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by

Nicholas G. Morgan

May, 2011

THE EFFECTS OF SINGLE GENDER SCHOOLS ON BOYS' SELF-ESTEEM AND  
ACADEMIC CONFIDENCE

A Doctoral Thesis Presented to the  
Faculty of the College of Education  
University of Houston

In Partial Fulfillment  
of the Requirements for the Degree

Doctor of Education  
in Professional Leadership

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Approved by Dissertation Committee:

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Dr. Dov Liberman, Chairperson

---

Dr. Angus MacNeil, Committee Member

---

Dr. Steve Busch, Committee Member

---

Dr. Nancy Taylor, Committee Member

---

Dr. Robert K. Wimpelberg, Dean  
College of Education

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#### ABSTRACT

Boys are falling behind academically in many schools in the United States. Over that past thirty years, girls have surpassed males in academic achievement in all subject areas, including those traditionally thought of as easier for boys (mathematics and science). This achievement shift has been linked to teaching styles and practices in schools today, which often favor rely more heavily on female learning styles (Meyer, 2008). However, single gender schools are combating this sudden lack of academic achievement by teaching boys with techniques and practices thought to be more appropriate for boys learning styles and development. These schools are succeeding with boys on academic scales, but little research has been done on these boys' self-esteem and academic confidence. Boys in mixed gender schools experiencing constant failure will continue a downward spiral of self-esteem and academic performance. Self-esteem has been widely accepted to be connected with academic success and they have a reciprocal relationship (Hamachek, 1995; Pajares & Schunk, 2001). This study contends that boys in a single gender campus, which focuses on appropriate teaching strategies and practices, will develop higher self-esteem in boys and thus find higher academic achievement.

This study included 58 sixth, seventh, and eighth grade boys from two different Catholic parochial schools. The first school is an all-boy single gender campus, in which 39 students participated. The second school is a mixed gender campus with 19 participants. The participants' self-esteem will be measured with the *Coopersmith Self-*

*Esteem Inventory*, which breaks self-esteem into four subgroups. These subgroups include attitude towards self in social, academic, family, and personal areas of experience.

Results of this study do not support the hypotheses that single gender schools would facilitate higher self-esteem in boys. No significant statistical differences were found within the four subscales or overall results. Furthermore, in this study, neither the single gender school nor the mixed gender school showed distinct advantages over the other regarding developing self-esteem. Limitations of this study include the relatively small sample size, the number of years that participants attended the school, only one gender being studied, and the additional family connections within parochial schools.

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## CHAPTER ONE - INTRODUCTION

As a middle school boy growing up in public schools, I became acutely aware of peer pressure. The pressure to be popular in the eyes of my peers was at times overwhelming and highly distracting to my daily life. I was often more concerned about saying or doing the right things to get attention from my peers than focusing on my studies and ensuring that I understood the day's objectives. I attended a large middle school (student body of approximately 800) in the suburbs of Houston, Texas. It was an average, mixed-gender public school in which being athletic and/or causing disruptions in class brought popularity among the student body. However, the students causing disruptions were often met with swift disciplinary action from teachers and parents. The different punishments that I experienced (ranging from detention to grounding at home) deterred specific behaviors, and so I simply found other ways to draw attention to myself in order to gain popularity or try to fit in with my peers, both male and female.

When I graduated from middle school, my parents enrolled me in a single gender, private high school. My family had a long history with this school, so I was not surprised to find myself there. I was moving into a private school where I knew no other students while they had known each other for years from the private middle schools. Although it was a difficult transition for me, by the end of my sophomore year I was glad to be there. At the time, I could not put my finger on it, but I knew something was different about this school. The academics were a bit more challenging, and I was not as concerned with the opposite sex throughout the day, but there was something else. It was a different atmosphere than I was used to at my former mixed gender school; an environment better suited to me, a teenage boy, rather than forcing me into learning situations in which I did

not gain much nor enjoy. Rather than group work, I always had the option to work by myself, which I pursued regularly. I also experienced healthy competitions within the classroom, which drew my attention and created a desire within myself to perform better. This school made feel more confident, while at the same time helped me build social relationships within my family and form friendships.

Years later, I graduated from college with my undergraduate degree in early childhood education and began teaching first grade at an elementary school in Spring, Texas. The school was in a low socio-economic area with a high majority of our students receiving free and reduced price lunch. From my first days of teaching, I experienced large contrasts within my classroom. In general, the girls in my room were the “academics” and seemed to focus on doing the best they could and pleasing the teacher through their obedient behavior. On the other hand, a majority of the boys in the class were often the sources of disruptions and behavior issues. While not all the boys caused the disruptions, the individuals who did cause these on a regular basis were usually males. In addition, many seemed to experience problems with conflict resolution, following both school and classroom rules, and self-identity. The boys who often disrupted the learning of the class seemed to be the more popular or well-known students in the school. I spent five years teaching at this school and saw the same pattern repeat itself throughout my tenure there.

Between my fifth and sixth year of teaching I was approached with the opportunity to teach at an all-male private school. After much thought and deliberation, I decided that change would be good for me at that time. The next year I began teaching first grade in that all boys’ school. I was shocked by the differences in the two schools’

contexts. These boys were excited to attend school, and many of them commented throughout the year on how much they enjoyed their learning. In addition, they thoroughly enjoyed reading, and teachers often had trouble getting them to put their books down, rather than struggling with them to pick a book up. Initially, I thought it might have just been my particular class, but my next year's class was just as eager. I realized that this all boy school, just as my high school, was different; it had a positive atmosphere that supported male learning within the classroom and encouraged boys to develop appropriately. However, these two schools with special atmospheres were not at the same levels, one was a high school and the other was an elementary/junior high, and although there were many differences, the similarity was abundantly obvious. Both were single-gender schools for boys.

Recently a colleague put into words what I had struggled to simplify enough for an explanation. A new student had recently transferred to the all boy school where I currently work. This student had a few problems adjusting to the new environment. He had come from a mixed gender public school and was struggling to understand the social and behavioral norms established within this single gender school. My colleague described it to this student's mother as a school where within the eyes of the other boys, "it is generally looked down upon to be in trouble". She continued to say that boys at this school "...generally respect boys who are working hard in school..." (L. Stallings, personal communication, September 20, 2010). Since school has started and we have worked with the mother and the boy, I have noticed that he has begun to abandon his previous habits and attention grabbing methods. He has begun to strive for academic achievement and direct his attention toward his schoolwork rather than causing



disruptions in class. From observing this boys' change and my own personal experiences, I have to ask myself: What is different in these schools that sets them apart from mixed gender schools? What made this school better for this student, an average boy? Why did I feel more comfortable as a student in an all boy setting and seem to blossom in that environment?

### Background and Context

In fact, in the United States, males are struggling with school (Twist, 2009). In our country, a higher percentage of males drop out of school as compared to females in almost all categories of race (U. S. Department of Education, n.d.). As of 2008, the overall dropout rate for males, aged sixteen to twenty-four was 8.5%, while the respective female dropout rate in 2008 was 7.5%. White and Hispanic males are also more likely to drop out than their female counterparts (U. S. Department of Education, n.d.). In mixed gender classrooms and schools, boys have been found more likely to be labeled with learning or behavior problems, fail more classes, have a higher retention rate, and are more likely to drop out of school (Sadker, 1995). Simply put, in our educational system, boys are in need of more support than they are currently receiving.

However, this has not always been the case. Historically, women have had fewer rights and lower social status than men have (Giele, 2010). The smaller stature of typical women compared to men helped define the more physically demanding jobs as being "man jobs" (Giele, 2010). Overtime, these physical requirements of certain jobs became tradition. During the early history of the United States, women were considered the

property of their husbands or fathers (Women's International Center, 1995). In addition, they were considered intellectually inferior to men (Women's International Center, 1995). The traditional role of the woman was as the housekeeper, and daughters often learned the necessary skills by helping and/or watching their mother (Women's International Center, 1995). During the late 19<sup>th</sup> century, early 20<sup>th</sup> century, and again during World War II, women began working outside the home on a much larger scale. Furthermore, in 1920, the United States adopted the 19<sup>th</sup> constitutional amendment, which gave female citizens the right to vote (Giele, 2010). In the wake of this, the feminist movement in the United States remained idle for many years.

In the 1960's, the feminist movement enjoyed a rebirth. Participating females were again questioning the traditional role of women in society. They rebelled against the "housewife" role and fought against discrimination in the workplace (Giele, 2010). Many women's organizations were formed which focused on specific issues or injustices facing women. In particular, The Women's Equity Action League was formed in 1968 to monitor educational programs and detect discrepancies. This organization focused on what they called the "chilly classroom climate" in which girls were not encouraged to participate or succeed in schools (Giele, 2010). As recently as the 1990's, a study conducted by The American Association of University Women (AAUW) again focused on girls being discriminated against in school (Meyer, 2008). The AAUW study also found that girls were reluctant to participate in class discussions, exhibited low self-esteem, and a low interest in science and math.

However, since 1968, women have made countless strides in education, and great efforts were consciously made to make schools more girl friendly (Meyer, 2008). Some

argue that schools have overcompensated for this problem and have become “anti-boy” (Meyer, 2008). According to these studies, boys have become the misfits and are often prescribed drugs or interventions to change their behavior. Our current school structure in the United States and around the world is not motivating boys well enough to produce sufficient academic results. A reading assessment (Programme for International Student Assessment) performed in 2000, which studied 15 year olds in thirty-two countries showed that females outperforming males in all participating countries, including the United States. Another study (Progress in International Reading Literacy Study) performed in 2001 and 2006 showed females outperforming males in all 35 countries and again in 38 of the 40 participating countries respectively (Twist, 2009). Furthermore, Kush and Watkins (1996) found that as boys get older their dislike for reading (academic and recreational) increases with age, while in females the attitude towards reading is more stable over time.

It is widely accepted that females perform at a higher level than males in reading and writing, while males perform better academically in the areas of science and math. In 2005, the 8<sup>th</sup> grade performance on the National Assessment of Educational Progress confirms this phenomenon (Meyer, 2008; Else-Quest, et al., 2010). On the other hand, in 2003, 2005, and 2006 educational attainment was examined using three categories. The categories included high school graduation rate, 18 – 24 year olds enrolled in college, and 25 – 29 year old college graduates with at least a bachelor’s degree. Females yielded a higher percentage of attainment in all three categories. More recently, females have achieved at such high levels that they are now leaving boys behind in all academic achievement areas (Twist, 2009). Therefore, females are reaching and attaining higher

levels of educational achievement almost across the board, while males are dropping out of school at higher rates, being prescribed drugs at outrageous rates, and attending college in lower numbers (Sax, 2007).

Not surprisingly, researchers have found that students with a positive self-esteem or self-concept achieve higher academic success than students with lower self-esteem (Hamachek, 1995; Pajares & Schunk, 2001). This, in turn, creates a reciprocal cycle of high self-concept being reaffirmed by academic success. Therefore, it is logical to conclude that students with low self-esteem experience the opposite effect. They experience academic failure, which creates low self-esteem, and feeds more academic failure. As the academic achievement continues to favor the girls in schools more and more, the self-esteem of the boys begins to fall due to the constant failure and underperformance.

Even with these clear indicators of differences in performance between males and females, administrators, schools, and teachers attempt to teach males and females with the same strategies and equal expectations. Schools are not focusing on creating a more boy-friendly classroom, particularly when female teachers dominate the profession. In 2005, eight of every ten teachers were female (National Center for Education Information, 2005). School administrators are focusing on racial subgroups or economic subgroups, but tend to ignore the inherent developmental differences of the two genders and gender learning styles. Of course, equality has been an issue, and rightly so, since the civil rights movement of the 1960s. However, to treat people equally does not necessarily mean to treat them in the exact same way (Daniels et al., 2001). Equal treatment should refer to equal in the sense of “equally good and appropriate” (Evans,

1995, p.3). Thus, to treat males and females equally should mean that we give each individual the support and direction he needs to be equally successful. Just as we give extra support to students with special needs to enable their success, we should offer appropriate support for each gender and take into account their differences.

### Problem Statement

Research indicates that academic achievement and self-esteem are closely connected. The higher a student's self-esteem, the more academically successful that student will be. With girls consistently outperforming boys in school, the teaching strategies and classroom dynamics of mixed gender schooling has come into question. However, there is little research on the link between single gender schooling and the self-esteem of boys. If this link exists, single gender educational settings may very well be an answer to the recent struggles of boys in the classroom.

### Purpose

The purpose of this exploratory research study was to determine if differences exist in academic confidence and self-esteem in single gender and mixed gender schools. Single gender schools have been widely researched with positive results found for boys (Mael, 1998; Friend, 2006; & Gibb et. al., 2008). However, most of the research has been focused on academic progress and achievement. This study will examine how

single gender schools affect boys' self-esteem. Guiding the inquiry will be this set of hypotheses:

1. Middle school boys attending the single gender school will have significantly higher attitudes towards self in overall areas of experience.
2. Middle school boys attending the single gender school will have significantly higher attitudes towards self in social areas of experience.
3. Middle school boys attending the single gender school will have significantly higher attitudes towards self in academic areas of experience.
4. Middle school boys attending the single gender school will have significantly higher attitudes towards self in family areas of experience.
5. Middle school boys attending the single gender school will have significantly higher attitudes towards self in personal areas of experience.

### Research Approach

With the approval of the University's Committee for the Protection of Human Subjects, the investigator studied the self-esteem views of fifty-eight middle school boys at two different campuses. One campus was a single gender campus for boys, while the other was a mixed gender campus. These students had attended their school for at least three years and voluntarily participated in the study.

The hypotheses were explored through the *Coopersmith Self-Esteem Inventories (SEI)* (Coopersmith, 2002) which was used to measure self-esteem and academic confidence. This fifty-eight item questionnaire explored the self-perceptions of the

participants through four subscales. Survey items are categorized into these subscales, which are social, academic, family, and personal areas of self-esteem. In addition, the *SEI* incorporates an eight-question lie scale within its survey to verify the responses. The participants were assigned survey numbers so their identity was kept confidential by the investigator.

### Assumptions

Based on the investigator's background and experience in education, two main assumptions were made in this study. First, all other factors affecting self-esteem are equal between the two schools being studied. Self-esteem is highly complex and has many factors affecting its development, such as family history, parenting style, and previous success or failures. This study does not try to simplify the causes of self-esteem down to school organization. However, in an attempt to better understand the complexities of middle school boys, this study is focusing on this single aspect (school organization), which may affect self-esteem. With that being said, this study will consider all other aspects effecting self-esteem to be equal between the two schools and individual students.

Secondly, the study assumes the self-reporting conducted in this study by the participants is accurate and not fluctuating. While the survey includes a lie scale, and has high reliability ratings and test re-test scores, an individual's self-reporting may not always be accurate and may fluctuate depending on the day or time that the survey is

being completed. This study assumes the survey results are accurate and perpetual for each individual.

### Rationale and Significance

The rationale for this study originates from the investigator's desire to identify the strengths of single gender schools as seen from personal experience. Furthermore, the increase in boys not completing or achieving in schools today further promotes this desire. Boys are falling behind at alarming rates and this study hopes to discover or add to the understanding of the complexities with this issue. The males in schools today may need teaching strategies and practices that promote their learning styles more consistently than those we are currently using in mixed gender schools. Providing appropriate teaching strategies and practices for boys would promote academic confidence, self-esteem, and academic achievement.

Increased understanding of self-esteem issues with connection to school organization and practices may not only reduce the number of dropouts, but improve the academic confidence and achievement of both genders. Recognizing and focusing on the learning styles of each gender may ultimately increase the success of both genders rather than one constantly being left behind.



### Definitions of Key Terminology Used in This Study

Mixed Gender – An educational setting (either a school or classroom) in which students of both genders are present.

*SEI* – An acronym that refers to the *Coopersmith Self-Esteem Inventories*. The *SEI* is a fifty-eight item survey used to measure self-esteem.

Single Gender – An educational setting (either a school or classroom) in which students of only one gender are present.

## CHAPTER TWO – REVIEW OF THE LITERATURE

### Overview

The purpose of this exploratory study was to examine middle school boys' self-esteem and academic confidence in a single gender school as compared to a mixed gender school. Fifty-eight students were given a survey, which focused on four main areas of self-esteem, social, academic, family, and personal. To conduct this study it was necessary to complete a thorough review of the literature. This review continued through the data collection, the data analysis, and the synthesis phases of the research.

This review explores five aspects affecting the self-esteem of a middle school boy as they relate to school, although the investigator recognizes that other aspects affecting self-esteem exist. This study focused on five categories, which consist of: (a) the importance of self-esteem, (b) single gender schools, (c) male and female developmental differences, (d) male and female learning differences, and (d) Carl Rogers' "Core Conditions." A review of the importance of self-esteem and single gender schools provides the basis for the study and explains the impact self-esteem has on academic achievement. In addition, an assessment regarding how single gender schools may influence self-esteem is provided. A summary of male and female developmental and learning differences provides the groundwork to understand the differences in gender learning styles and development. Furthermore, a review of the learning environments, in which males typically thrive, is presented to define possible strengths to single gender schools. The final section describes Carl Rogers' "Core Conditions", which examines the

necessary requirements students need to create relationships and thus improve themselves through connections to others.

To conduct this review of literature, the researcher used a variety of resources including books, dissertations, internet resources, professional journals, databases, and periodicals. These sources were accessed through ERIC, Academic Search Complete, PsycINFO, PsycARTICLES, and Psychology and Behavioral Sciences Collection. No specific time frame was used to limit the search results.

Throughout the review of literature, the investigator summarized key findings and relevant details. Each section of the literature review closes with a synthesis that focuses on the research implications. The summary at the end of the chapter reflects the investigator's understanding of the literature and how the material contributes to the ongoing development of the research.

### Importance of self-esteem

Self-esteem is a very complex concept that contributes to the uniqueness of human beings. It has been widely accepted that self-esteem or self-concept has an effect on many aspects of life including academic performance (Hamachek, 1995; Pajares & Schunk, 2001). A student with low self-esteem or a low self-concept is much more likely to struggle academically. On the other hand, a student with high self-esteem has been found to be much more likely to be successful and to achieve academically (Hamachek, 1995; Pajares & Schunk, 2001). First, a clear definition of self-esteem or self-concept must be established. This study will refer to self-esteem as the "evaluation a person

makes and customarily maintains with regard to himself or herself” (Coopersmith, 2002, p.5). This evaluation is expressed as an approval or disapproval and shows the level to which individuals believe themselves to be capable, significant, successful, and worthy (Coopersmith, 2002). Self-esteem has been further defined as an individual’s representation of all of his self-knowledge (James, 1981). As Combs (1962) put it, an individual’s self-esteem is “what an individual believes he is” (p. 62).

Bandura (1977) refers to self-efficacy as the degree to which one expects he will successfully perform a desired task. When a student obtains feedback from an action or task he has not previously performed, he is forming his opinion or judgment of his own abilities at that task. This feedback comes from many individuals including teachers, parents, and peers among others. On the other hand, if he has already performed this task, the reaction or feedback he receives from others confirms or weakens those judgments he has made about himself. In addition, Bandura (1977) continues to argue that this judgment of the individual’s own abilities is instrumental in his decision making and in the goals he pursues in the future. The judgment one makes about his abilities or self is what will be defined as self-esteem in this study.

Within that definition of self-esteem, three features need to be explored further. First, Coopersmith (2002) notes that this definition of self-esteem remains constant for multiple years, which means that this self-judgment is very obstinate and may take many years for an individual to improve or lower their self-esteem. This has been tested and confirmed through Coopersmith (2002) by using the School Form of the Self-Esteem Inventory with the reliability scoring .70 on a three-year interval test (Coopersmith, 2002). Therefore, a student has evaluated his capability, significance, success, and

worthiness at a young age and continues that belief for a long period. Coopersmith (2002) even suggests these judgments about self happen at some time preceding middle school. Sax believes that even as young as Kindergarten students are noticing who is in the high or low reading groups and have begun making these judgments about themselves (Sax, L., personal communication, January 14, 2010).

Second, self-esteem may vary across different areas of experience and be dependent on sex, age, and other defining roles (Coopersmith, 2002). Persons may regard themselves as highly competent in math, but not regard themselves as worthy baseball players. It seems logical overall that a person's self-esteem would weight these different areas in a subjective order of importance and then a general judgment of self-approval or disapproval be maintained. Furthermore, it has been found that these differing areas of experience contribute to general self-esteem and can be linked to culturally valued activities (Alpert-Gillis & Connell, 1989). Activities that are valued in one culture may not be in another culture, and depending on which culture the individual shares, self-esteem can be affected. If a culture values something where an individual sees himself, as being successful, then he will have a higher self-esteem than if he lived in culture that did not value that same quality or skill.

The third feature is the meaning of self-evaluation in which persons judge his performance, capabilities, and attributes according to personal standards and values (Coopersmith, 2002). Individuals will arrive at decisions of their worthiness from personal standards, which may influence a predisposition to favor one object or event over another. Either the individuals approve or disapprove of themselves just as one might approve or disapprove of some other object. The individuals will either respond

favorably or unfavorably towards that object or event based from their standards, which may shape their self-esteem (Coopersmith, 2002).

In addition to self-esteem being linked to academic achievement (success with grades), academic confidence, or high self-esteem in academics has been found to have an even more significant relationship with academic achievement (Hamachek, 1995). However, both academic confidence and academic achievement become cyclical patterns and it becomes difficult to find where the cycle begins or has its roots. Determining which came first in a student's experience, the academic success, or the academic confidence can be argued both ways. However, it is important to note that they feed the other and the reciprocal cycle may be positive or negative (Hamacheck, 1995) in outcome. If a student is enjoying academic success, he will typically have high self-esteem in academic areas of experience, which will feed his feelings of success. On the other hand, if a student is struggling with academics, he will typically have low self-esteem in academic areas of experience and continue in this pattern.

Harvard psychologist William Pollack examined boys' self-esteem and found that middle and high school boys' self-esteem is actually more fragile than that of girls (Pollack, 1998). Michael Gurian (2005) furthers this thought by saying that boys' confidence as learners is impaired and suggests that by the time someone notices a boy's low self-esteem, he has already endured difficulty in his learning experiences. Furthermore, it has been suggested that mixed gender schools in our education system foster lower self-esteem in boys when compared to their single gender school counterparts. This finding may stem from repeated failing and from learning

environments in mixed gender schools not conducive to boys' developmental stages (Gurian & Stevens, 2005).

Leonard Sax (2007) elaborates on the thought of boys' achievement in school and does not simply place the expected outcomes on self-esteem. Sax (2007) claims a boy with high self-esteem in math, for example, may not necessarily do better in math simply because of that high self-esteem. He believes motivation has a large part to play in achievement. Students in general, not just boys, need to want to learn or participate in the activity to achieve appropriate levels of motivation. Appropriate practices and assignments within the school and classrooms can achieve this for all students (Gurian & Stevens, 2005). In addition, Sax notes that boys are motivated by competition and that this competitive element has been widely removed from schools (Sax, 2007).

To complicate the issue of self-esteem even further, it has been accepted that a sense of connection to various aspects in an individual's life has direct implications on the psychological and academic health of that individual (Witherspoon, Schotland, Way, and Hughes, 2009). The more connections that an individual has may provide even greater psychological benefits (Witherspoon, et al., 2009). The relationships the young adolescent has with his parents may foreshadow his views of himself and the relationships he will build in the future (Cripps & Zyromski, 2009). Children begin building their own self-concept through interactions with their parents as infants and pre-adolescents (Cripps & Zyromski, 2009). Young children are not capable of judging themselves so their judgments rely on the judgments and relationships with others i.e., their parents (Pajares & Schunk, 2001). These relationships set the tone for how children will self-evaluate and interact with others, as they grow older. Furthermore, family

connectedness and unity has been linked with academic achievement (Witherspoon, et al., 2009). Strong links and connections to family has been shown to have positive effects on academic achievement (Witherspoon, et. al., 2009)

The quality of relationships that individuals have developed within their family directly affects the relationships they build with their peers and teachers. These social relationships have significant influence on attitudes towards school as well (Booth & Curran, 2010). As adolescents grow older, they begin to create relationships outside of the family. Separating themselves from their parents becomes important as adolescents seek other realities (Cripps & Zyromski, 2009). In fact, in adolescences the need for peer approval increases significantly as the individuals grow older, while the need for parental approval remains constant (Cripps & Zyromski, 2009). Therefore, school attachment or feelings of belongingness and family connections greatly influence adolescents' self-esteem.

Thus, one may conclude that the issue of self-esteem is highly complicated and cannot be limited or narrowed to just one factor. From the research it seems apparent that self-esteem does affect academic performance, although it may not be the only factor. In addition, the relationships, which adolescent boys develop with peers and adults, play important developmental roles in strengthening self-esteem.

Single gender schools have the ability to focus solely on adolescent males or females, ensuring that they have the opportunity to create positive relationships. Furthermore, single gender schools can challenge and inspire adolescent males in appropriate ways using competition and broad guidelines of male learning styles, all the



while giving them chances for true academic success, which builds academic confidence and self-esteem.

### Single Gender Classrooms

As previously noted, gender issues are being largely overlooked in many schools. Males are struggling from the gender inequity in schools, current teaching strategies, classroom management, and a lack of significant relationships within the schools. All of these issues affect the academic and psychological issues facing students today.

However, it is important to note that this academic success in school is not a “zero sum game” (American Association of University Women, 2008). The fact that females have risen in academic achievement does not mean the males have fallen behind because of that rise. They are not directly related. Academic achievement for each gender could theoretically act independently of each other. They could both rise or fall without affecting the other. Nevertheless, it has been noted that this rise and fall may be related to how schools are teaching and treating boys (Meyer, 2008).

Many of the teaching strategies being implemented in classrooms today may actually benefit or be more appropriate for one gender. Collaborative group work is a common classroom teaching strategy at all levels, and the basis of collaboration is working in groups to produce a common goal or product (“*The American Heritage*,” 1997). Educators often believe that students in groups will help each other accomplish or finish the project by employing each of their individual strengths to help maximize the learning through synthesizing individual viewpoints and social discourse (Smith, n.d.)

with each other. However, Gibb, et al. (2008) claim that some decisions, such as the widespread use of collaborative group work made in schools today, advantage females, and disadvantage males. Studies (Daniels, 2001, & Karges-Bone, 2010) suggest that males prefer individual work and, in general, may not inherently have the skills to work effectively in groups. Females work very well in groups and tend to prefer that style to individual work. This conflict between learning styles and teaching strategies can cause males to have motivational and performance issues, which are linked to self-esteem (Gurian & Stevens, 2005).

In addition, males have a predisposition to compete, which has largely been taken out of many school activities and classrooms (Daniels, 2001) as they have become more feminized. As a result, females will thrive and achieve in a collaborative classroom setting while males will struggle to reach comparable levels of achievement. This success or failure has direct links to self-esteem and how students judge themselves. Sarah Carrier (2009) describes the classrooms today as girl-friendly. To be successful in classrooms, students must be verbal-emotive, able to sit still, and able to multi-task. Girls perform much more strongly than boys at these tasks (Carrier, 2009). Therefore, boys in classrooms today often struggle with teaching styles and classroom settings, which may lower their academic scores and self-esteem.

Males also tend to direct attention towards themselves and away from others including females, in classroom settings. Female achievement can be directly affected because males constantly demand or make demands on the teacher's attention. Females tend to limit their own participation in classroom activities, as well as their academic risk-taking (Hoffman, 2008). In mixed gender classrooms, female students are found to

have fewer opportunities to contribute vocally to class discussions, fewer leadership opportunities, and lower course enrollment in fields traditionally dominated by males (Sadker, 1995). However, the male domination of classrooms was also found to have negative effect for boys. A side effect of this male domination is the pressure for boys to outperform the opposite sex, participate verbally, and overcome shyness and awkwardness (Warrington, 2001). This causes great anxiety for both genders and pulls the attention away from the academics within classroom and school settings.

To combat these problems, some private and even some public schools are exploring single gender classrooms. This is not a new direction for public schools in the United States. After the 1972 ruling of Title IX in the U.S., single gender schooling was slowly forced out of the public education system. However, with the Supreme Court ruling against the Virginia Military Institute's all-male admission policy in 1996, all the justices purposefully commented on the positive educational benefits possible from single gender education (Meyer, 2008), and attitudes began to change. Since this change in perception of single gender educational settings, schools across the country have explored single gender classrooms. In 2002, only about a dozen public schools in the United States offered single gender classrooms (National Association for Single Sex Public Education [NASSPE], n.d.). Over the past decade, the interest in single gender learning environments has grown substantially. In June of 2010, there were at least 540 public schools in the United States that offered single gender classrooms (NASSPE, n.d.). Ninety-two of those schools were considered single gender campuses in which all the experiences of those students were in single gender settings, while the remaining 448 schools had single gender classes within a mixed gender school (NASSPE, n.d.).

Some maintain that males and females have “hardwired” differences, which are best handled through single gender settings (Gibb, et. al., 2008). The evidence shows possessive boys’ attention grabbing in the classroom advantages males, but disadvantages females. Studies (Warrington, 2001) have suggested that the effect of single gender classrooms is more beneficial for males to achieve at higher levels and helpful to females by removing the “disruptive” nature of males.

Classroom separation of both genders eliminates opposing gender classroom distractions. In particular, girls are less distracted and more open to dialogue about issues facing their particular interests (Friend, 2006). Both genders seem to recognize the advantages of the separate gender classes once they have been exposed to them for a few years. Both boys and girls reported having more confidence after experiencing single gender settings and claimed to take more pride in their work (Warrington, 2001). In single gender groups, it was found that boys were committed to achieving academically, although for different reasons than females (Hubbard, 2005). The males in Hubbard’s study were trying to achieve academically as a means to stay eligible for athletics, while females were determined to achieve academically so they would have a greater chance for college acceptance. In addition, students in groups were found to encourage each other in order to advance the group. For example, boys in a setting with other boys who value academic achievement will begin to value academic success as well.

However, simply splitting the classes or subjects into single gender groups does not correct the problem of achievement, motivation, or self-esteem. Splitting classes into male and female single gender groups, while teaching each class with the same strategies, did not yield a significant statistical difference in student achievement although the

average mean between single gender and mixed gender was higher for single gender boys (Friend, 2006). In addition, Gibb et al. (2008) found significant differences in boy's achievement in single gender classrooms in the first year of the study but not in the second. Therefore, it seems logical to conclude that the simple placement of a student into a single gender classroom is not the only factor affecting academic performance. Single gender schools can better focus on the developmental differences and learning style differences between the two genders and thus promote a more appropriate environment so that boys and girls can become academically successful and more confident.

### Male and Female Developmental Differences

Male and female brains are wired differently from the very beginning. Researchers can follow the development of gender of a fetal brain through tracing the “bombardments” of testosterone and other hormones while still in the mother's womb (Gurian & Stevens, 2005). Since both male and female brains are organized or designed the same, the difference is not that males and females have largely different brain structures, but that the development occurs in a difference sequence between the two groups (NASSPE, n.d.). In addition, it is typically thought that boys mature “slower” or are “a few years behind” girls, but this is not the case. The development of the two genders is not on the same line or track from the very beginning. They simply develop various areas in different sequences (Lenroot et al, 2007; Sax, 2005). Therefore, schools, which expect the same output from both genders at the same age, may not get equal

results. The constant struggle of boys in schools more appropriately designed for girls will negatively affect their self-esteem. Differences in brain development (including the corpus callosum, Broca's area, and the amygdala) and sense organs (eyes and ears) affect what the individual child is capable of doing in academic settings. Expecting students to all perform at the same level when they are not beginning with the same capabilities is ineffective and inappropriate. In this case, boys will suffer emotionally and quickly adopt negative views of education if they are in environments generally organized for the success of girls, as many public schools are today.

In today's school systems, curriculum is being accelerated or introduced earlier in a child's life (Sax, 2007). What was once expected of a first or second grader thirty years ago is now being taught in kindergarten or even preschool. Since boys develop at different rates and on different developmental tracks than girls, it has become common practice to hold boys out of school for a year and then enroll them a year later than the school would have originally accepted them (Sax, 2007). Little research was found to confirm or refute the effectiveness of this parental strategy, although the conclusion can be made from this practice that many boys are not developmentally ready for the expectations of the current public school system.

The average human brain weighs three pounds and is the seat of intelligence as well as the controller of the body movements and behaviors that define us as human beings (National Institute of Neurological Disorders and Strokes, 2010). In the past decade, new technology has allowed researchers to study the brain further and examine how, or more precisely, where and when, brain activity occurs as humans grow and develop. By simply looking at the average brain in males and females, one will quickly

notice the difference in size. The adult male brain tends to be 10% larger than the average female brain (Karges-Bone, 2010). However, it is important to note that size does not translate directly into intelligence. Many other factors play into the intelligence and development of an individual.

According to the National Institute of Neurological Disorders and Strokes, people often recognize the part of the brain called the cerebrum. This is the largest section of the brain that rests on top. The cerebrum is divided into two sections or hemispheres by a split or fissure between them. The two hemispheres are connected through a thick track of nerve fibers called the corpus callosum, the largest connection between the hemispheres. The two hemispheres control or are responsible for specific functions. The left hemisphere is generally associated with verbal skills and the right hemisphere is generally associated with spatial skills. The corpus callosum enables the brain to process information with both sides simultaneously, and process complex information (National Organization for Disorders of the Corpus Callosum, 2009). The corpus callosum has been found to be up to 20% larger in females than in males.

Therefore, females have a faster, stronger link between the two hemispheres of the brain (Gurian & Ballew, 2003) allowing them to use both sides of the brain in a more efficient manner than males of the same age. Many females will have more highly developed mental resources, problem solving strategies, and multi-tasking abilities at a younger age than males. This may be the cause of disparity in academic achievement in early school years and begin the negative outlook of a boy's self-concept. Requiring highly complex problem solving at very young ages gives an unfair advantage to females because of biology alone. Boys observed struggling in early years of school may develop

lower self-esteem very early in their school career because they are being compared to girls who have more academically developed mental resources.

Within each cerebral hemisphere, the brain is divided into four sections, called lobes, which specialize in specific brain functions. The frontal lobe lies directly behind the forehead and is the true command center for our body. The frontal lobe is responsible for reasoning, problem solving, impulse control, and judgment. In addition, this is the last area of our brain to develop (Brain Health and Puzzles, 2007). The left frontal lobe contains an area called the Broca's area, which is thought to be responsible for grammar and the transfer of thoughts into words or the production of words. Broca's area has also been found to be larger in women than in men, which explains the common belief that women acquire words faster than boys (James, 2007). Furthermore, brain scans have shown three and six month old girls using the left side of the brain (the hemisphere typically associated with verbal skills) when stimulated and boys using the right side. However, adult males almost exclusively use the Broca's area when given a language task while adult women use the Broca's area and the corresponding area on the right side of the brain (James, 2007). This further shows the connection and the use of both hemispheres to be more constant in females than in males even at older ages.

Other structures in the brain show significant differences between boys and girls as well. The amygdala is part of the brain's limbic system, which is responsible for our emotions and memories (Brain Health and Puzzles, 2007). Specifically, the amygdala connects sensory information with emotion and has been linked with triggering sweaty palms, increased heartbeat, stress hormone release, etc. (Brain Health and Puzzles, 2007; James, 2007). In other words, the amygdala controls emotional responses. As children



grow, the size of the amygdala is greater in males than females. Amygdala size is linked to academic strengths in vocabulary, arithmetic, reading single words, and total estimated intellectual abilities (James, 2007).

A common assumption exist that males are not as open about their feelings and are not as emotionally driven as females, however the study of the amygdala may lead one to a different conclusion. Males generally experience very powerful emotions, and are simply not able to communicate them as well as females (James, 2007). This lack of emotional communication leads to a portrayal of a lack of emotions. The source of this disconnect is partially biological and partially learned behavior (James, 2007). The learned behavior is based on the expectations of how males and females should act in society or culture, while the biological component is based on the lack of a strong connection between these areas in male brains. This means males struggling in school may experience higher levels of stress and anxiety during social or academic situations compared to females or high achieving males. This stress in adolescents has been found to have effects on self-esteem, although those connections were considered weak. Students constantly experiencing high stressful situations tend to have lower self-esteems (Moksnes, Moljord, Espnes, & Byrne, 2010).

Differences in males and female senses are worth noting as well. The human's five senses (sight, sound, taste, feel, and smell) gather new information for the brain to process. It is important to note the differences between male and female senses because of the basic idea of what children should be doing at school: gathering new information. While differences have been found in almost all the sense organs between females and

males, this discussion will focus on two of the senses (eyes and ears), which affect a child's organization and management of learning activities.

Overall, the structure of the ear is very similar in men and women. However, one important difference is the length of the cochlea. The cochlea is the part of the ear in which sound becomes a nerve signal. This is a liquid filled coiled tube with a membrane running down the middle of it. In males, this tube is longer than in females. Therefore, the response time to verbal commands is fractionally longer for males than females. The significant effect of this is that girls' ears are more sensitive, while boys have a much higher tolerance for noise (James, 2007). Other studies (Sax, 2005) simply find that girls hear better, even at very young ages. These studies suggest that the differences in the male and female hearing ability only increases over time. Girls are simply tuned in earlier, which only enhances their alertness to the sounds of their environment and the linguistic development.

This has interesting implications for the classroom teacher regarding where students should sit in the classroom, the appropriate noise level during group or collaborative work, and the repercussions this can have on self-esteem. Boys may not be as easily distracted or bothered by more noise in the classroom, while girls may be significantly more bothered by the noise. This finding also suggests that boys should sit towards the front of the classroom, which will ensure the boys actually hear the directions or lecture while, at the same time, not being bothered by the louder level of speaking. Female teachers may also discipline male students for being loud when the male students are simply not hearing the noise as loudly as the teacher is or female students. Constantly

being told to quiet down can have negative impacts on student self-esteem regarding their ability to behave in school.

Sight differences between the two genders have been found as well. The retina is a highly complex organ that contains rod and cone cells that react to light (James, 2007). Ganglion cells collect information from the rod and cone cells for processing in the brain (Sax, 2005). The Ganglion cells are broken down into two types. The smaller cells are parvocellular (P) cells and the much larger cells are magnocellular (M) cells. M cells are wired to rods with very little input from the cones and are simply motion detectors. M cells help the individual find “where is it now and where is it going” (Sax, 2005). P cells are wired to cones with very little input from the rods and are concentrated around the center of vision. P cells help the individual find “what is it?” (Sax, 2005). The human male retina is substantially thicker than a female’s (Sax, 2005). This is due to the higher number of larger M cells in the male eye. Therefore, males are pre-wired to look at or notice things in motion, while females are more inclined to look at things with texture. Even infant boys on the day of their birth will tend to look at moving objects rather than faces, but infant girls will prefer to look at faces (Sax, 2005). In addition, females are much better at seeing objects in darkened areas while males can see objects more clearly than females in brightly lit areas (Gurian & Ballew, 2003).

This also has interesting implications for classroom settings concerning lighting, student seating, teacher expectations, and psychological effects on the student. Boys may prefer and excel in rooms, which are a little brighter. Again, boys may do better sitting towards the front of the classroom so that they are closer to the instructor and may notice more textural differences that they would not see from the back of the room.

Furthermore, it is worth noting that this difference in sight is often revealed through young students' drawings. Boys tend to draw action or verbs on the page, while girls often draw objects or nouns with lots of colors and textures (Sax, 2005). Teachers should try not to discourage one or the other, rather appreciate both within their own contexts. Dismissing a boy's drawing of action, while encouraging still images typically drawn by females can also have a damaging effect on a student's self-esteem at a very young age.

All of these differences in brain development have an effect on the developing self-esteem of middle school males. Emotions and the ability to communicate or deal with them appropriately play a huge role in puberty (James, 2007). Later developing boys tend to have lower self-esteem than boys who enter puberty at an earlier age (James, 2007). Generally, as children enter puberty, their self-esteem begins to decrease or become more negative. This is an accepted finding regarding females, but many males also experience low self-esteem and are not able to communicate this feeling as well (James, 2007). Furthermore, males often enter puberty one to two years after females so some of the complex brain functions and problem solving abilities lag from the very beginning of puberty. Males generally have more confidence in their academic skills than females, and become even more devastated when they fail (James, 2007). Perhaps a school solely focused on how boys learn may be able to more appropriately develop and encourage boys at all levels to be successful academically and emotionally. With appropriate teaching strategies and expectations, boys can have higher academic success and therefore, higher self-esteem.

## Male and Female Learning Differences

Universities should prepare teachers to be aware of differences in brain function and how they affect the learning and self-esteem of their students. “Good teachers” understand that a class learns more when certain atmospheres or cultures are created in the classroom. Productive classroom atmospheres not only promote learning but also promote positive self-esteem as well (Shindler, n.d.). However, individuals can only be considered “good teachers” if they find ways to get their students to academically achieve as well as concern themselves with the quality of the work (Shindler, n.d.). Creating “boy friendly” classrooms is the key to encouraging their success. Single gender schools have the opportunity to tailor their teaching techniques and student expectations to fit boys’ learning styles more appropriately. In this way, single gender schools will promote higher academic achievement and self-esteem.

Based on their years of research, Michael Gurian and Arlette Ballew developed ten areas denoting learning style differences between boys and girls in the classroom. These ten differences are not definite rules rather general traits and preferences. Single gender schools can focus on these traits and help develop boys’ self-esteem and challenge them academically in appropriate ways. This will create a more positive self-esteem through academic success.

The first area relates to deductive and inductive reasoning. Boys tend to start their reasoning process by using a general principle and applying it to other individual cases. Girls tend to prefer inductive reasoning where they begin with specific, concrete examples and then build to general theories. Therefore, it is often much easier for girls to

give examples while boys are typically more adept at multiple-choice tests, especially early in the conceptualization process. Schools focused on male learning styles may focus on comparing case studies and how applying general principals to different situations may change the outcome.

Second, Gurian addresses abstract and concrete reasoning. Boys tend to be able to calculate something without seeing it or touching it more easily than girls can. Boys do not need to use manipulatives as much and are able to learn better from abstract teaching. Teachers in an all-male classroom should focus on numbers and then work back towards manipulatives, which is the opposite of common practice in primary grade math classes (Sax, L., personal communication, January 14, 2010). Many math curriculums for primary grades begin with manipulatives and work towards numbers. Boys also enjoy number games, which involve competition within the classroom. In addition, boys like abstract discussions or arguments (Gurian & Ballew, 2003). Boys will often argue or test the limits of examples given in class.

Thirdly, females produce far more words than males. In general, girls want things conceptualized with concrete details, while boys tend to use jargon or coded language in their speech and areas of interests. For example, in many sports and in the military, both largely populated by males, large amounts of coded language are used, which inherently do not have a meaning except within the context of that event or organization where they may have a great deal of meaning (Gurian & Ballew, 2003).

Fourth, girls are better listeners than boys are. Girls tend to hear more of what is said and are more receptive to the details of conversations or lessons (Gurian & Ballew,

2003). As previously discussed, boys typically do not hear noises “as loud” as girls (L. Sax, personal communication, January 14, 2010). Any boys not paying attention need to be moved to the front of the classroom to help them hear what is being said.

Furthermore, a teacher in all male classes should move around the room often, speaking from different areas, and speaking loudly when giving instructions (L. Sax, personal communication, January 14, 2010).

The fifth principle states that boys are more likely to become bored. Boys are not able to manage their boredom as well as girls, and boys need a variety of stimuli in order to stay attentive (Gurian & Ballew, 2003). By constantly moving around the classroom a teacher helps keep male students alert and while walking around every student’s desk, also keeps students aware of where the teacher is standing or giving instructions. With no desks being “safe” from the teacher standing next to that individual, all students are encouraged to stay on task. Furthermore, teachers should call on students randomly to keep them on their “toes” and teachers should interrupt themselves often to keep the student’s attention (L. Sax, personal communication, January 14, 2010). By employing these instructional techniques, students will have to focus on what is being said in order to follow the instructions and will never know when they will be called upon.

Sixth, boys need more space when they learn. Boys often spread out into other’s space, while girls will tend to stay in their own area (Gurian & Ballew, 2003). Teachers in all boy classrooms should allow the students the freedom to move around in the room and find their own place to work. They may not want to work at their desk, but would prefer spread out on the floor. Clipboards and other hard surfaces enable students to

work in non-tradition locations (laying on the floor, sitting by the window, etc.) without compromising the quality of the work.

The seventh principle of learning style differences relates to movement. Movement has been found to stimulate male brains, which helps control impulse behavior. Girls typically do not need to move around as much. Teachers can address this tendency by having boys play with something silently, by giving boys chores, and by introducing lessons with high levels of movement. It often helps boys learn when breaks are given where boys may get up and move around or focus on something else. Having breaks is a good practice and can be applied to all ages in many different scenarios (Gurian & Ballew, 2003). Throwing a soft ball or another object to students whose turn it is to talk may also keep their attention and encourage their participation through movement.

Eighth, girls seem to learn better or find it easier to master working with groups. They tend to learn while adhering to social interactions better than boys do (Gurian & Ballew, 2003). Without strict guidelines and explicit instructions, boys struggle in group activities. Boys need to be shown how to work within a group and stringent time constraints should be placed on the activity to minimize off-task behavior (L. Sax, personal communication, January 14, 2010).

The ninth principle involves the use of symbolism. Boys rely on symbols to stimulate the right side of their brain. In literature, boys will focus on graphs, diagrams, and symbolic texts, while girls will focus more on the emotional aspects of the work (Gurian & Ballew, 2003). Teachers in all boy classrooms should have projects and



assignments based on this. Having students focus on creating maps and graphic organizers from literature is much more beneficial than having boys discuss feelings about a story (L. Sax, personal communication, January 14, 2010). In this way, boys will become much more engaged and enjoy the assignments.

The tenth and final principle relates to the use of teams. Boys and girls approach teams differently. Girls form looser organizations, while boys form more structured groups and quickly identify leaders. Boy-led teams become very goal oriented; while girl led teams spend more time on managing the team (Gurian & Ballew, 2003). All boys' single gender campuses are encouraged to create teams within the school or classrooms, which helps the boys, manage their behavior (L. Sax, personal communication, January 14, 2010). The boys elect their team leaders and help monitor each other in the pursuit of awards and goals within the school or classroom. These goals can be based on behavior and academic success. However, rules and effective leadership must be taught and expected within each team.

While classroom organization and strategies play an important role in the development of self-esteem, relationships and interactions within the classroom play a significant part as well. Not surprisingly the relationships and interactions within a classroom have great psychological effects on all students. In particular, boys are struggling with these relationships in schools today and often do not see the value in education. With the classrooms being organized for female learning styles (Gibb et. al., 2008; Carrier, 2009; Daniels, 2001), males in particular are not finding the support they need psychologically in mixed gender classrooms, whereas single gender schools can offer this support.

## Core Conditions

Carl Rogers, a humanistic psychologist, focused his research on psychological support. The American Heritage College Dictionary defines humanism as “a system of thought that centers on humans and their values, capacities, and worth” (“*The American Heritage,*” 1997). Rogers’s work revolves around the context of his experience in which individuals becoming increasingly trustworthy once they feel deep connections or relationships with others.

Every life force has what Rogers and others call “the actualizing tendency” which motivates a life form to strive towards its fullest potential. As Rogers’s notes, this condition does not pertain just to humans. Plants and animals also have this motivation. For example, a plant will push through rock to continue to grow and improve. The plant is determined to reach its fullest potential, and the rock will not keep it from reaching that potential (Boeree, 2006).

Rogers also believed that the human experience is a process rather than a product (“*The Institute of Transpersonal Psychology,*” n. d.). To illustrate his belief, every individual goes through this process by trying to become a fully functioning person, with each individual’s path or journey being unique to that individual. According to Rogers, a fully functioning person has five qualities. The first is openness to experience, which includes that an individual is able to accept reality and the perceptions of their experiences in the world; in other words, openness is the opposite of defensiveness. The second quality is existential living, which simply means living in the present without spending too much time or concern over the past or future. The third quality is

organismic trusting meaning that individuals should trust in themselves to do what they feel is right or natural. This stems from the “actualization tendency” and an organism’s knowing what is best for itself. The fourth quality is experiential freedom, which means a fully functioning person recognizes that he or she has choices and the freedom to choose. In addition, the individual recognizes and takes responsibility for those choices. The fifth quality is creativity which Rogers defines as the desire to contribute to the world, whether through doing one’s best at one’s job or being the best parent, for example (Boeree, 2006).

Within one’s self, a person must obtain or strive towards obtaining these five qualities in order to become a fully functioning person. In other words, these five qualities are not something that can be taught by another individual in the traditional sense of teaching, but rather something that must be changed by the individual himself. Rogers believed the individual seeking help or guidance with these qualities must be supported and directed to find answers or solutions within himself rather than being told the solutions by someone else (Boeree, 2006).

Through his beliefs, Rogers developed his own techniques for therapy called “client-centered” therapy. He believed the therapist did not have all the answers because each individual’s journey is unique. However, the therapist should be supportive and empathic in maintaining unconditional positive regard for his clients. He wanted to stress to the clients the significant worth of each individual. Rogers felt each client should find and explore what is wrong within himself and find ways to improve. The therapist was simply a facilitator for the clients to develop themselves (“*Carl Rogers*,” n. d.). Rogers believed this same relationship could also be applied to education. Teachers must

develop relationships in which they become the facilitators for the student's academic improvement or achievement.

According to Rogers, a relationship had to be established in order for improvement to be possible. Rogers thought teachers should focus on developing relationships with students that would facilitate personal growth within each individual. A relationship between the teacher and student should be built rather than the teacher trying to "fix" the student. By providing a specific type of relationship, the teacher will give the student the opportunity to use the relationship for growth. According to Rogers, once the relationship is created, change and personal growth will happen within the student (*"The Institute of Transpersonal Psychology,"* n. d.).

Rogers stated that the teacher-student relationship should have three "core conditions" or requirements. The first of these relationship requirements is congruence, the genuineness, or honesty between the teacher and student. The teacher needs to be a real person, not a façade, rather an actual person with feelings who is able to communicate those feelings and have direct personal encounters with the client. Second, the teacher must bring empathy to the relationship. In other words, the teacher must be able and willing to feel what the student feels. The third requirement is that the teacher must respect the student. The teacher must accept the student and have an unconditional positive regard for him. That is, the teacher must accept the student as an imperfect human who is fundamentally trustworthy (Boeree, 2006).

Rogers claims these three requirements are "necessary and sufficient" for individuals to improve through therapy or education (Boeree, 2006). He continues on to

say that if the teacher meets these three requirements, some improvement will occur within the student without any other interventions. Whatever the technique the teacher employs does not matter as much as the personality he or she displays for the clients. Independent studies have confirmed this to be true (Boeree, 2006).

Students are trying to improve themselves with education using the guidance and relationships they have built with their teachers. With single gender schools for boys focusing on appropriate teaching strategies and practices, teachers have the opportunity to create facilitating relationships within the classrooms. Teachers can use and implement the ten principals developed by Gurian and Ballew (2003) to create appropriate classrooms for boys to succeed in school. Furthermore, addressing boys and talking to them in “their style” encourages positive relationships to develop. Teachers should talk to boys “shoulder to shoulder” rather than face to face (L. Sax, personal communication, January 14, 2010). This creates comfortable communication and discussions for boys in the way they often communicate with each other. Sax elaborates on this thought by encouraging teachers to address boys by their last names, Mr. Smith, for example (Sax, L., personal communication, January 14, 2010). This shows mutual respect for the students and stimulates that same respect towards the adults from the young men.

Boys are falling behind academically and dropping out of school at incredible rates. As a society, we have not motivated nor inspired boys to value education and choose to pursue it. The students’ sense of self-worth and their own academic aspirations may play a role in this. If boys are to improve, they must see the value of their studies. To do this, we must teach boys appropriately and understand that they do not develop and learn in the same way as girls. In addition, boys must feel supported and comfortable

within their schools in order for the schools to develop the complete boy, academically, emotionally, socially, and physically.

Therefore, if the hypotheses are correct and middle school boys within a single gender school have higher self-esteem than their peers in a mixed gender setting, the source of their confidence may well be the single gender setting itself. These boys may have stronger relationships with their teachers, which would lead to improvement in academic achievement through the “actualizing tendency”. Even without stronger relationships between teachers and male students, higher self-esteem would lead to higher academic achievement for these boys, which would ultimately be of greater benefit in helping these males to succeed in life.

### Summary

In conclusion, self-esteem plays a vital role in academic achievement. Many mixed gendered schools have become “anti-boy” in their teaching styles and practices. With the number of boys struggling in school rapidly rising, their self-esteem and academic confidence are adversely affected and will begin to decline. Once this decline has begun, it is very difficult for young men to pull themselves out of the cycle of failure and falling self-esteem. However, single gender schools have the ability to focus on appropriate teaching strategies and developmentally acceptable practices for their gendered students. Focusing on male learning styles will benefit boys in multiple ways. One, males will be allowed to learn and express their understanding in ways in which they are comfortable. Two, males will experience a school where they are engaged and

comfortable. Such an environment allows the students to build relationships within the school, feel connected, and feel welcomed within that community. These relationships and connections are essential in building academically and emotionally successful students.

## CHAPTER THREE – RESEARCH METHODOLOGY

### Introduction

The purpose of this exploratory study was to determine whether adolescent boys in a single gender school have higher self-esteem than adolescent boys in a mixed gender school. The researcher believes that by identifying if such a difference exists, educators can explore better methods for school and classroom models where boys can be more successful both academically and socially. In order to determine whether a difference existed, five hypotheses were developed: (a) Middle school boys attending the single gender school will have significantly higher attitudes towards self in overall areas of experience. (b) Middle school boys attending the single gender school will have significantly higher attitudes towards self in social areas of experience. (c) Middle school boys attending the single gender school will have significantly higher attitudes towards self in academic areas of experience. (d) Middle school boys attending the single gender school will have significantly higher attitudes towards self in family areas of experience. (e) Middle school boys attending the single gender school will have significantly higher attitudes towards self in personal areas of experience.

This chapter describes the study's research methodology and includes discussions of the rationale for the research approach, description of research sample, instruments, overview of research design, review of procedures, analysis and synthesis of data, and limitations of the study. A summary of methodology concludes the chapter.



### Rationale for Quantitative Research Design

The underlying belief of quantitative research is that we live in a stable and coherent world that can be measured and about which we can generalize (Gay, Mills, & Airasian, 2006). In other words, the world and the laws that govern it can be understood, examined, and generally predicted through scientific research and inspection. This view was adopted by the educational field within the realm of natural sciences. Furthermore, quantitative research is based on the collection and analysis of numerical data with the expectation to explain, predict, or control the phenomena of interest (Gay et al., 2006). The intent of this qualitative research is to test hypotheses in order to establish facts and to identify differences between variables.

On the other hand, the positive aspects of qualitative research have not been lost on this investigator. In order to establish statistical data and to determine if a statistical difference does exist, this investigation used a quantitative method as the initial data collection method. If a significant difference is found, further research may be recommended using qualitative methods to find the reasons for that difference.

### Rationale for Questionnaire Methodology

Within the realm of quantitative research, the study was most suited for a questionnaire design. The study is a descriptive research project in which determining and describing how things are is the objective. A common data collection tool in descriptive research is the questionnaire (Gay et al., 2006). A questionnaire is “a written collection of self-report questions to be answered by a selected group of research

participants” (Gay et al., p.163). The strengths of using a questionnaire include, but are not limited to, less time than is required with other methods; it is often less costly; and typically allows the investigator to gather data from large samples of participants. Furthermore, a questionnaire must be developed appropriately and with careful consideration to sound questions (Gay et al.)

### The Research Sample

The low number of eligible participants, due to the selection requirements, caused this study to request participation from all eligible participants. The criteria for selecting participants were:

- All participants were male students
- All participants were in the sixth, seventh, or eighth grade
- All participants attended their respective school for at least three years (the current year may count as the third year)

The study required participants to be in the sixth, seventh, or eighth grade to ensure that the participants had developed and formed an opinion of themselves. The development of self-opinion typically happens at a young age and is constant for long periods of time (Coopersmith, 2002). In addition, the participants had to attend their respective school (either single gender or mixed gender) for at least three years. To increase the sample size the current year was considered a full year and was counted in this requirement. The investigator decided upon this limitation in order to ensure adequate adaptation and conformance to the social norms and practices of the respective

school environment. The research sample consisted of seventy-seven participants from two different schools who met all three requirements.

The two schools are located in a large urban area on the Texas Gulf Coast. The first school is a single gender private school for boys and the second campus is a mixed gender private school. Both campuses house grades pre-kindergarten through eighth. However, the single gender school is within the city limits while the mixed gender school lies in the greater suburban area of the large city. The population in the area is comprised of a wide variety of different demographics with the major ethnic groups comprising Hispanic (39%), White Non-Hispanic (35%), and Black (18%) (U.S. Census Bureau, 2010). This study was conducted within two Catholic private schools, which both draw from middle to upper class populations; therefore, the ethnic breakdown for these schools is skewed from the general population in the metropolitan area.

The single gender school has 251 male students enrolled during the 2010 – 2011 school year with the population being comprised of White Non-Hispanic (55%), Hispanics (20%), Black (4%), and Asian (2%) of the student body. Forty-six boys were eligible to participate and thirty-nine, or 84% returned the parental permission form, signed the student assent form, and actually participated in the study. In the participating sample, 64% were White Non-Hispanic, 30% Hispanic, 2% Asian, and 2% Black which reflects the school's population well (See Table 1). Furthermore, eleven of the thirty-nine (or 28%) were students in sixth grade, fourteen (or 35%) were in the seventh grade, and eighth grade had fourteen (or 35%) of the thirty-nine participants as well (See Table 2).

The mixed gender school has 351 students enrolled during the 2010 – 2011 school year. However, 163 of those students are males with the remaining 188 being females. The population at the mixed gender school is comprised of White Non-Hispanic (70%), Hispanic (15%), Asian (11%), and Black (2%). Twenty-four students were eligible to participate in the sample group. Out of those eligible, nineteen or 79% returned the completed the parental permission form, signed the student assent forms, and participated in the study. The participating sample in the mixed gender school consisted of 84% White Non-Hispanic students, 5% Hispanic, 5% Asian, and 5% other ethnicity students (See Table 1). Additionally, three of the nineteen participants (or 15%) were in the sixth grade, nine (or 47%) were in the seventh grade, and seven (or 36%) were in the eighth grade (See Table 2).

Table 1

## Ethnicity of Participants by Percentage

	White Non- Hispanic	Hispanic	Asian	Black	Other
Single Gender	64	31	2	2	0
Mixed Gender	84	5	5	0	5

*Note.* All percentages were rounded.

Table 2

## Number of Participating Students by Grade

	Participants				
	Eligible	Participated (%)	Grades (% of total)		
			6	7	8
Single Gender	46	39 (84)	11 (28)	14 (35)	14 (35)
Mixed Gender	24	19 (79)	3 (15)	9 (47)	7 (36)

*Note.* All percentages were rounded.

% = percentage of participants

## Instrumentation

*Coopersmith Self-Esteem Inventories*

The *Coopersmith Self Esteem Inventories (SEI)* (Coopersmith, 2007) was designed to measure attitudes toward self in social, academic, family, and personal areas of experience. These areas are measured by evaluating the self-esteem of a person in the four listed areas. In the *SEI*, the term “self-esteem” refers to the evaluation persons make about themselves and the overall approval or disapproval of their competence, success, significance, and worth. The *SEI* was developed in conjunction with a research study on self-esteem. The investigators believed self-esteem “is significantly associated with personal satisfaction and effective functioning” (Coopersmith, 2002, p.2). Three

different forms of the survey have been developed over time to assess this. They are the School Form, the School Short Form, and the Adult form (Coopersmith, 2002).

The School Form was developed to be used on populations aged eight through fifteen years and consists of fifty-eight items. Some of the items were developed from the Rogers and Dymond (1954) scale, while the other items were original (Coopersmith, 2002). All of the items were worded so that children between eight and fifteen years of age could understand and respond. Five psychologists sorted the items into statements, which showed positive or negative self-esteem (Coopersmith, 2002). Any items found to be repetitive or ambiguous, were omitted from the final version of the survey.

This form was also able to break down the results into subscales and includes a lie scale. The subscales included general self, social self-peers, home-parents, and school-academic (Coopersmith, 2002). Subscales allow for a difference in perceptions of self-esteem through children's different areas of experience. In addition, the lie scale helps determine if the participant is responding defensively or thinks he or she knows the "intention" of the survey (Coopersmith, 2002).

The School Short Form consists of the first twenty-five items from the School Form but does not contain the lie scale or the ability to examine the subscales. The short form is recommended for testing conditions limited by time. The Adult Form used with individuals ages sixteen and older is simply an adapted version of the School Short Form. Each form presents the participants with favorable or unfavorable statements about themselves. A participant responds with "like me" or "unlike me" (Peterson, et al. 1985).

This study used the School Form in order to break down and examine the subscales within each group. The test-retest reliability of the *SEI* school form was .70. The mean score of the males was 70.1 with a standard deviation of 13.8 in an administration to 1,748 students attending public schools in Connecticut (Coopersmith, 2002). The reliabilities of the subscales is .346 for peers, .322 for parents, .311 for school, and .321 for personal interest (Ahmed, Valliant, & Swindle, 1985). Correlation of single items to total test score ranged from .21 to .41. Therefore, the *SEI*'s findings are congruent with the instrument's goal of rating high self-esteem (Ahmed, et al.).

### Overview of Research Design

The following lists outlines the steps used to carry out this doctoral thesis research. After this list is an in depth discussion of these steps.

1. Before any data was collected, a review of the literature was conducted to relate research to the study's topic of self-esteem and single gender schooling. Key contributions and findings were summarized and implications were suggested.
2. Following the proposal defense, the investigator attained approval from the Review of Research Involving Human Subjects Institutional Review Board (IRB) to continue the research project. The IRB process consisted of outlining all procedures and preparing all forms the study needed. These procedures and forms were reviewed to ensure adherence to the standards required for studies dealing with human subjects.

3. The principal at each school was contacted and met with the investigator to discuss the study and participant qualifications. Potential participants were selected using participant criteria by the school principals and parental permission forms were sent home by the school.
4. The investigator met with the students who had returned the agreed upon parental permission form to discuss the study, sign the student assent forms, and take part in the survey.
5. The data from the survey was analyzed between the two groups of students.

### Procedure

The investigator acquired approval of the research proposal from the campus Review of Research Involving Human Subjects Institutional Review Board (IRB) to proceed with the study. The investigator approached the principals at each school. After discussion between the principals and investigator about participant qualifications, the potential participants were identified by each school. The parental permission forms were given to the potential participant's homeroom teachers with instructions to pass out the permission letters and remind the students to have them signed and returned to school.

Once the sample group's parental agreements were returned, the investigator met with all of the participants to explain the study. The investigator explained that boys' thoughts and feelings were being examined in order to understand how well they fit as individuals within that school. The investigator met with each school's sample group on



separate dates. Furthermore, the investigator explained the voluntary nature of this study and had the participants sign the assent to participate form.

The participants agreeing to contribute to the study completed the demographic page and then completed the *CES*. The participants took the survey online through Mind Garden, Inc.'s web-based survey collection site. All the instructions were contained within the online survey. Due to scheduling conflicts the students took the surveys at various times and locations within each school. At the single gender school, the eighth graders took the survey during first period in their campuses science lab using their student laptops. The sixth graders took the survey during sixth period in a classroom while also using their student laptops. Finally, the seventh graders at the single gender school took the survey during seventh or eighth period (depending on the homeroom section to which they were assigned) in a classroom using their laptops as well. At the mixed gender school, the schedule yielded itself to a much more conducive environment for the students to participate in the study. All of the students participating took the survey during first period in the science lab using laptop cart computers.

The investigator remained in the room where the students participated in the survey and gave the students a brief introduction and time to ask any questions before the survey began. This allowed the investigator to build some rapport and trust with the participants, which is a strength of administering a questionnaire in person (Gay et al., 2006). Furthermore, once the survey began, the investigator provided further instruction or clarification on an individual basis if requested by the participants. The results were collected and reported by Mind Garden, Inc. and were downloaded by the investigator through a password-protected account. From this raw data, the investigator verified the

results. The names of the students were coded with survey numbers by the investigator to ensure participant anonymity. The survey numbers and names were linked on a document saved on the investigator's personal computer and password-protected as well.

### Statistical Treatment of Data

This study examined the data collected with a MANOVA and used the .05 level of confidence to determine statistical significance. The MANOVA compared a single independent variable with multiple dependent variables (Taylor, 2010). Following the MANOVA test, post hoc analysis of each individual outcome was used to determine the difference in each subscale. The t test determined if the mean scores were significantly different between the two populations (Gay et al., 2006). The t test made adjustments for the small sample size and the fact that the distribution of scores becomes larger as the sample size gets smaller. The t test was performed on the Coopersmith Self-Esteem Inventories to determine if the difference in self-esteem between middle school boys in single gender schooling and mixed gender schooling within the four subscales of social, academic, family, and personal areas of experience was significant. A two-tailed test of significance was used to confirm or refute the hypotheses.

### Limitations of the Study

This study contains certain limiting conditions due to the nature of quantitative studies and the design of this study. The investigator has carefully considered these

limitations and has attempted to account for them by minimizing their impact on the study. The basic idea of quantitative studies lends itself to being problematic concerning application of the results. In addition, the location and size of the samples in the study further limits the implications of the results.

Quantitative research attempts to “boil” down a complex issue into a single number, which makes the results easy to understand. This can be very beneficial when trying to discover whether a difference exists between two variables, as in this study. However, quantitative studies do not tell us how or why the difference exists. Moreover, it can be difficult at times to find realistic ways in which the results will affect practice; that is, how these numbers can change or affect the practices or procedures happening in the field.

A second limitation of this study is the small sample size. These two locations were selected because the investigator had personal access, both were religiously affiliated, and both principals were willing and eager to have their campuses participate in the study. To help limit the effects of this small sample size, the investigator expanded the range of grades eligible to participate in order to increase the number of participants. Even with this expansion, the numbers are still small for typical quantitative research.

The third limitation of the study is the schools themselves. The study was conducted in two Catholic private schools. As mentioned previously, the investigator had access to these schools. In order to limit the variables, the investigator used two Catholic private schools rather than one private and one public school. Nevertheless, the demographic makeup of these schools is significantly different than public schools.

However, the intent of the study is to determine if a difference exist in self-esteem, so the investigator compared similar schools within the Catholic school system.

### Summary

In summary, this chapter provides a detailed description of this study's research methodology. Quantitative research was selected as the methodology to establish facts and to identify if a difference exists between self-esteem and the organization of a school setting. The investigator attempted to establish if a difference existed using the *Coopersmith Self-Esteem Inventories* (Coopersmith, 2002). Fifty-eight participants took the online survey with the results being downloaded and analyzed by the investigator. Through a MANOVA test and two-tailed test of significance, the investigator determined differences or lack thereof between school organization and self-esteem. Limitations of quantitative studies, the small sample size, and school associations may limit the overall application of the findings.

## CHAPTER FOUR – STATISICAL ANALYSIS

### Introduction

The purpose of this exploratory study was to examine whether differences in self-esteem existed between adolescent boys attending a single gender school and adolescent boys attending a mixed gender school. By identifying differences in the two school structures, educators may be able to develop better methods and organizational structures in which boys may be more successful in school. This chapter presents the findings, which have been broken into the four sub-scales, as well as the overall score of the *Coopersmith Self-Esteem Inventories* (Coopersmith, 2002). The survey was taken by fifty-eight sixth, seventh, and eighth grade adolescent males attending two schools during the Spring of 2011.

Initial results examined through a series of MANOVA tests are presented first with a brief discussion of the results. The MANOVA tests did not report a significant difference between the two schools. Each hypothesis was further examined through post hoc analyses t tests, which were run in an attempt to find differences among individual outcomes. Brief discussions of the results were included with each hypothesis. None of the four subscales showed significant differences in self-esteem between the single gender school and the mixed gender school.

## Hypothesis One

Hypothesis one stated boys attending a single gender school would have significantly higher attitudes towards self in overall areas of experience on the *Coopersmith Self-Esteem Inventories* scale. A MANOVA was run between the mean scores of the mixed gender school and the single gender school. The MANOVA will compare a single independent variable with multiple dependent variables (the four subscales) (Taylor, 2010). Table 3 shows the results of the MANOVA tests. None of the tests performed showed significant statistical differences between the two groups. Therefore, post hoc t tests were used to determine if any significant differences could be found between the two schools in the overall mean scores (Table 4). Again, no statistically significant difference was found between the attitudes towards self in overall areas of experiences of sixth, seventh, and eighth grade boys in a single gender school and a mixed gender school. Hence, the first hypothesis failed to be confirmed and is therefore rejected.

Table 3

MANOVA Test of Adolescent Males Attending Mixed and Single Gender Catholic Parochial Schools in Grades 6, 7, and 8 on Attitudes Towards Self in General-Self, Home-Parents, School-Academic, and Social-Peers Areas of Experience

Test	Statistic	<i>df</i>	F (df1, df2)	F	Prob>F
Wilks' Lambda	0.951	1	4.0, 53.0	0.67	0.612
Pillai's Trace	0.048		4.0, 53.0	0.67	0.612
Lawley-Hotelling Trace	0.050		4.0, 53.0	0.67	0.612
Roy's largest Root	0.050		4.0, 53.0	0.67	0.612

*Note.* \* $p < .05$ .

Table 4

Two Sample t Test With Equal Variances of Adolescent Males Attending Mixed and Single Gender Catholic Parochial Schools in Grades 6, 7, 8 on Attitudes Towards Self in Overall Areas of Experience

Group	Mean	Std. Dev.
Mixed Gender	73.68	15.98
Single Gender	74.61	15.54

$t = -0.212$

*Note.* \* $p < .05$ .

## Hypothesis Two

Hypothesis two stated that boys attending a single gender school would have significantly higher attitudes towards self in social areas of experience on the *Coopersmith Self-Esteem Inventories* scale. Table 5 shows the post hoc t test results that were used to determine if any significant differences could be found between the two schools on social mean scores. No statistically significant difference was found between the attitudes towards self in the social areas of experience of sixth, seventh, and eighth grade boys in a single gender school and a mixed gender school. Consequently, the second hypothesis failed to be confirmed and is therefore rejected.

Table 5

Two Sample t Test With Equal Variances of Adolescent Males Attending Mixed and Single Gender Catholic Parochial Schools in Grades 6, 7, 8 on Attitudes Towards Self in Social Areas of Experience

Group	Mean	Std. Dev.
Mixed Gender	6.78	1.65
Single Gender	6.53	1.65

t = 0.543

*Note.* \*p < .05.



### Hypothesis Three

Hypothesis three stated that boys attending a single gender school would have significantly higher attitudes towards self in academic areas of experience on the *Coopersmith Self-Esteem Inventories* scale. Table 6 shows the post hoc t test results that were used to determine if any significant differences could be found between the two schools in academic mean scores. No statistically significant difference was found between the attitudes towards self in academic areas of experience of sixth, seventh, and eighth grade boys in a single gender school and a mixed gender school. Hence, the third hypothesis failed to be confirmed and is therefore rejected.

Table 6

Two Sample t Test With Equal Variances of Adolescent Males Attending Mixed and Single Gender Catholic Parochial Schools in Grades 6, 7, 8 on Attitudes Towards Self in Academic Areas of Experience

Group	Mean	Std. Dev.
Mixed Gender	5.05	2.41
Single Gender	5.38	1.90

t = -0.570

Note. \*p < .05.

### Hypothesis Four

Hypothesis four stated that boys attending a single gender school would have significantly higher attitudes towards self in family areas of experience on the *Coopersmith Self-Esteem Inventories* scale. Table 7 shows the post hoc t test results, which were used to determine if any significant differences could be found between the two schools in family mean scores. No statistically significant difference was found between the attitudes towards self in family areas of experience of sixth, seventh, and eighth grade boys in a single gender school and a mixed gender school. Hence, the fourth hypothesis failed to be confirmed and is therefore rejected.

Table 7

Two Sample t Test With Equal Variances of Adolescent Males Attending Mixed and Single Gender Catholic Parochial Schools in Grades 6, 7, 8 on Attitudes Towards Self in Family Areas of Experience

Group	Mean	Std. Dev.
Mixed Gender	5.36	2.24
Single Gender	6.07	2.25

t = -1.126

Note. \*p < .05.

### Hypothesis Five

Hypothesis five stated that boys attending a single gender school would have significantly higher attitudes towards self in personal areas of experience on the

*Coopersmith Self-Esteem Inventories* scale. Table 8 shows the post hoc t test results, which were used to determine if any significant differences could be found between the two schools in personal mean scores. No statistically significant difference was found between the attitudes towards self in personal areas of experience of sixth, seventh, and eighth grade boys in a single gender school and a mixed gender school. Hence, the fourth hypothesis failed to be confirmed and is therefore rejected.

Table 8

Two Sample t Test With Equal Variances of Adolescent Males Attending Mixed and Single Gender Catholic Parochial Schools in Grades 6, 7, 8 on Attitudes Towards Self in Personal Areas of Experience

Group	Mean	Std. Dev.
Mixed Gender	19.63	4.28
Single Gender	19.30	4.17

t = 0.275

Note. \*p < .05.

### Summary

This chapter presented the results found in this study. Findings were organized by research hypothesis. As is typical of quantitative research, tables and numerical data were provided to support the findings. By providing tables and statistical test results, the researcher aims to provide a clear picture of the data and the outcomes.

The primary finding of this study is that no statistical difference was found between boys attending the single gender school and the boys attending the mixed gender school. All five hypotheses were rejected based on a comparison of the mean scores of the overall assessment and each of the subscales. Furthermore, the t test results did not consistently show favorable results towards either school. As Table 9 reveals, the t test results do not show a consistent differences among the four subscales. Two of the subscales (family and academic) indicate higher means in the single gender school and the other two subscales (personal and social) show higher means in the mixed gender school. Even examining the results without looking for significant differences does not yield noteworthy patterns or consistent results favoring one school organizational type over the other.

Table 9

Summary of t Test Results from Four Subscales in the *Coopersmith Self-Esteem Inventories (SEI)*

	<i>SEI</i> Subscales			
	Social	Academic	Family	Personal
t test results	0.54	-0.57	-1.12	0.27

*Note.* \* $p < .05$ . Positive t test scores show a higher mean score for mixed gender schools and vice versa for negative scores and single gender schools.

## CHAPTER FIVE – SUMMARY AND CONCLUSION

The purpose of this exploratory study was to determine whether a difference in self-esteem exists between adolescent boys who attend a single gender school and adolescent boys who attend a mixed gender school. It was hoped that a better understanding of the self-esteem of adolescent boys would lead educators to find more appropriate ways to teach and organize boys in their schools. Insights into the struggles and possible solutions to the problems boys are experiencing in education today will not only benefit boys, but also benefit everyone in education. Even teachers, staff, and girls may benefit as educators continue to develop comprehensive understandings of different aspects that play roles in student learning. More appropriate practices, environments, and expectations are vitally needed in education for all students and this study aimed to further the understanding of those needs for boys.

This research used a survey-based quantitative design to collect the data. Participants in the study included fifty-eight sixth, seventh, and eighth grade males from two different schools. The first school was a mixed gender school where nineteen of the participants had attended for at least three years. The second school was a single gender school where thirty-eight participants had attended for at least three years. All participants took the *Coopersmith Self-Esteem Inventories*, which measures the self-esteem of participants broken down into four subscales.

This study was based on these five hypotheses, which related to the four subscales of the *Coopersmith Self-Esteem Inventories* survey:

1. Middle school boys attending the single gender school will have significantly higher attitudes towards self in overall areas of experience.
2. Middle school boys attending the single gender school will have significantly higher attitudes towards self in social areas of experience.
3. Middle school boys attending the single gender school will have significantly higher attitudes towards self in academic areas of experience.
4. Middle school boys attending the single gender school will have significantly higher attitudes towards self in family areas of experience.
5. Middle school boys attending the single gender school will have significantly higher attitudes towards self in personal areas of experience.

These five hypotheses were discussed with the findings presented in chapter four. This study's overriding conclusion revealed that no statistical difference had been found in any of the subscales. Therefore, all five hypotheses were rejected. Furthermore, even the small differences in each subscale were not consistent with each other, which further demonstrates the lack of results found within this study. In other words, even the most narrow differences were not showing favorable results or patterns for one school or the other, so neither can be considered to have more of an effect on student's self-esteem even in the slightest degree. This chapter will interpret and analyze the findings, discuss limitations of the study, and offer recommendations for future studies.

## Findings

The findings of this study were much more limited and narrow than the researcher had expected. The goal of this exploratory study was to determine whether self-esteem in students is significantly different in single gender schools or mixed gender schools. If the single gender school had significantly higher self-esteem scores, with previous studies showing higher academic achievement in single gender schools, then the strategies and practices in these single gender schools need to be studied in great depth to help the struggling boys in all schools today. The *Coopersmith Self-Esteem Inventories* is a tool to measure the self-esteem of participants in four areas including social, academic, family, and personal areas of experience (Coopersmith, 2002). However, the results refuted all hypotheses and showed neither school having a statistical advantage over the other in terms of positive self-esteem. In fact, the lack of significant difference and the equal split of t test results further proves that the results are inconclusive.

Self-esteem has been linked to academic achievement (Hamachek, 1995; Pajares & Schunk, 2001) and are connected in a reciprocal cycle that has students spinning in either positive or negative directions (Hamacheck, 1995). Finding and identifying environments where positive cycles are more prevalent than negative cycles is vital to the academic improvement and emotional stability of all students. This research found, however, that measuring self-esteem is not always an easy task. Rarely do surveys, filled out by people about themselves, report “low” self-esteem. Typically, people who are considered to have “low” self-esteem do not rate themselves low on self-esteem scales. More often, they are found to rate themselves in the middle of the range of possible scores (Kohn, 1994). This finding relates to the second assumption which the

investigator mentioned in chapter one. The self-reporting nature of surveys leaves room for error where the participant does not see himself as they truly are and thus do not report accurate information.

### Limitations to the Study

Due to this study's lack of results from the data, a deeper discussion of limitations is appropriate. In addition to the limitations previously discussed in chapter three, other factors may have played a role in this study. These limitations include the relatively small sample size, number of years that participants attended the schools, only one gender being studied, and the very nature of parochial schools.

The first limitation of this study was the small sample size available to the researcher. The total number of fifty-eight participants represents a small number for the typical survey. While seventy students were eligible to participate in the two schools combined, fifty-eight (or 82%) of them returned the parental permission form, signed the student assent form, and actually participated in the study. The problem with small samples sizes is that it becomes increasingly more difficult to generalize about populations (Gay, Mills, & Airasian, 2006). With such few participants, it becomes difficult to make conclusions about all students from the results of so few. Furthermore, the numerical difference between the two means must be larger as the sample gets smaller for it to be considered statistically significant. In other words, the difference between the means of the two groups must be larger as the groups get smaller in order to create statistically significant differences.



The second limitation of this study is the number of years each student has attended the school. In order to have the sample size as large as possible but still account for social norms within each school, the investigator set an eligibility limitation to attending the school for at least three years. The number of years each participant attended their respective school ranged from three years to eleven years (including pre-kindergarten, which both schools offer). Of the fifty-eight participants, almost half (twenty-eight, or 48%) had attended their school for five years or less. Furthermore, most of the students who had transferred into the single gender school had previously attended a mixed gender school. As Coopersmith (2002) states, self-esteem is developed early in a child's development and remains persistent for long periods of time. Individual judgments about themselves may take many years to change (Coopersmith, 2002).

Carl Rogers states that an individual's path or development as a fully functioning person is specific and unique (*"The Institute of Transpersonal Psychology,"* n. d.). Therefore, one cannot assume nor expect all students to have conformed or to have been changed by a school's environment in a specified number of years. This study may have found more significant results had it focused on only those students who had attended the single gender school or mixed gender school for their entire school career. However, this would have greatly reduced the number of eligible participants.

The third limitation includes the basis of this research. This study focused on males in education, but the results do not limit the potential outcome of this same study were it to be conducted with female participants. Historically, single gender schools for girls have been found to encourage academic achievement, as opposed to the mixed gender system, which traditionally favored males (Mael, 1998). As previously

mentioned, discovering techniques or practices that help develop positive self-esteem and academic achievement for one gender would be beneficial to both genders. Learning the best practices for males may lead to clues to discover best practices for females and vice versa. As educators develop better understandings of the factors that play into academic success, more appropriate practices can be developed to help all students succeed.

The fourth limitation of this study is the issue of conducting studies in parochial schools. Parochial schools develop and include religious doctrines into the curriculum. In this study, two Catholic schools participated in the study and the religious affiliation and curriculum may have had an effect on the outcome of the study. Furthermore, the link between many of the students as belonging to the same faith may create more connections to the school for those students. Connections affect self-esteem and the more a student has the higher their self-esteem is typically (Witherspoon, Schotland, Way, and Hughes, 2009). This study may have found different results if the study had been conducted in two public schools.

#### Recommendations for Further Research

The researcher recommends that additional studies be conducted to further the understanding of the components, which affect academic success. Although little corroborating evidence was found in this study, there is no doubt that adolescents struggle with self-esteem. Educators would better serve their goals if they more deeply understood the connection between self-esteem and school success. Author Jeanne Elum says, “The conflict between the need to belong to a group and the need to be seen as

unique and individual is the dominant struggle of adolescence.” Adolescent students are constantly struggling with finding and creating those connections in their lives, while at the same time being highly aware or sensitive of what others think of them. In the light of this, the following should be considered for future research:

- 1) Based on the limitations of this study, a survey should be given to a larger number of students, who have attended only the single or the mixed gender schools for their entire academic career.
- 2) Similarly, as with the previous recommendation, a study should be conducted using a survey in a single gender school for girls, and also with a larger sample size than the current study.
- 3) A similar study should be pursued in a public school setting to determine effects religious teaching may have on the results.
- 4) A similar study in which specific questions are discussed with eligible participants in an attempt to discover the strengths and weaknesses of single gender and mixed gender schools and how they each relate or affect self-esteem.

### Conclusion

Results of this study do not support the stated hypotheses that single gender schools would develop more positive self-esteem for boys. However, from the researcher’s personal experiences, some quality exist in single gender schools, which appears to set them apart from mixed gender schools. The researcher has observed the single gender school using at least some of the ten learning differences with positive results. Whether it be more engagement in the classroom activity, striving to achieve

academically, or more confidence in themselves, the boys in the single gender school seem more comfortable and more eager to learn.

Although this exploratory study was not able to identify the factor or factors that create the difference. The difference between male students in mixed gender schools and single gender schools may manifest itself in areas other than self-esteem. For example, students may improve in behavior, personal satisfaction with the school, or positive attitude toward peers and teachers. Either way, boys are continuing to struggle in school and researchers need to define and encourage new practices to promote greater understanding and empathy regarding boys' success in schools. As Carl Rogers (n.d.) states in his "actualizing tendency",

During a vacation weekend some months ago, I was standing on a headland overlooking one of the rugged coves, which dot the coastline of northern California. Several large rock outcroppings were at the mouth of the cove, and those received the full force of the great Pacific combers, which, beating upon them, broke into mountains of spray before surging into the cliff-lined shore. As I watched the waves breaking over these large rocks in the distance, I noticed with surprise what appeared to be tiny palm trees on the rocks, no more than two or three feet high, taking the pounding of the breakers. Through my binoculars, I saw that these were some type of seaweed, with a slender "trunk" topped off with a head of leaves. As one examined a specimen in the interval between the waves, it seemed clear that this fragile, erect, top-heavy plant would be utterly crushed and broken by the next breaker. When the wave crunched upon it, the trunk bent almost flat, the leaves were whipped into a single line by the torrent of water, yet

the moment the wave had passed, here was the plant again erect, tough, resilient. It seemed incredible that it was able to take this incessant pounding hour after hour, day after night, week after week, perhaps, for all I know, year and year, and all the time nourishing itself, extending its domain, reproducing itself; in short, maintaining and enhancing itself in this position which, in our shorthand, we call growth. Here in this palm like seaweed was the tenacity of life, the forward thrust of life, the ability to push into an incredibly hostile environment and not only hold its own, but to adapt, develop, and become itself.

The struggle to discover solutions to the problem of boys' academic successes or lack thereof will continue. Educators are called to ensure success of all students through appropriate organization, teaching strategies, and practices. However, discovering these elements is difficult and tedious. Furthermore, one structure or "size" does not fit all students and individual students may fit better at one type of school rather than another. In no way does this infer that one system is right or wrong, or that a lack of results from this study means that no difference exist; the meaning here is that this study did not identify any differences. Researchers must not permit setbacks or inconclusive results prevent them from striving to achieve their goal of academic and emotional confidence and success for all students.

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Appendix A

Letter of Parental Consent for the Single Gender School

## Parent Permission Form

### **PROJECT TITLE:**

The Effects of Single Gender Schools on Boy's Self Esteem and Academic Confidence

Your child is being invited to participate in a research project conducted by Nicholas Morgan from the College of Education at the University of Houston in support of a doctoral dissertation. The project is part of a dissertation under the supervision of Dr. Dov Liberman associate professor in the Educational Psychology department at the University of Houston.

### **NON-PARTICIPATION STATEMENT**

Your child's participation is voluntary and you or your child may refuse to participate or withdraw at any time without penalty or loss of benefits to which your child is otherwise entitled. Your child may also refuse to answer any question.

### **PURPOSE OF THE STUDY**

The purpose of this study is to examine the effects single gender schooling may have on a middle school boys' self-esteem, academic confidence, and academic relationships. The study will last one week.

### **PROCEDURES**

Seventy-seven subjects at two locations will be asked to participate in this project. Your child will be one of approximately 24 subjects asked to participate at this location.

If given your permission, your child will be asked to take an online survey at school, which will last no longer than 40 minutes. This survey will take place in the computer lab at his school and the results will be sent to only the investigator.

The total time commitment is 40 minutes.

### **CONFIDENTIALITY**

Your child's participation in this project will be anonymous. All participants will be directed not to enter their name, but a survey code number on their survey. The investigator will keep this survey code number until all data has been collected just in case further clarification is needed. However, the investigator will not share the identification information with anyone.

**RISKS/DISCOMFORTS**

There are no anticipated risks to the participants.

**BENEFITS**

While your child will not directly benefit from participation, his participation may help investigators better understand how education and schooling affects boys.

**ALTERNATIVES**

Participation in this project is voluntary and the only alternative to this project is non-participation.

**PUBLICATION STATEMENT**

The results of this study may be published in professional and/or scientific journals. It may also be used for educational purposes or for professional presentations. However, no individual subject will be identified.

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**SUBJECT RIGHTS**

1. I understand that parental consent is required of all persons under the age of 18 participating in this project. I understand that my child will also be asked to agree to participate.
2. All procedures have been explained to me and I have been provided an opportunity to ask any questions I might have regarding my child's participation.
3. Any risks and/or discomforts have been explained to me.
4. Any benefits have been explained to me.
5. I understand that, if I have any questions, I may contact Nicholas Morgan at 713-682-8383. I may also contact Dr. Dov Liberman, faculty sponsor, at 713-743-9826. Furthermore, Dr. Matthew Paradise, a licensed clinical psychologist, who works with the Regis School of the Sacred Heart will discuss any issues, which develop from participation in this study. He may be reached at 713-682-8383.
6. I have been told that my child or I may refuse to participate or to stop his/her participation in this project at any time before or during the project. My child may

also refuse to answer any question.

7. ANY QUESTIONS REGARDING MY CHILD'S RIGHTS AS A RESEARCH SUBJECT MAY BE ADDRESSED TO THE UNIVERSITY OF HOUSTON COMMITTEE FOR THE PROTECTION OF HUMAN SUBJECTS (713-743-9204). ALL RESEARCH PROJECTS THAT ARE CARRIED OUT BY INVESTIGATORS AT THE UNIVERSITY OF HOUSTON ARE GOVERNED BY REQUIREMENTS OF THE UNIVERSITY AND THE FEDERAL GOVERNMENT.
8. All information that is obtained in connection with this project and that can be identified with my child will remain confidential as far as possible within legal limits. Information gained from this study that can be identified with my child may be released to no one other than the principal investigator and Dr. Liberman. The results may be published in scientific journals, professional publications, or educational presentations without identifying my child by name.

NAME OF CHILD (STUDENT):

\_\_\_\_\_

I agree to allow my child (student) to participate in this research project:

YES \_\_\_\_\_ NO \_\_\_\_\_

Signature of

Parent/Guardian: \_\_\_\_\_

## Appendix B

### Letter of Parental Consent for the Mixed Gender School



## Parent Permission Form

### **PROJECT TITLE:**

The Effects of Single Gender Schools on Boy's Self Esteem and Academic Confidence

Your child is being invited to participate in a research project conducted by Nicholas Morgan from the College of Education at the University of Houston in support of a doctoral dissertation. The project is part of a dissertation under the supervision of Dr. Dov Liberman associate professor in the Educational Psychology department at the University of Houston.

### **NON-PARTICIPATION STATEMENT**

Your child's participation is voluntary and you or your child may refuse to participate or withdraw at any time without penalty or loss of benefits to which your child is otherwise entitled. Your child may also refuse to answer any question.

### **PURPOSE OF THE STUDY**

The purpose of this study is to examine the effects single gender schooling may have on a middle school boys' self-esteem, academic confidence, and academic relationships. The study will last one week.

### **PROCEDURES**

Seventy-seven subjects at two locations will be asked to participate in this project. Your child will be one of approximately 24 subjects asked to participate at this location.

If given your permission, your child will be asked to take an online survey at school, which will last no longer than 40 minutes. This survey will take place in the computer lab at his school and the results will be sent to only the investigator.

The total time commitment is 40 minutes.

### **CONFIDENTIALITY**

Your child's participation in this project will be anonymous. All participants will be directed not to enter their name, but a survey code number on their survey. The investigator will keep this survey code number until all data has been collected just in case further clarification is needed. However, the investigator will not share the identification information with anyone.

**RISKS/DISCOMFORTS**

There are no anticipated risks to the participants.

**BENEFITS**

While your child will not directly benefit from participation, his participation may help investigators better understand how education and schooling affects boys.

**ALTERNATIVES**

Participation in this project is voluntary and the only alternative to this project is non-participation.

**PUBLICATION STATEMENT**

The results of this study may be published in professional and/or scientific journals. It may also be used for educational purposes or for professional presentations. However, no individual subject will be identified.

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**SUBJECT RIGHTS**

9. I understand that parental consent is required of all persons under the age of 18 participating in this project. I understand that my child will also be asked to agree to participate.
10. All procedures have been explained to me and I have been provided an opportunity to ask any questions I might have regarding my child's participation.
11. Any risks and/or discomforts have been explained to me.
12. Any benefits have been explained to me.
13. I understand that, if I have any questions, I may contact Nicholas Morgan at 713-682-8383. I may also contact Dr. Dov Liberman, faculty sponsor, at 713-743-9826. Furthermore, Dr. Matthew Paradise, a licensed clinical psychologist, who works with the Regis School of the Sacred Heart will discuss any issues, which develop from participation in this study. He may be reached at 713-682-8383.
14. I have been told that my child or I may refuse to participate or to stop his/her participation in this project at any time before or during the project. My child may

also refuse to answer any question.

15. ANY QUESTIONS REGARDING MY CHILD'S RIGHTS AS A RESEARCH SUBJECT MAY BE ADDRESSED TO THE UNIVERSITY OF HOUSTON COMMITTEE FOR THE PROTECTION OF HUMAN SUBJECTS (713-743-9204). ALL RESEARCH PROJECTS THAT ARE CARRIED OUT BY INVESTIGATORS AT THE UNIVERSITY OF HOUSTON ARE GOVERNED BY REQUIREMENTS OF THE UNIVERSITY AND THE FEDERAL GOVERNMENT.
16. All information that is obtained in connection with this project and that can be identified with my child will remain confidential as far as possible within legal limits. Information gained from this study that can be identified with my child may be released to no one other than the principal investigator and Dr. Liberman. The results may be published in scientific journals, professional publications, or educational presentations without identifying my child by name.

NAME OF CHILD (STUDENT):

\_\_\_\_\_

I agree to allow my child (student) to participate in this research project:

YES \_\_\_\_\_ NO \_\_\_\_\_

Signature of  
Parent/Guardian: \_\_\_\_\_

## Appendix C

Letter of Student Assent for the Single Gender School

## Student Assent Form

### **PROJECT TITLE:**

The Effects of Single Gender Schools on Boys' Self Esteem and Academic Confidence

You are invited to participate in a research study conducted by Nicholas Morgan a student at the University of Houston. The project is part of a dissertation under the supervision of Dr. Dov Liberman, associate professor in the Educational Psychology department at the University of Houston.

You can say no if you do not want to participate in this study. Adults cannot make you participate in this study if you do not want to. If you agree to participate in the study now, but change your mind about it later, you can stop being in the study, and no one will be angry with you.

Forty-six students are being asked to participate at your school with a total of seventy-seven students being asked to participate in the entire study.

### **WHAT IS RESEARCH?**

Research is a way to learn information about something. Researchers study different subjects the way you study English or math as a subject in school.

There are many reasons people choose to be in a research study. Sometimes people want to help researchers learn about ways to help people or make programs better.

You should understand why you would say yes to be a research participant. Take the time you need to decide if you want to be in this study. You can ask your Head Mistress, Dr. Taylor any question you have about the study.

### **WHY ARE WE DOING THIS RESEARCH?**

In our research, we want to learn about middle school boys' self-esteem and academic confidence.

### **WHAT WILL HAPPEN DURING THE STUDY**

At school, you will be asked to take an online survey, which will last no longer than 40 minutes. Before the survey begins, you will be given the opportunity to ask questions or get further clarification. This survey will take place in the computer at your school and the results will be sent to only the investigator.

The total time commitment is 40 minutes.

### **COULD GOOD THINGS HAPPEN TO ME FROM BEING IN THIS STUDY?**

What we learn in this study may not help you now, but it may help educators understand middle school boys and what they need to be successful. This may help other boys in school later on.

### **COULD BAD THINGS HAPPEN TO ME FROM BEING IN THIS STUDY?**

The investigator does not anticipate any bad things happening to you.

### **DO I HAVE OTHER CHOICES?**

You can choose not to participate in this study, and you can decide you no longer want to be in the study at any time. You may choose not to answer any question with which you are not comfortable. If you choose not to participate at any time, you will not be penalized.

### **WHAT IF I HAVE QUESTIONS?**

If you have any questions or worries about the research, you can ask Nicholas Morgan at 713-682-8383 before, during, or after your completion of the survey. If you wish to talk to someone else or have questions about your rights as a participant, call the University of Houston Committee for the Protection of Human Subjects at 713-743-9204. Furthermore, Dr. Matthew Paradise, a licensed clinical psychologist, who works with the Regis School of the Sacred Heart will discuss any issues, which develop from participation in this study. He may be reached at 713-682-8383.

### **DOCUMENTATION OF PARTICIPANT'S ASSENT**

**I agree to participate in this study called:** The Effects of Single Gender Schools on Boy's Self-Esteem, Academic Confidence, and Academic Relationships

Signature of minor participant: \_\_\_\_\_

Date: \_\_\_\_\_

ANY QUESTIONS REGARDING MY RIGHTS AS A RESEARCH SUBJECT MAY BE ADDRESSED TO THE UNIVERSITY OF HOUSTON COMMITTEE FOR THE PROTECTION OF HUMAN SUBJECTS (713-743-9204). ALL RESEARCH PROJECTS THAT ARE CARRIED OUT BY INVESTIGATORS AT THE UNIVERSITY OF HOUSTON ARE GOVERNED BY REQUIREMENTS OF THE UNIVERSITY AND THE FEDERAL GOVERNMENT.

## Appendix D

Letter of Student Assent for the Mixed Gender School

## Student Assent Form

### **PROJECT TITLE:**

The Effects of Single Gender Schools on Boy's Self Esteem and Academic Confidence

You are invited to participate in a research study conducted by Nicholas Morgan a student at the University of Houston. The project is part of a dissertation under the supervision of Dr. Dov Liberman, associate professor in the Educational Psychology department at the University of Houston.

You can say no if you do not want to participate in this study. Adults cannot make you participate in this study if you do not want to. If you agree to participate in the study now, but change your mind about it later, you can stop being in the study, and no one will be angry with you.

Twenty-four students are being asked to participate at your school with a total of seventy-seven students being asked to participate in the entire study.

### **WHAT IS RESEARCH?**

Research is a way to learn information about something. Researchers study different subjects the way you study English or math as a subject in school.

There are many reasons people choose to be in a research study. Sometimes people want to help researchers learn about ways to help people or make programs better.

You should understand why you would say yes to be a research participant. Take the time you need to decide if you want to be in this study. You can ask your principal, Mrs. Morgan any question you have about the study.

### **WHY ARE WE DOING THIS RESEARCH?**

In our research, we want to learn about middle school boys' self-esteem, academic confidence, and academic relationships.

### **WHAT WILL HAPPEN DURING THE STUDY**

At school, you will be asked to take an online survey, which will last no longer than 40 minutes. Before the survey begins, you will be given the opportunity to ask questions or get further clarification. This survey will take place in the computer at your school and the results will be sent to only the investigator.

The total time commitment is 40 minutes.



### **COULD GOOD THINGS HAPPEN TO ME FROM BEING IN THIS STUDY?**

What we learn in this study may not help you now, but it may help educators understand middle school boys and what they need to be successful. This may help other boys in school later on.

### **COULD BAD THINGS HAPPEN TO ME FROM BEING IN THIS STUDY?**

The investigator does not anticipate any bad things happening to you.

### **DO I HAVE OTHER CHOICES?**

You can choose not to participate in this study, and you can decide you no longer want to be in the study at any time. You may choose not to answer any question with which you are not comfortable. If you choose not to participate at any time, you will not be penalized.

### **WHAT IF I HAVE QUESTIONS?**

If you have any questions or worries about the research, you can ask Nicholas Morgan at 713-682-8383 before, during, or after your completion of the survey. If you wish to talk to someone else or have questions about your rights as a participant, call the University of Houston Committee for the Protection of Human Subjects at 713-743-9204. Furthermore, Dr. Matthew Paradise, a licensed clinical psychologist, who works with the Regis School of the Sacred Heart will discuss any issues, which develop from participation in this study. He may be reached at 713-682-8383.

### **DOCUMENTATION OF PARTICIPANT'S ASSENT**

**I agree to participate in this study called:** The Effects of Single Gender Schools on Boy's Self-Esteem, Academic Confidence, and Academic Relationships

Signature of minor participant: \_\_\_\_\_

Date: \_\_\_\_\_

ANY QUESTIONS REGARDING MY RIGHTS AS A RESEARCH SUBJECT MAY BE ADDRESSED TO THE UNIVERSITY OF HOUSTON COMMITTEE FOR THE PROTECTION OF HUMAN SUBJECTS (713-743-9204). ALL RESEARCH PROJECTS THAT ARE CARRIED OUT BY INVESTIGATORS AT THE UNIVERSITY OF HOUSTON ARE GOVERNED BY REQUIREMENTS OF THE UNIVERSITY AND THE FEDERAL GOVERNMENT.

