attention, and learn.
8. What do you like best and least about your all male classroom
9. Which type of class, all male or coed, will you choose for next year? Explain

your answer.

APPENDIX B
INTERVIEW GUIDE
PARENT FOCUS GROUP

Script: I appreciate your willingness to participate in this focus group. I am a graduate student at North Carolina State University working on a doctorate degree. I am doing research on all male classes at the middle school level.

You will be identified only as a parent in my report. I may use some of your answers in my report. You may answer none, some, or all of the questions.

1. The topic for discussion today will center on your thoughts and feelings about your son's attitude about school and his academic performance since he has been involved in an all male class.
2. What did you know about single gender education before your son was enrolled in this class?
3. Were you initially in favor of your son's enrollment in this class immediately?
Did you read some literature about single gender education; talk to someone whose child was in a single gender class, or learn about this type of class in some other way?
4. What are the benefits, if any, for your son as a student in an all male class?
5. How does your son feel about this class? How has his behavior and academic performance changed, or not changed, since he became a part of this class?
6. How is this class different from a regular coeducational class?
7. Will you continue to support your son's enrollment in an all male class? Why?

Why not?

8. Do you have any other ideas concerning single gender classes or all male classes?
that you would like to share at this time?

APPENDIX C
INTERVIEW GUIDE
TEACHER

1. How long have you been a teacher? How long have you been teaching in a single gender class?
2. How did you become the teacher of this class?
3. How were you prepared to teach a single gender class?
4. Describe the environment in the all male classroom. Is it different from the environment in a coeducational classroom?
5. Describe the academic performance of your students.
6. Describe the difference in teaching strategies you use in an all male class and the difference, if any, in the strategies that you used in a coeducational setting.
7. Describe the feedback that you receive from administrators and parents about this class.
8. Will you continue to teach a single gender class?
9. Explain why you think that this class is more or less successful than a coeducational class.
10. Do you think that your students enjoy this class? Explain why or why not.

APPENDIX D
INTERVIEW GUIDE
PRINCIPAL

1. How long have you been an administrator at a school with any single gender classes?
2. Do you have a special interest in single gender classes?
3. Describe any professional development that you and the staff have been involved in to prepare for the single gender classes
4. Do you notice any differences in the emotional climate between the single gender classes and the coeducational classes?
5. Describe any differences in the academic performance between the all male classes and the coeducational classes.
6. Has there been an increase, decrease, or change in the discipline referrals in the all male classes? Can you explain?
7. Are the teachers in the all male classes enthusiastic about the single gender concept?
8. Did teachers choose to teach all male classes?
9. Describe any parent reactions that you have observed to the all male classes.

APPENDIX E

North Carolina State University

INFORMED CONSENT FORM for RESEARCH (Adult Consent)

This consent form is valid 2/18/2010 through 2/18/2011

Title of Study: AN EFFECTIVE MIDDLE SCHOOL LEARNING ENVIRONMENT:

THE MALE PERSPECTIVE

Principal Investigator: Sylvia Schmidt

About the Study

The public school system in the U. S. has come under intense scrutiny in recent years. Reports of inferior academic performance by U. S. students have made education a major topic of discussion for policymakers. On a national level, statistics indicate that 72% of female students and 65% of male students graduate from high school. Female students graduated at a higher rate in each major racial group than male students (Greene & Winters, 2006). The single gender class for males and females has recently gained popularity as strategy to address the needs of both male and female students.

Purpose of the Study

The purpose of this study is to examine the opinions and feelings of the male student in an all male classroom, the parents of these male students, the teachers of the all male classes, and the principal of the school about the aspects of this type of classroom that may or may not contribute to the academic success of the male student.

What will happen to subjects who take part in the study?

You will be part of a focus group. The purpose of the focus group is to listen and gather information. It is designed to help the researcher better understand how people feel and think about some issue. It is a group interview. Sylvia Schmidt will ask the group of parents some questions about the experiences of their children in the all male classroom. Parent focus groups will be made up of 15 individuals. Any participant may answer the questions. The session will be tape recorded. Those who participate will be involved for no more than 1 hour.

Risks to subjects who participate

No one who participates will be identified.

Benefits of the study

Parents will not receive any direct benefit from the study. Parents will have the opportunity to express their feelings and opinions about the experiences of their children in an all male classroom. The opinion of parents is important in understanding the effects of this type of classroom. Students will receive the opportunity to express their feelings and opinions about their all male classroom. Single gender classes are gaining popularity nationally. It is important to evaluate the impact of all male classes on academic performance. The data collected will directly benefit school boards and other policymakers who consider the implementation of single gender classes.

Confidentiality

All information from this study will be kept confidential. Parents who participate in the focus group will not be identified. Tape recordings will be stored in a locked file cabinet and

will be destroyed one month after the completion of the study (when the researcher successfully defends her dissertation). Notes will be kept on computer memory storage devices accessible only with passwords. You will not be asked to write your name on any materials associated with this study.

Compensation

You will not be offered any compensation for their participation in this study.

What if you have questions about this study?

If you have questions at any time about the study, you may contact me, Sylvia Schmidt, at 5000 Gerbing Circle, Fayetteville, NC 28306 or by phone 910 423 1712. My email address is schmidts@nc.rr.com.

What if you have questions about your rights as a research participant?

If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Deb Paxton, Regulatory Compliance Administrator, Box 7514, NCSU Campus (919/515-4514).

Consent to Participate

“I have read and understand the above information. I have received a copy of this form. I agree to participate in this study with the understanding that I may choose not to participate or to stop participating at any time without penalty or loss of benefits to which I am otherwise entitled.”

Parent’s Signature _____ **Date** _____

Investigator’s signature _____ **Date** _____

APPENDIX F

North Carolina State University

INFORMED CONSENT FORM for RESEARCH (Student Consent)

This consent form is valid 2/18/2010 through 2/18/2011

Title of Study: AN EFFECTIVE MIDDLE SCHOOL LEARNING ENVIRONMENT:

THE MALE PERSPECTIVE

Principal Investigator: Sylvia Schmidt

About the Study

The study that you are asked to participate in seeks to find out if there are benefits to an all male classroom at your grade level. As a researcher, I am interested in your opinions about this type of classroom. You will be given the opportunity to discuss your feelings about the classroom. I will ask you to be a part of a group interview or focus group. Your responses to questions will be tape recorded. I will observe in your classroom during the instructional day. My goal is to provide educational policymakers with information about an all male classroom at the middle school level.

Purpose of the Study

The purpose of this study is to examine the opinions and feelings of the male student in an all male classroom, the parents of these male students, the teachers of the all male classes, and the principal of the school about the aspects of this type of classroom that may or may not contribute to the academic success of the male student.

What will happen to subjects who take part in the study?

You will be asked to participate in the focus group interview and observed in your classroom for periods of 30-45 minutes during the instructional day. Each student focus group will be made up of 12 male students. Notes will be taken during the observations. I will ask your teachers to review class grades and test scores. I will not ask to look at any individual grades or test scores. You may examine all interview transcriptions and observation notes.

Risks to subjects who participate

No one who participates will be identified.

Benefits of the study

Students will not benefit directly from the study. They will receive the opportunity to express their feelings and opinions about the experiences of children in an all male classroom. The opinions of students are important in understanding how this type of classroom may address student needs. Single gender classes are gaining popularity nationally. It is important to evaluate the impact of all male classes on academic performance. The data collected will directly benefit school boards and other policymakers who consider the implementation of single gender classes.

Confidentiality

All information from this study will be kept confidential. No one who participates in this study will be identified. Tape recordings will be stored in a locked file cabinet and will be destroyed one month after the completion of the study (when the researcher successfully defends her dissertation). . Notes will be kept on computer memory storage devices

accessible only with passwords. You will not be asked to write your name on any materials associated with this study.

Compensation

You will not be offered any compensation for their participation in this study.

What if you have questions about this study?

If you have questions at any time about the study, you may contact me, Sylvia Schmidt, at 5000 Gerbing Circle, Fayetteville, NC 28306 or by phone 910 423 1712. My email address is schmidts@nc.rr.com.

What if you have questions about your rights as a research participant?

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Consent to Participate

“I have read and understand the above information. I have received a copy of this form. I agree to participate in this study with the understanding that I may choose not to participate or to stop participating at any time without penalty or loss of benefits to which I am otherwise entitled.”

Student Signature _____ **Date** _____

Investigator’s signature _____ **Date** _____

APPENDIX G

North Carolina State University

INFORMED CONSENT FORM for RESEARCH (Parental Consent)

This consent form is valid 2/18/2010 through 2/18/2011

Title of Study: AN EFFECTIVE MIDDLE SCHOOL LEARNING ENVIRONMENT:

THE MALE PERSPECTIVE

Principal Investigator: Sylvia Schmidt

About the Study

The public school system in the U. S. has come under intense scrutiny in recent years. Reports of inferior academic performance by U. S. students have made education a major topic of discussion for policymakers. On a national level, statistics indicate that 72% of female students and 65% of male students graduate from high school. Female students graduated at a higher rate in each major racial group than male students (Greene & Winters, 2006). The single gender class for males and females has recently gained popularity as strategy to address the needs of both male and female students.

Purpose of the Study

The purpose of this study is to examine the opinions and feelings of the male student in an all male classroom, the parents of these male students, the teachers of the all male classes, and the principal of the school about the aspects of this type of classroom that may or may not contribute to the academic success of the male student.

What will happen to students who take part in the study?

Your child will be part of a focus group. The purpose of the focus group is to listen and gather information. It is designed to help the researcher better understand how people feel and think about some issue. Each student focus group will be made up of 12 male students. Sylvia Schmidt will ask the group of male students some questions about the all male classroom. Any participant may answer the questions. The session will be tape recorded. The students who participate will be involved for no more than 1 hour.

Risks to students who participate

Student performance data will be reported in an aggregate form. Grade level end of grade test scores and grades will be examined. No student will be identified or linked to individual test scores or grades. Students who may have concerns about their names being associated with scores and grades will be assured that they will not be identified.

Benefits of the study

Students will not receive any direct benefit from the study. Students will have the opportunity to express their feelings and opinions about their all male classroom. Single gender classes are gaining popularity nationally. It is important to evaluate the impact of all male classes on academic performance. The data collected will directly benefit school boards and other policymakers who consider the implementation of single gender classes.

Confidentiality

All information from this study will be kept confidential. Students who participate in the focus group will not be identified. Tape recordings will be stored in a locked file cabinet and will be destroyed one month after the completion of the study (when the researcher

successfully defends her dissertation). . Notes will be kept on computer memory storage devices accessible only with passwords. Your child will not be asked to write his name on any materials associated with this study.

Compensation

Students will not be offered any compensation for their participation in this study.

What if you have questions about this study?

If you have questions at any time about the study, you may contact me, Sylvia Schmidt, at 5000 Gerbing Circle, Fayetteville, NC 28306 or by phone 910 423 1712. My email address is schmidts@nc.rr.com.

What if you have questions about your rights as a research participant?

If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Deb Paxton, Regulatory Compliance Administrator, Box 7514, NCSU Campus (919/515-4514).

Consent to Participate

“I have read and understand the above information. I have received a copy of this form. I agree to participate in this study with the understanding that I may choose not to participate or to stop participating at any time without penalty or loss of benefits to which I am otherwise entitled.”

Child’s Name _____ **Date** _____

Parent’s Signature _____ **Date** _____

Investigator’s signature _____ **Date** _____

APPENDIX H

North Carolina State University

INFORMED CONSENT FORM for RESEARCH (Teacher/Principal Consent)

This consent form is valid 2/18/2010 through 2/18/2011

Title of Study: AN EFFECTIVE MIDDLE SCHOOL LEARNING ENVIRONMENT:

THE MALE PERSPECTIVE

Principal Investigator: Sylvia Schmidt

About the Study

The public school system in the U. S. has come under intense scrutiny in recent years. Reports of inferior academic performance by U. S. students have made education a major topic of discussion for policymakers. On a national level, statistics indicate that 72% of female students and 65% of male students graduate from high school. Female students graduated at a higher rate in each major racial group than male students (Greene & Winters, 2006). The single gender class for males and females has recently gained popularity as strategy to address the needs of both male and female students.

Purpose of the Study

The purpose of this study is to examine the opinions and feelings of the male student in an all male classroom, the parents of these male students, the teachers of the all male classes, and the principal of the school about the aspects of this type of classroom that may or may not contribute to the academic success of the male student.

What will happen to subjects who take part in the study?

Teachers will be asked to participate in an interview and will be observed in your classroom for periods of 30-45 minutes during the instructional day. The interview will be tape recorded and scheduled at your convenience. Principals will be asked to participate in an interview. The interview will be tape recorded and scheduled at your convenience. Notes will be taken during the observations. You may review all interview transcriptions and observation notes.

Risks to subjects who participate

No one who participates will be identified.

Benefits of the study

Teachers and principals will receive no direct benefits from this study. Teachers and principals will receive the opportunity to express their feelings and opinions about the experiences of children in an all male classroom. The opinions of teachers and principals are important in understanding how this type of classroom may address student needs. The data collected may help schools, school boards, and other educational policymakers that seek innovative instructional strategies to address the needs of male students.

Confidentiality

All information from this study will be kept confidential. No one who participates in this study will be identified. Tape recordings will be stored in a locked file cabinet and will be destroyed one month after the completion of the study (when the researcher successfully defends her dissertation). . Notes will be kept on computer memory

storage devices accessible only with passwords. You will not be asked to write your name on any materials associated with this study.

Compensation

You will not be offered any compensation for their participation in this study.

What if you have questions about this study?

If you have questions at any time about the study, you may contact me, Sylvia Schmidt, at 5000 Gerbing Circle, Fayetteville, NC 28306 or by phone 910 423 1712. My email address is schmidts@nc.rr.com.

What if you have questions about your rights as a research participant?

If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Deb Paxton, Regulatory Compliance Administrator, Box 7514, NCSU Campus (919/515-4514).

Consent to Participate

“I have read and understand the above information. I have received a copy of this form. I agree to participate in this study with the understanding that I may choose not to participate or to stop participating at any time without penalty or loss of benefits to which I am otherwise entitled.”

Teacher/Principal

Signature _____ **Date** _____

Investigator’s signature _____ **Date** _____

APPENDIX I

LETTER TO PARENTS

May 30, 2010

Dear Parents:

I am a doctoral student in the Department of Educational Leadership and Policy Studies at North Carolina State University and principal at Montclair Elementary School in Fayetteville, N. C. As a part of my degree program, I am conducting a research study on the all male classrooms at the middle school. My research will involve observing and interviewing boys in a focus group format who are students in the all male classrooms. I will also request that the parents of the boys participate in a separate focus group interview. My study will examine the perspectives of the male students on their feelings and opinions about this type of classroom. I am interested in what aspects of this type of classroom may help their academic achievement. No risks will be involved for your child. Students will not be identified or linked to any test score or grade.

It is the policy of North Carolina State University for researchers to secure parental permission when student information is used for the purpose of research. If you agree, please sign the consent form that will allow your child to participate in the study. No penalty will occur as a result of participation or non-participation.

I appreciate your willingness to allow your child to be a part of this important area of research. It is my desire to find methods to address the academic needs of the male student. Please contact me with any concerns you may have 910 423 1712.

Sincerely,

Sylvia Schmidt, Principal

Montclair Elementary School

APPENDIX J

North Carolina State University

Institutional Review Board for the Use of Human Subjects in Research

SUBMISSION FOR NEW STUDIES

GENERAL INFORMATION

<p>1. Date Submitted:</p> <p>1a. Revised Date:</p>
<p style="text-align: center;">Title of Project:</p> <p style="text-align: center;"><i>AN EFFECTIVE MIDDLE SCHOOL LEARNING ENVIRONMENT: THE MALE PERSPECTIVE</i></p> <p>2.</p>
<p>3. Principal Investigator: <i>Sylvia Schmidt</i></p>
<p>4. Department: <i>Educational Leadership and Policy Studies</i></p>
<p>5. Campus Box Number: <i>None</i></p>
<p>6. Email: <i>sschmidt@ccs.k12.nc.us</i></p>
<p>7. Phone Number: <i>910 423 1712</i></p>
<p>8. Fax Number: <i>910 487 2179</i></p>
<p>9. Faculty Sponsor Name and Email Address if Student Submission: <i>Dr. Lance Fusarelli,</i> <i>lance_fusarelli@ncsu.edu</i></p>
<p>10. Source of Funding? (required information): <i>None</i></p>
<p>11. Is this research receiving federal funding?: <i>No</i></p>
<p>12. If Externally funded, include sponsor name and university account number: <i>None</i></p>
<p>13. RANK:</p> <p>Faculty</p> <p>Student: Undergraduate; Masters; or PhD</p>

Other (specify): Ed.D.

As the principal investigator, my signature testifies that I have read and understood the University Policy and Procedures for the Use of Human Subjects in Research. I assure the Committee that all procedures performed under this project will be conducted exactly as outlined in the Proposal Narrative and that any modification to this protocol will be submitted to the Committee in the form of an amendment for its approval prior to implementation.

Principal Investigator:

Sylvia W. Schmidt

_____*

*As the faculty sponsor, my signature testifies that I have reviewed this application thoroughly and will oversee the research in its entirety. I hereby acknowledge my role as the **principal investigator of record**.*

Faculty Sponsor:

Dr. Lance Fusarelli

_____*

***Electronic submissions to the IRB are considered signed via an electronic signature. For student submissions this means that the faculty sponsor has reviewed the proposal prior to it being submitted and is copied on the submission.**

Please complete this application and email as an attachment to: debra_paxton@ncsu.edu
 or send by mail to: Institutional Review Board, Box 7514, NCSU Campus (Administrative Services III). **Please include consent forms and other study documents with your application and submit as one document.**

For SPARCS office use only

Reviewer Decision (Expedited or Exempt Review)

Exempt	Approved	Approved pending modifications	Table
Expedited Review Category: 1	2 3	4 5 6 7 8a 8b 8c	9

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Reviewer Name	Signature	Date
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APPENDIX K

North Carolina State University

Institutional Review Board for the Use of Human Subjects in Research

GUIDELINES FOR A PROPOSAL NARRATIVE

In your narrative, address each of the topics outlined below. Every application for IRB review must contain a proposal narrative, and failure to follow these directions will result in delays in reviewing/processing the protocol.

A. INTRODUCTION

1. Briefly describe in lay language the purpose of the proposed research and why it is important.

The purpose of this study is to examine the opinions, feelings, and perceptions of male students, parents, teachers, and administrators that lead to academic achievement for the male student in all male classes at the middle school level. The study will explore the type of classroom environment that facilitates the best possible academic achievement for male students.

Male students are failing to achieve at the same level as female students. The rate of academic failure and school dropout is of growing concern. Lower academic performance of male students has been reported at national, state, and local levels. A great demand for accountability in public education exists in our nation. Schools are held responsible for the academic success of all students. Males will be more often diagnosed with learning disabilities and are placed in special education classes more often than girls. Male enrollment in colleges and universities has fallen behind females since the early 1980's (Sommers, 2000; Tyre, 2008). Some students become less motivated to do well academically during the middle school years (Tyre, 2008). I chose to study students during middle school because these years are an important transitional period.

I developed interview questions for the male students in grades 6, 7, and 8 parents, teachers, and principals. The guiding research question for this study is: What are the perceptions of male students in an all male classroom regarding the factors that affect their academic performance? Specific research questions include: Does participation in a single gender class affect the academic performance of middle school male students? If so, in what ways? What accounts for the impact of single gender classes on the academic performance of middle school male students? What types of learning strategies are utilized in teaching students in all male classes in middle school? What are the observations of parents, students, teachers and administrators regarding all male classes?

Data collection for this study will include individual and focus group interviews, participant observation, and document analysis. An interview is the "most ordinary and most extraordinary of ways you could

use to explore someone else's experiences" (Richards, 2005, p. 38). The principals, all male classroom teachers, parent focus groups, and student focus groups from two middle schools will be interviewed. The interview questions are open-ended to allow participants to express themselves.

This project will examine the responses of male students, their parents, teachers, and principals to determine those factors present in the classroom that may affect academic performance. Single gender education has recently become an alternative method used to address the specific needs of male and female students. It could contribute to the areas of middle and elementary education and teacher education in an effort to improve male academic performance.

2. If student research, indicate whether for a course, thesis, dissertation, or independent research.

Doctoral dissertation.

B. SUBJECT POPULATION

1. How many subjects will be involved in the research?

Approximately 72 students, 30 parents, 6 teachers, and two principals.

For this study, I have selected male students in all male classes at the middle school level, their parents, teachers of the all male classes, and principals of the middle schools that offer the all male classroom.

Approximately 72 students from the South Carolina Public School System in the Florence or Darlington District, their parents, 6 teachers of the all male classes, and principals of each school will be invited to participate in the study. South Carolina Public Schools has offered single gender classes for several years. Both districts offer all male classes in at least two middle schools

2. Describe how subjects will be recruited. Please provide the IRB with any recruitment materials that will be used.

The superintendent will be contacted for permission to conduct the research in the school district. The principals at schools with single gender classes will be contacted to obtain permission to collect data in their schools for the study. The researcher will contact principals to discuss the project. If the principal agrees, I will request teacher email addresses to contact them directly to explain the study. It may be that there is only one all male class at each grade level. Under NCLB guidelines, coed classes must be made available as a choice at each grade level that includes all male and all female classes. In that case, there may not be a choice of classes to study. It may be that only one class of all male students exists at each grade level. Every attempt will be made to find schools that offer multiple all male classes at the same grade level. The researcher will randomly choose teachers of classes at the sixth, seventh, and eighth grade levels at schools with multiple all male classes and contact them by email to invite them to participate in the study.

Emails of copies of consent forms and protocols will be sent to principals and teachers for review.

I will email each teacher to ask them to participate. Teachers who agree to participate will be asked to sign the consent form before student consent forms are distributed.

I will visit classrooms of teachers who agree to participate to explain the project to students and invite them to take part in the study. Invitations to students and parents to participate in the study will be distributed to students. I will ask them to take the invitations to participate home for parent review.

Consent forms will be attached to the invitation. Parents and students will be asked to sign and return to the classroom teacher. The date for the parent focus group will be scheduled on a PTA /PTO meeting date. The date for the focus group interview will be included on the adult consent form for parents.

I will provide a folder for each teacher to collect consent forms. I will return to the school to collect the forms that are returned.

Focus groups of 12 students, focus groups of 15 parents, and individual interviews will take place at each school that participates in the study.

3. List specific eligibility requirements for subjects (or describe screening procedures), including those criteria that would exclude otherwise acceptable subjects.

Student participants should be male students enrolled in an all male class at each middle school. I will be looking at areas that have middle schools with single gender classes. Every effort will be made to find schools that offer multiple all male classes at each grade level. No one within each class who chooses to participate will be excluded. Parents of students in these classes will be asked to participate. All parents who choose to participate will be included. Teachers and administrators should be employed at one of the middle schools in order to participate in the study.

4. Explain any sampling procedure that might exclude specific populations.

The method of recruiting all male students to participate in the study will be to sample from schools with single gender classes. Every effort will be made to select schools that offer multiple all male classes at each grade level. The public school system in South Carolina includes approximately two hundred schools with single gender classes. The 2008 State Report Card indicated that in English Language Arts 27.3% of male students were proficient and 35% of females were proficient. Math results indicated that 20% of male students were proficient and 21.2% of females were proficient. The state met 27 of 37 AYP goals. The academic performance of male students is lower than females according to statewide statistics. The state had failed to meet AYP goals. Schools in this system should provide adequate information for the study.

5. Disclose any relationship between researcher and subjects - such as, teacher/student; employer/employee.

No relationship exists between researcher and any of the subjects.

6. Check any vulnerable populations included in study:

minors (under age 18) - if so, have you included a line on the consent form for the

parent/guardian signature

fetuses

pregnant women

persons with mental, psychiatric or emotional disabilities

persons with physical disabilities

economically or educationally disadvantaged

prisoners

elderly

students from a class taught by principal investigator

other vulnerable population.

7. If any of the above are used, state the necessity for doing so. Please indicate the approximate age range of the minors to be involved.

<p>It is necessary to involve minors due to the age of middle school students. The study focuses on students in the age range 11-14</p>

C. PROCEDURES TO BE FOLLOWED

In lay language, describe completely all procedures to be followed in the course of the experimentation. Provide sufficient detail so that the Committee is able to assess potential risks to human subjects. In order for the IRB to completely understand the experience of the subjects in your project, please provide a detailed outline of everything subjects will experience as a result of participating in your project. Please be specific and include information on all aspects of the

research, through subject recruitment and ending when the subject's role in the project is complete. All descriptions should include the informed consent process, interactions between the subjects and the researcher, and any tasks, tests, etc. that involve subjects. If the project involves more than one group of subjects (e.g. teachers and students, employees and supervisors), please make sure to provide descriptions for each subject group.

Sample-

I used the National Association for Single Sex Public Education website to find school systems that offer single gender classes. Approximately 82 middle schools in the South Carolina Public School System offer single gender classes. I plan to target middle schools with single gender classes at each grade level. Larger schools should have a larger number of classes at each grade level. I plan to work with male students at each grade level at two middle schools.

Recruitment-

I will contact principals using the introductory letter attached. I will request written permission to recruit students and teachers using the attached consent forms. The school website will be used to contact teachers through email

and then by phone. If the teachers agree to participate, I will request that they sign the consent form before scheduling a visit to recruit students and parents.

I will provide a folder for consent forms. I will ask that forms be returned within one week. I will travel to the schools to gather the folders.

Data Collection

The focus group will be the main form of data collection. Students will form focus groups and parents will form the other focus groups. Teachers and principals will be interviewed individually. Interviews will be audio taped and transcribed. Tape recordings will be destroyed at the end of the project.

I will review end of grade test scores by grade level over a two year period to compare performance.

The goal of this study is to provide a rich thick description of the factors that are present when middle school male students feel or do not feel academically successful. This research will rely as much as possible on the participant's view of the situation.

1. How much time will be required of each subject?

1hour.

D. POTENTIAL RISKS

- 1 State the potential risks (physical, psychological, financial, social, legal or other) connected with the proposed procedures and explain the steps taken to minimize these risks.

This study does not present any potential physical, social, or legal risks to the students who participate. The researcher will collect information about class performance on standardized tests will be reported in aggregate. It will be used to indicate whether or not students do well in the class and indicate if academic performance has improved from the previous year. Some students may have concerns about their names being associated with scores and grades. I will assure them that they will not be identified or linked to scores or grades. Anyone who wishes to answer a question may do so. Some students and parents may not want to answer a question in the presence of others. I will assure them that their names will not be associated with their response. A question concerning behavior refers to the type of atmosphere that exists in the classroom that the student considers the best for learning. I will explain that we are not going to discuss individual behavior issues that might result in some kind of punishment.

2. Will there be a request for information that subjects might consider to be personal or sensitive (e.g. private behavior, economic status, sexual issues, religious beliefs, or other matters that if made public might impair their self-esteem or reputation or could reasonably place the subjects at risk of criminal or civil liability)?

No.

- a. If yes, please describe and explain the steps taken to minimize these risks.

- b. Could any of the study procedures produce stress or anxiety, or be considered offensive, threatening, or degrading? If yes, please describe why they are important and what arrangements have been made for handling an emotional reaction from the subject.

No.

3. How will data be recorded and stored?

Data from focus group tape recorded interviews and individual interviews will be stored on audio tape recording to be held in the possession of the principal investigator only. Identities of focus group participants will not be revealed when tape recordings are transcribed. Tapes from each focus group will be transcribed in order to interpret meaning from the exact words used by participants. Identities of participants will not be revealed. Audio tape recordings will be stored in a locked file cabinet. Data from field notes and interviews will be stored on computer memory storage devices accessible only through passwords. The data from all sources will be destroyed one month after the study is complete, or more specifically, one month after the researcher has obtained the doctorate degree.

- a. How will identifiers be used in study notes and other materials?

Parents will participate in a focus group. Responses will be tape recorded. Teachers of all male classes will be interviewed and observed during instruction. Principals will be interviewed. No individual identities will be revealed. Parent responses will be identified as parent response. Teachers and principals will be referred to as teacher of an all male classroom and principal of a middle school that offers all male classrooms.

- b. How will reports will be written, in aggregate terms, or will individual responses be described?

Individual responses will be recorded and grouped into categories by response.

4. If audio or videotaping is done how will the tapes be stored and how/when will the tapes be destroyed at the conclusion of the study.

Audio tape recordings and computer memory storage devices will be kept in the personal possession of researcher at all times. The tape recordings will be shredded one month after the conclusion of the study.

5. Is there any deception of the human subjects involved in this study? If yes, please describe why it is necessary and describe the debriefing procedures that have been arranged.

None.

E. POTENTIAL BENEFITS

This does not include any form of compensation for participation.

1. What, if any, direct benefit is to be gained by the subject? If no direct benefit is expected, but indirect benefit may be expected (knowledge may be gained that could help others), please explain.

Students and parents who agree to participate will receive any direct benefits from the study. Benefits to male students from the information gathered in this study may be helpful to schools that seek to improve the instructional strategies for students. The need for research is based on statistics that indicate that male students do not perform as well as female students in school. The dropout rate is higher for males at the national and state levels. Any insight gained from students, parents, teachers, and principals may provide useful information for educators who see the need for support for struggling male students. Benefits may be realized by schools, school boards, and other policymakers that seek innovative instructional strategies to address the needs of male students.

Each group interviewed will be provided the opportunity to express their feelings about the all male classroom. Each group may realize that their perspectives are valued by researchers who seek to improve instructional methods for all students.

F. COMPENSATION

Please keep in mind that the logistics of providing compensation to your subjects (e.g., if your business office requires names of subjects who received compensation) may compromise anonymity or complicate confidentiality protections. If, while arranging for subject compensation, you must make changes to the anonymity or confidentiality provisions for your research, you must contact the IRB office prior to implementing those changes.

1. Describe compensation

Subjects will receive no compensation.

1. Explain compensation provisions if the subject withdraws prior to completion of the study.

N/A

1. If class credit will be given, list the amount and alternative ways to earn the same amount of credit.

N/A

G COLLABORATORS

1. If you anticipate that additional investigators (other than those named on **Cover Page**) may be involved in this research, list them here indicating their institution, department and phone number.

None.

2. Will anyone besides the PI or the research team have access to the data (including completed surveys) from the moment they are collected until they are destroyed.

No.

H. CONFLICT OF INTEREST

1. Do you have a significant financial interest or other conflict of interest in the sponsor of this project? No

2. Does your current conflicts of interest management plan include this relationship and is it being properly followed? NA

I. ADDITIONAL INFORMATION

1. If a questionnaire, survey or interview instrument is to be used, attach a copy to this proposal.

2. Attach a copy of the informed consent form to this proposal.

3. Please provide any additional materials that may aid the IRB in making its decision.

J. HUMAN SUBJECT ETHICS TRAINING

*Please consider taking the Collaborative Institutional Training Initiative (CITI), a free, comprehensive ethics training program for researchers conducting research with human subjects.

Just click on the underlined link.

APPENDIX L

IRB Protocol

Purpose of the Study: The purpose of this study is to gain perspectives of male students, their parents, teachers, and principals about the effectiveness of the all male classroom at the middle school. The literature suggests that some students may perform at higher levels academically when separated into single gender classes. Thurgood Marshall Elementary School in Seattle, Washington (Schachter, 2003) and Dent Middle School in Columbia, South Carolina (Chadwell, 2007) have reported increased achievement for students in single gender classes. A number of studies have examined the concept of single gender classes. Few have studied the effects of the all male classroom.

Focus group interview questions and individual teacher and principal interview questions were developed using the guiding questions: What are the perceptions of male students, their parents, teachers, and principals about the effectiveness of the all male classroom? Do male students think that they are more academically successful in an all male classroom? Do their parents think that their sons are more academically successful in all male classroom? Why do parents choose an all male setting for their sons? How do teachers view this type of class? What are the differences in teaching all male and coeducational classes? How do principals view the all male classroom?

Type of Data Requested

From 7th, and 8th grade male students: One audio taped 60 minute focus group interview using an interview guide. The principal investigator will act as facilitator. The interview will take place in the school media center or multipurpose room at the school.

From parents of 7th, and 8th grade male students: One audio taped 60 minute focus group interview using an interview guide. The principal investigator will act as facilitator. The interview will take place in the school media center or multipurpose room at the school. The parent and student focus groups will be interviewed separately.

From the teacher: One audio taped 30 minute structured interview using an interview guide. The principal will act as interviewer. The interview will take place in the teacher's classroom or other quiet area at the school.

From the principal: One audio taped 30 minute structured interview using an interview guide. The principal will act as interviewer. The interview will take place in the principal's office or other quiet area at the school.

From the school: Male student progress report grades and state test scores for the previous and current school years. Parent permission must be obtained.

Research Risks

I do not anticipate any physical, social, or legal risks to students, parents, teachers, or principals who choose to participate in this study. Some students and parents may be concerned that individual test scores and grades will be linked to a certain individual. The students and parents will be assured that the data will be reported collectively, and only the researcher will have access to the information. School identification numbers will be destroyed when numbers created for this study are assigned.

Potential Benefits

Participation in this project could benefit students and parents by allowing them to discuss their feelings and opinions about the all male classroom. The principal investigator is very

interested in their ideas about this type of classroom and any advantages that have been realized. They will contribute the understanding of other educators who may seek to implement single gender classrooms.

Schools that seek innovative methods to address the needs of the male student will benefit from findings of this study. This project will contribute to the overall understanding of single gender education. Qualitative data will describe the perceptions of the major stakeholders in the schools. Educators, members of local boards of education, and administrators who are considering adding single gender classrooms to the traditional coeducational classroom structure that exists in most schools will have the advantage of understanding how those involved feel about this concept.

APPENDIX M

March 4, 2010

Mr. Craig Washington

Southside Middle School

200E. Howe Springs Road

Florence, SC 29501

Dear Mr. Washington,

I am a doctoral student in the Department of Educational Leadership and Policy Studies at North Carolina State University, Raleigh NC. It is my goal to conduct a case study of the all male classrooms at Ronald McNair Middle School. It is necessary that I obtain your written permission to begin the study. I request permission to examine grades and annual state scores of these students with parent consent. All personally identifiable private information will be held in confidence. Research methods will include student and parent focus groups, teacher and principal interviews, and classroom observation.

Grades and test scores will not be linked to individual students when findings are reported.

No harm, discomforts, inconvenience or risks will be associated with this study.

Participation will be voluntary.

The intended benefits of this study will be to provide educators with valuable information to schools that seek to raise the level of academic performance for male students.

This information is of great interest to me for Cumberland County Schools where I am employed as principal. If you have any questions or concerns regarding this proposed research, please contact me at 910 868 5124 (Montclair Elementary School),

910 432 1712 (Home), 910 476 1040 (personal cell), or you may contact Deb Paxton, Regulatory Compliance Administrator, Box 7514, NCSU Campus (919/515-4514). Thank you for your consideration.

Sincerely,

Sylvia Schmidt

Doctoral Candidate

North Carolina State University

APPENDIX N

Montclair Elementary School

555 Glensford Drive

Fayetteville, NC 28314

September 10, 2010

Dear Principal Watkins,

I am a doctoral student at NC State University working on a dissertation that focuses on the male perspective of the all male classroom at middle school. I understand from David Chadwell that there is a single gender program at Whittemore Park Middle School. The study has been approved by the Institutional Review Board at NC State. I would like to conduct a focus group interview of seventh and eighth grade male students, a focus group of parents, individual interviews with their teachers, and one administrator. The interviews would take about thirty minutes of an individual who agrees to participate.

Some classroom observation is involved. I would ask permission from the teachers who are interviewed to allow me to observe in their classrooms.

I will be happy to forward any permission forms or interview guides that you would like to review.

Part of the study has been conducted at Southside Middle School in Florence, SC.

I understand that you are very busy. If you have a lead teacher in the single gender program that I could contact, I would be happy to do that.

Sincerely,

Sylvia Schmidt, Principal