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Breaking Through: A Study of Educators in All-male Classrooms and the Instructional Decisions They Use to Bridge the Gender Academic Achievement Gap

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Breaking Through: A Study of Educators in All-male Classrooms and the Instructional Decisions They Use to Bridge the Gender Academic Achievement Gap

A Dissertation

Submitted to the Graduate Faculty of the
University of New Orleans
in partial fulfillment of the
requirements for the degree of

Doctor of Philosophy
in
Educational Administration

by

Kelly M. Clark

B.A. University of New Orleans, 2009
M.A.T. University of New Orleans, 2015

May 2024
Dedication

To my (not so little anymore) miracle babies, Tayler Mae and Easton
May you always remember determination and heart will help you succeed.
Pray hard, dream big, and know that I am always here for you.
Acknowledgment

I began the doctoral program with the intent of studying both the pros and cons of single-sex education, specifically for males. Searching for literature and resources often became arduous with few studies conducted in America due to the lack of single-sex public schools and the limited access to single-sex private schools which have the right to refuse to participate. This only further increased my curiosity and determination. My research question and interview questions centered around my interest in exploring the possible academic and social influences that result from attending a single-sex school. My hope is to bring light to the possibility that separating genders in the classroom can allow educators to teach more effectively when gearing their lessons and methods to a more specific group of students while properly utilizing boys’ energy and potential to help them become more successful in the classroom.

My passion for education was unexpected, and I can only attest it to my strong faith reminding me that God always has a plan. Completing my goal has not always been easy while balancing my loves – family, personal, professional, and student life – but I know there is no way I could have survived without the love and support from the following people:

To my husband Timmy – Thank you for always encouraging my crazy dreams and ideas, allowing me to jump right in on nothing more than faith and a prayer, supporting me in whatever it takes to help me not only survive but thrive, picking up my slack around the house, and even bringing meals to the computer to ensure I was eating. More importantly, thank you for loving me unconditionally, even when I am not at my best. I promise I will slow down.

To my daughter Tayler Mae and son Easton – I know my doctoral pursuit during these last five years has not been the easiest thing for either of you. Thank you for understanding and forgiving me when I sometimes dropped the ball, missed events, and was extra tired. Your
bright-eyed smiles and sweet encouragements always pushed me a little harder, especially on
days I was missing out on you both. Neither the house, nor me and dad, would have survived
without you pitching in. Remember, you make our world go ‘round. You’re the best!

To my four-legged, emotional support besties Charley, Molly, and Maggie – From the
greetings in the doorway and the late night snuggles, I can’t imagine how boring (and less hairy)
this life would be without you.

To my parents – The educational opportunities you provided at home, in the best schools,
and in daily life, as well as the constant reminder that faith and family come first is something I
wish I could go back in time and bottle. You have been the house that built me, calmed the
storm, embraced the young energy, stood by the sassy and stubborn, and given unconditional
love and support. I may not have always done things the easiest way but thanks for always letting
me create my own path.

To my sister and brother – While our age differences seemed like such a large gap when
we were younger and I may not have baked the best donuts, all I have ever wanted to do was
love and protect you, be a positive example, and make you proud. Always know that I am here,
no matter how close or far.

To my mother-in-law and father-in-law – It’s said that it takes a village, and I simply
can’t imagine hand picking a better family to accept me, love me, push me, and help take care of
me and my family in so many unimaginable ways. I’m sure the tab is long, but I’ve always got
you.

To Truck/Cabin/Spoon and my BEBS, the best friends a girl can have – The
encouragement, necessary reality checks, games, concerts, shopping breaks, long winded
brunches, dinners, trips, shared laughs, tears, and fears, and the support in any and every way
possible is never unnoticed and more appreciated than you will ever know. Thanks for reminding me it is ok to take time for myself.

To my office krewe, my nest in the tree – Put this on a sticky note: I cannot imagine my life without rides on the positivity train. Our daily jokes, need to project, and taste for chocolate created a makeshift family that has loved and supported me, picked me up, kept me in check, grounded me, and laughed with me even when the cart is before the horse and the gators are up to their eyeballs.

Eric, your constant gentle nudging, support, and belief in me is something I can never thank you enough for. Your genuine love and want to see those around you succeed is unmatched as a leader.

Jill, from fashion to food to my failed attempt with flowers and most importantly the friendly advice and motherly tough love when I need it, you have always had my back.

To my Fluffledorfs – Too many laughs, too many vents, and no one else I’d rather share this crazy triangle with other than you two. Remember, when the hooting owl is a little off, just leave salt on the table. “Caw” and I’ll come running.

Ronnie, you’re the older brother I never knew I needed, and hawks certainly have to stick together. Thanks for the best off the cuff humor, hyping me up and chilling me out at all the right moments, and letting me annoy you like any little sister would do. Do I get that baked cake now?

Phil, those expert spreadsheet skills, proofreading edits, formatting fixes, and the 24-hour, 7 day a week sounding board that you always provide is priceless. Hey, it’s your turn.

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Mrs. Patty and Mrs. Teresa, I will never be able to repay you for the free years of mentoring, mothering, tough love, laughs, and lessons that you have given me. You have been an inspiration, and a large part of who I am as an educator is directly because of your influence and example.

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Abstract

In reviewing academic achievement gaps across United States school districts, educational research samples show deviations between males and females with males statistically outperforming females in math while females typically outperform males in reading and language arts. With strict American educational policies set in place to promote equality and equity in the classroom, research and long-term results on the impact and possible benefits of male, single-sex classrooms in the American educational system are limited. This study seeks to explore educators’ best practices for teaching male students and effective strategies to cater to their different needs. By qualitatively studying the experiences of teachers through a series of observations and interviews, the researcher gathered and analyzed the data in a multiple case study using the Multiple Intelligence theory to determine the instructional decision-making approach of teachers in single-sex classrooms. Through the triangulation of data in the cross-case thematic analysis there were two major themes that emerged: movement and Social and Emotional Learning (SEL). Three secondary but relevant themes emerged: motivation, organization, and relationships. The results further develop the deficient literature needed to understand the instructional decisions of teachers in all-male classrooms and the possible benefits, downfalls, and limitations of educators in the separation of the sexes in a classroom setting. These results may be useful in understanding methods to increase male academic success rates and to lessen the gender academic achievement gap through improved teaching techniques that will enhance male students’ engagement and understanding.

Keywords: academic achievement gap; single-sex classrooms; effective strategies; experiences of teachers; Multiple Intelligence theory; separation of sexes; instructional decisions
Chapter 1: Introduction

Both males and females in the United States of America have access to education, but their academic success rates are uneven. Research evidence shows there is a gender academic achievement gap between males and females. Data suggests female students outperform males in an academic setting (Alfarhan & Dauletova, 2019; Piechura-Couture, et al., 2011; Sax, 2016; Smith, 2004). When ranked separately by gender, the highest scores and grade point averages from males that are accepted into universities is relatively lower than the higher scores and grade point averages provided by females accepted into the same universities (Alfarhan & Dauletova, 2019). Reardon et al. (2018) research of the gender academic achievement gaps across almost 10,000 U.S. school districts demonstrates a positive correlation between gender and particular subjects such as math and ELA. In a study by Smith (2004) at Brunel University, females outperformed their male peers in geography classes even though all students began the course testing on the same level. One major factor separating the two sexes is a female’s likeliness to complete homework, for example (Sax, 2016). This is not to say that females are necessarily smarter than males but instead are more concerned with seeking approval from their teachers through demonstrating their capabilities in their work.

Male students are also referred to special education classes at a higher rate than their female peers (Piechura-Couture, et al., 2011). When surveyed, 59% of faculty and male students in a 2011 study report improved male behavior when students are separated by gender and 86% of the faculty reporting increased participation from males when in a classroom setting by themselves (Piechura-Couture, et al., 2011). Though the gap exists and is narrower during middle school age, there is a significant increase as the males and females continue into junior high and high school years.
To combat unequal academic achievement between genders, single-sex education has become a popular structure, but one not fully understood. Because America has laws against gender segregation to afford equal opportunities for males and females, research on the outcomes that could emerge from separating boys and girls in an educational environment is often limited. Bunting and Watts (1996) surveyed a panel of educators, doctors, and lawyers to evaluate the pros and cons of single-sex education for both the teachers and the students. This study suggested that boys are continually labeled by teachers as not up to par in a classroom setting when compared to their female peers. Gurian & Stevens (2005) suggest that boys often appear to be less interested in academics than their female peers. This may lead to greater behavior problems in the classroom not because of their lack of capabilities but because educators are not sure how to best serve the young men. There is a large misconception that boys are less engaging, less capable, and less motivated; however, their needs and abilities may often be just misunderstood.

Biological differences can produce males that are more physically active, less responsible, and more diverse in their learning styles, often responding to visual and kinesthetic teaching strategies (Aguayo et al., 2021; Alfarhan & Dauletova, 2019; Brualdì, 1996; Gardner, 2006; Laster, 2004; Wilson, 2018). Research supports education geared specifically to males based on these physiological differences (Gurian & Stevens, 2005; King, 2013; Reichert & Hawley, 2010; Sax, 2016). While coeducational classrooms are most commonly the norm, single-sex education is becoming more appealing to school districts across the country to help students blossom and excel by utilizing their uniquely independent biological factors and growth (Cable & Spradlin, 2008). Continued exploration of the separation of males from females, at
least in core curriculum classes, could be a beneficial method to bridging the gender academic achievement gap by understanding and utilizing the various learning styles of male students.

**Problem Statement**

A gender academic achievement gap occurs in schools across the country (Sax, 2016). Because males are biologically differently than females, their brain differences make them require more direct stimulation (Gurian & Steves, 2011; Sax, 2005). These physiological differences often lead teachers to believe the male student is not as capable as his female peer. A male’s brain develops differently and matures slower than a female’s brain, often requiring a variety of methods to help code, sort, and process information (Gurian & Stevens, 2005).

Although policies may restrict single-sex classrooms in many public schools, research has been conducted, mostly in the American private sector and other countries, that suggests not only are there racial disparities in advancement, but there are also stark differences based on biological sex differences (Griffin et al., 2013; Gurian & Stevens, 2011; Piechura-Couture, et al., 2011; Sax, 2016). These studies have shown males are more likely to struggle both academically and socially in a co-educational school setting compared to their female counterparts (Bigler & Signorella, 2011). Even more troublesome is that within the literature that exists, research by Eliot (2013) claims most of the research focuses on the differences between male and female adult brains, but that children’s brains vary greatly from adults. The differences in the development of the brain only makes the need for studying the educational separation of adolescent males from females even more necessary to better utilize the male’s maturity, learning pace, and interests as an educational tool.

Studying the potential strengths and weakness of the male student in a specific environment can be challenging because of policies in place. The Elementary and Secondary
Education Act of 1965 (ESEA) and the Higher Education Act of 1965 were mandated to ensure that schools would receive proper funding for professional development, resources, and educational programs that would help further students’ academic successes, yet no focus was geared specifically to students’ various learning styles that may result from biological differences. The Educational Amendments of 1972 soon followed to ensure students would not be discriminated against in federally funded educational settings based on their gender (Education Amendments Act of 1972). Although the enactment of Title IX aimed to create gender equity in athletics, its effects were also felt in the educational setting by subsequently preventing public schools from creating single-sex classrooms (Cable & Spradlin, 2008). Inherently, this significantly created a smaller sample size for researchers to study single-sex classrooms. It also impedes schools’ abilities to provide the most effective instructional strategies and environments for their students, by creating more disparity in learning styles and behaviors within individual classrooms. The revision became an unplanned outgrowth that stifled possible research exploring the notion that boys and girls may learn more effectively when separated from each other. The addition of the No Child Left Behind Act (2001), however, allowed for the expansion of single-gender public classrooms with specific guidelines from Congress. Even with the newer allowances and a slight increase in classroom separations allowing for the expansion in research on the benefits of single-sex education, there is still limited research that explores the learning style and behaviors of male students who are falling behind (Dwarte, 2014; Gurian & Stevens, 2005; Sax, 2016). It is important, however, to explore what is known about male brains to understand and use this information to increase male students’ motivation, understanding, and higher level of thinking in the classroom.
Statement of Purpose

The purpose of this study was to explore how learning styles and behaviors in an all-male classroom may influence educators’ teaching methods and interactions as they work to help their students achieve academic success. Biological differences and physiological development played a pivotal role in how males learn, making them more likely to be misunderstood. A student’s full intelligence cannot be solely measured by how well he scores on an IQ test. There is more than one way to measure knowledge with each form of Gardner’s (2006) eight intelligences as equally as important (Brown & Meyers, 2008; Brualdi Timmins, 1996). Recognizing the role of educators and their use of educational tools to best guide instruction to further develop their students’ unique learning skills in single-sex classrooms was critical to the study’s research. Guided by the theory of Multiple Intelligences, this collective multiple case study adds to the deficiency of recent literature in educators’ practices as it explored academic benefits and/or drawbacks in separating males from females in a classroom setting. The study’s findings may contribute to understanding the methods and planning strategies teachers recognize and implement to increase male academic success through specific teaching and motivational lessons. This study examines young males, ages twelve through eighteen, in single-sex classrooms and the ways in which their teachers may need to cater to their specific needs. The study answers the following research question: How do educators in all-male classrooms make decisions about classroom instruction?

Significance of the Study

Exploring teachers’ experiences and observing classrooms of all male students was vital to the research as it is these lived moments inside the classrooms by both groups that helped guide the research. The resulting observations and interviews were analyzed through the lens of
Gardner’s Multiple Intelligence Theory. Multiple Intelligences, also known as MI, may be used by educators to formulate lessons geared more to the needs of a variety of students, specifically in single-gender classrooms. Focusing on males’ strengths, weaknesses, and interests may provide the students with specialized instructional strategies that can optimize their learning environment and bring an appreciation for learning (Reichert & Hawley, 2010).

Offering instruction that allows for exploration using Multiple Intelligences could provide opportunities for a variety of intelligences to shine through to help students better learn concepts in a way they can understand and relate to (Tamilselvi & Geetha, 2015). If students are understanding more easily, they will be more focused and feel compelled to continue learning (King, 2013; Reichert & Hawley, 2010). When males feel comfortable with a class’s subject material, they tend to increase their study time and show more interest in cultural and political contexts (Sax, 2016).

Using the lens of Gardner’s theory of Multiple Intelligences may bring about effective learning by capitalizing on students’ strengths and using a positive approach for their weaknesses may transform the male student’s classroom experience. Proponents of MI imply that educators should be thoughtful and engage their learners through means of instruction that will produce critical thinking (Wilson, 2018). Effective learning and quality education can only begin when students think critically. The MI theory recommends using strategies that cater to students’ varied intelligences, which may be deciphered more easily in single-sex classrooms. Students’ inherent abilities may be further developed with educators and pedagogy that is open to the potential that multiple intelligences should not be confined to a specific set of skills. Instead of limiting them to generic tests, it is best to “help uncover and foster the individual’s competences” (Gardner, 2006, p. 207).
Gardner’s (1983; 2006) Multiple Intelligence theory and Sax’s (2016) research not only support gender differences but also suggest that classroom separation may allow boys the freedom to be themselves, and teachers an opportunity to use strategies that may be more conducive to their students’ learning styles and prior knowledge. This could produce children who are more actively involved in their own learning while promoting more creativity and maturity than the traditional educational methods of the past (Aguayo et al., 2021). According to the MI theory, presenting material that is geared towards gender differences allows for more individualized learning styles that may help foster the mastery of skills. This may promote more Professional Development (PD) and training tailored to gender specific instructional strategies. On a larger scale it could possibly influence policies that allow for & encourage change to traditional public school co-educational classrooms.

**Limitations**

Using a case study posed some possible limitations to consider before I began my exploration of educators in all-male classrooms. In qualitative, empirical research such as my study, there was no set formula to arrive at my explanations of the phenomenon; whereas quantitative, experimental research provides numerical data obtained using fixed methods (Creswell & Creswell, 2018; Yin, 1981). The qualitative approach allowed for a subjective interpretation of my efforts and findings that will not be satisfactory to all.

In addition to choosing an empirical research method to study this phenomenon, the selection of participants could also be considered a limitation. Participants were suggested by the school’s gatekeepers, such as the principals and curriculum instructors. While the selection process did not provide an opportunity for the researcher to have a direct hand in choosing the participants, it did entrust the gatekeepers to identify and create a group consisting of a variation
of the teachers’ personalities, educational backgrounds, experiences in the classroom, and professional training in single-sex classrooms existing ahead of the interviews and observations. These factors may have skewed results that could be different if participants were chosen specifically by the researcher or in a strictly randomized matter.

**Delimitations**

Boundaries restricted my findings in a few ways. First, the limited number of participants provided a small sample size. The number of participants was intentionally kept small, not only for an easily manageable group but to use a percentage of participant population similar to the most recent statistical ratio of male to female teachers. A small group of participants can be a limitation (Creswell & Creswell, 2018; Yin, 1981); however, the lower number allowed me to better understand the teachers and their methods in the classrooms as well as the male students’ learning styles and behaviors within this same environment. This focus helped me recognize and analyze teachers’ planning strategies, implementation of lessons, student learning styles, and student behaviors that foster or suppress learning in all-male classrooms. In addition to the sample size, using only two location sites presented another boundary. Limiting the location, however, also assisted in manageability and access.

While my subjectivity is a limitation, choosing to use a qualitative method has limited generalizability. My goals and responsibilities for my study were to set aside personal feelings to determine what is meaningful (Yin, 1981) in the research and which aspects are irrelevant. If a researcher attempts to replicate a similar study of educators in all-male classrooms, my research design and experiences will yield different results from the new study. With the focus solely on all-male classrooms, this study will also not offer a complete understanding of instructional decisions made in all single-sex education environments.
Definition of Terms

To provide a clear understanding of single-sex education, the following key terms are defined:

*Academic Achievement Gap* – the statistically proven and studied academic difference between a group of students performing significantly higher than another group of students. Student grouping may be based on a variety of factors such as race, ethnicity, socio-economic status, gender, and age (Ladson-Billings, 2006; McCreary, 2011).

*Coeducational Classroom* – a learning space with both males and females together learning the academic curriculum with the same approach at the same time.

*Gender* – referring to either a man or a woman in the confines of societal and cultural constructs, not biological differences (Badjanova et al., 2017)

*Gender Academic Achievement Gap* – the statistically proven and studied academic difference between the sexes with female students performing significantly higher than male students. These differences are evident in areas such as classroom setting, standardized testing, formative and summative assessments, and classroom behaviors (Alfarhan & Dauletova, 2019; Mertens, 2008; McCreary, 2011).

*Female* – a biological girl or woman born with XX chromosomes who identifies as a female.

*Males* – a biological boy or man born with XY chromosomes who identifies as a male.

*Sex* – the biological makeup of person at birth; identifies males and females based on their biological makeup of X and Y chromosomes (Bale & Epperson, 2017; Gurian & Stevens, 2011; Sax, 2006, 2016).
Single-Sex Classroom – a learning space with only male or female students learning the academic curriculum separately from the opposite sex.
Chapter 2: Review of the Literature and Theoretical Framework

A gender academic achievement gap exists in schools whether a student comes from a low socioeconomic class or an affluent community (Sax, 2005, 2016). Males who are doing acceptable work with average to below-average academic performances hold the highest percentage of failings and drop-outs. Existing research produces statistics demonstrating stark differences in the academic advancement between males and females as males are more likely to struggle in a coeducational school setting compared to their female counterparts. Studies of educational systems around the world echo the same crisis of male students drastically underperforming across all academic subjects (Bigler & Signorella, 2011; Griffin et al., 2013; Gurian & Stevens, 2005; Mulholland et al., 2004). If males are not prepared for success in college or the workforce, then the educational system in place to serve them has failed them. Although the American public school system is often limited because of policies to prevent gender segregation, school leaders are further exploring the inclusion of single-sex classrooms to help close the gender academic achievement gap. Students in single gender classrooms outperform students in co-educational classrooms with fewer behavioral issues in the classroom (Superville, 2016). Single-sex education does not center only around brain development but also the growing evidence the structure provides in fostering student success and development.

This study seeks to understand How do educators in all-male classrooms make decisions about classroom instruction? and will explore many facets to best understand the needs of male students and the approaches taken by the educators. Reviewing of literature, framing the research, collecting data, and analyzing through the lens of Gardner’s Multiple Intelligences theory will provide perspective on educators’ curriculum and assessment tasks that are relevant,
related, and reflective of students’ own experiences and interests in an effort to encourage male students to uncover their unique potential (Gardner 2006; King 2013; Sax 2016).

**Literature Review**

Children possess many capabilities, yet they tend to highlight the skills and understanding they feel most comfortable with, whether intentionally or subconsciously (Gurian & Stevens, 2011). Understanding and catering to the unique differences and needs of the male sex is not meant to pigeonhole students but instead to enhance their abilities and produce stronger, more positive academic outcomes. This literature review focuses on the biological male differences between the two sexes that may construct and redefine the role of schools as well as methods in which educators can implement a variety of strategies to enhance learning and bridge the gender academic achievement gap.

**Gender Differences**

Males take longer to mature both physically and mentally as their brains and bodies develop quite differently than that of females (Bramen et al., 2012; Bunting & Watts, 1996; Gurian & Stevens, 2005; Sax, 2005, 2006, 2016). Exploring the more individualized needs of children is an important component in the single-sex schooling versus coeducational schooling debate. London’s *Every Child Matters* agenda, for example, encourages schools to delve into the needs of the “whole” child to engage students beyond the traditional methods of gaining academic achievement by ensuring they are supported, challenged, engaged, and safe (Shah & Conchar, 2009). This sentiment is also echoed in many other educational policies around the world. Schooling, which already has no simple formula and can be difficult for children, is even harder for males when placed in classrooms where they are compared to their female peers
whose biological and physiological structures and functions develop mentally, physically, and emotionally at a more rapid, mature rate than the males.

The Male Brain

A 2013 University of Pennsylvania School of Medicine study consisting of 949 individuals’ brain connectivity and MRI scans from participants 8 to 22 years old concluded that “male brains are structured to facilitate connectivity between perception and coordinated action, whereas female brains are designed to facilitate communication between analytical and intuitive processing modes” (Ingalhalikar et al., 2014, p. 823). Gender, sometimes not connected to biological differences but instead social constructs (Sax, 2016), makes it harder to implement effective teaching methods and evoke proper behavior. Males do not always behave a particular way just because society expects them to; there are physiological factors beyond their control. Ignoring these hardwired differences creates teachers who are either not aware of or are not properly trained on using scientific findings to create lesson plans and develop classroom strategies. The amount of grey matter and the rate at which the brain develops, for example, should be considered by teachers when creating, implementing, and assessing lessons for males.

Males are more active and tend to learn through various learning styles when compared to females’ more open and inquisitive thoughts (Laster, 2004; Sax, 2006). Their display of movement and fidgeting leads to behavioral problems in the classroom yet it is not entirely within their control. Various levels of serotonin and oxytocin between the two genders also play a major role in boys’ fidgety behavior that not only distracts them from lessons but also leads to discipline issues (Tyre, 2005). More strategic teaching methods catering to interests and various learning styles (Gibb et al., 2008) prevent some of the male students’ negative behavior. A boy’s constant movement and inability to focus his attention does not necessarily indicate intentional
disrespect or disengagement but rather a possible lack of instructional guidance, activities, or materials catered to help him achieve desired outcomes.

**Hormones.** The brain’s hypothalamus and pituitary gland release testosterone at a crucial time in the development of a male’s brain. Although females produce a small amount in their ovaries, testosterone is a dominant hormone in males. The production of testosterone in pubescent boys can lead males to exhibit aggressive and risky behavior in search of instant gratification while their female peers are able to remain cautious and rational (Barton & Cohen, 2004; Bramen et al., 2012; Gurian & Stevens, 2005; Sax, 2005). This male demonstration of subconscious impulsiveness is often displayed through disruptive actions within the classroom. The increase in testosterone also brings physical changes, such as facial hair and a deepening of the voice, which can make boys feel insecure around others. This hormone along with the fluctuation of others throughout a single day influences the performance, interest, and memory of males (King, 2013). Besides their physical and often hyperactive ways, there is significant evidence that prepubescent males experience fluctuating hormones that stifle a young man’s concentration and level of focus on academics, especially if placed in close cohorts with females. According to Shah and Conchar (2009), single-sex schooling can provide a comfortable space and “infiltration free zone” for students. This classroom separation has the potential to create an educational environment that relieves its students from undesired interactions brought on by mixed-gendered tensions, stereotypical pressures, and immature impulses.

Skeptics of single-sex education, however, worry about the psychosocial development of students. Wong et al. (2018) fear gender salience will increase anxiety and reduce opportunities for interactions between genders. Separating or combining genders may both increase confidence in the classroom; however, real-life experiences outside of school will result in mixed
experiences for either group of students. There are also concerns that students educated in a single-sex environment will develop anxiety and retreat from forming romantic or business relationships with the opposite sex because of their separation from one another during such a developmental period in life (Wong et al., 2018). Although anxieties can emerge in all types of classrooms and lead to lower academic performances, studies by Gurian and Stevens (2005), King (2013), and Sax (2005) suggest same-sex instructional opportunities can provide males with a less dramatic, less embarrassing, and less self-conscious attitude potentially leading to a more positive and productive environment.

**Hearing, Vision, and the Autonomic Nervous System**

While the male brain processes information in a manner that is unique to him, there are other factors emerging in studies further exploring single-sex education. The developmental and reactionary differences among genders’ hearing, vision, and nervous systems must also be considered to better understand how males learn. Dr. Leonard Sax, a family physician, psychologist, published researcher, and head of the National Association for Single-Sex Public Education (NASSPE), concludes that sensation, perception, and autonomic function differences between genders is a scientific fact that cannot be ignored (2006).

Males tend to have significantly lower hearing sensitivity and slower eye development than females (Kommer, 2006; Sax, 2005, 2006). This provides boys with a natural disadvantage of seeing and interpreting visuals or hearing and processing a teacher’s instructions slower than a girl in the same room. Although not a single-sex proponent, research by Eliot (2013) also insists the developmental differences of boys’ hearing and vision should be more of a focus in the classroom because of the pivotal role it may play in bridging the gender academic gap.
The brain’s hypothalamus controls the Autonomic Nervous System or ANS. The small system plays a major role in directing a person’s comfort level by regulating hunger and thirst, attentiveness and tiredness, response to stress, and even temperature (Eliot, 2013). This is important to understand when considering the physical and emotional comfort of students in a classroom. The male sympathetic nervous system, part of the ANS, reacts best in colder temperatures with the general ideal temperature for a male around 71°, six degrees cooler than the average 77° desired by the female parasympathetic portion of ANS (Sax, 2005, 2006).

That same system also prompts the male’s tendency to respond by “fight or flight” in comparison to a female’s more typical “rest and digest” approach to stressors (Eliot, 2013; Sax, 2005, 2006). When feeling uncomfortable or threatened, males will become aroused while females may become physically ill and unexpressive. Although critics believe that educational systems can provide equal teaching in the same room, a temperature more likely to provide comfort and increase alertness for one gender cannot be established within the confines of a single space striving to equally satisfy and adapt to the other. Allowing for the separation of their different feelings and behaviors within single-sex classrooms, however, benefits all students by creating both a literal and figurative climate that is comfortable, thought-provoking, and safe.

**The Role of Schools in Effective Instruction in Single-Sex Classrooms**

Schools are responsible not only for academic outcomes but also for hiring qualified educators and the development of a system that educates and develops students’ abilities and level of understanding. Typically, males score lower in English classes with other studies concluding boys are underachieving throughout many aspects of the classroom (Gibb et al., 2008; Gurian & Stevens, 2005; Harker, 2000; Friend, 2006; King, 2013; Sax, 2005). Since state testing has increased the pressure to focus on innovative ways of learning that bests promote
productivity in an ever-growing technological society, a gender-separated class environment may assist in the learning gaps that ultimately lead to the testing gaps experienced between males and females. The criteria used in many single-sex studies has been based on academics through numerical data and scores; however, an effective school tries to provide more than just academic success (Harker, 2000). A successful school, single-sex or coeducational, strives to provide its students with a complete educational experience allowing for self-growth, exploration, collaborative relationships, and understanding of the world.

One example, Mulholland et al.’s (2004) quantitative study of an Australian secondary school, does not demonstrate a significant increase in math scores from males in single-sex classrooms despite the significant increase in English for females. There is no observed evidence proving any different types of gender-specific instructional strategies occurred in these classrooms. Even qualitative empirical research on the cognitive development of males indicates it is not enough to simply separate males from females. Single-sex classrooms create a specific school culture and discipline plan, as well as a stronger competitive atmosphere (Gibb et al., 2008) with the intent of creating quality instruction in a rigorous academic setting. To best serve any students and their community “schools must have focus, discipline, involved parents, and caring, knowledgeable teachers who know how to communicate their subject matter” (Laster, 2004, p. 60). Once committing to an education system specifically geared toward males, schools must not only make instructional decisions driven by data and observations but most importantly should also provide specific and intentional opportunities for their teachers and students to be successful.
Professional Development for Educators

School systems are responsible for supporting educators in discovering productive ways that apply male energy into the classroom for the goal of producing free-thinking, useful members of society. While all educators play a key role in shaping students to become self-aware, responsible, and independent thinkers (Flennaugh, 2017), it is critical that teachers of an all-male student body recognize and respond to the unique facets of the specific gender to be successful (Sax, 2006). Just as educators cannot teach what they do not know, they also cannot teach whom they do not understand. Many teachers’ assumptions, personal experiences, and often limited knowledge of specific genders result in the implementation of their pedagogies within their classroom (Martino et al., 2005). If there is to be any substantial progress established using an all-male education, teachers must be educated on the physiological and scientific findings of how males develop and learn. Administrators and school systems, particularly those specializing in single-sex education, are responsible for providing teachers with academic resources, such as professional development opportunities.

Schools that focus on a variety of teaching strategies and different learning needs specific to males see great success rates after utilizing a combination of many opportunities such as online classes, in-person professional development, summer institutes, and year-round training with follow-up (King et al., 2010). Continuous education is an essential support system for training teachers. It guides the creation and implementation of the curriculum and instruction that not only increases overall achievement by recognizing individual student differences but by also providing teachers with classroom tools that are gender and culturally relevant. From school administrators, stakeholders, and classroom teachers, it is everyone’s job to inspire confidence
and encourage success in any type of future environment their students will enter once outside of the academic world.

**Gender Identity of Educators in Single-Sex Classrooms**

Gender is constructed by social and societal norms. Gender differentiates a male from a female through societal and cultural differences, not biological (Badjanova et al., 2017). Recognizing the gender identity of students is important to the acceptance of behaviors, appearance, and other factors in the classroom. Single-sex classrooms, however, are constructed based on the biological differences of the students, not their gender identity thus meaning a biological female is not allowed to attend single-sex schooling geared for biological males. This, however, is not necessarily a requirement for the teachers in this type of classroom.

According to the National Center for Education Statistics and the United States federal government’s most recent 2017-2018 number, approximately 90% of elementary educators are female with more than 77% of the secondary school education system consisting of female teachers (Hwang & Fitzpatrick, 2021; Loewus, 2017; National Center for Education Statistics, 2021). While little research has been conducted on students being taught by teachers of the same gender, the area is largely unexplored, leaving not enough compelling evidence to verify that this factor is enough to make a large impact in the classroom. Additionally, the sparse research is contradictory showcasing examples where gender matching students and teachers can have both positive and negative effects (Hwang & Fitzpatrick, 2021). Other factors coupled with gender matching, such as teacher’s academic background, may play an additional role in whether the gender identity of the teacher in the classroom correlates to a higher level of achievement.


Private vs. Public Schools

Because of constitutional rights supported with the addition of Title IX (1972) to ensure girls and boys are receiving the same educational resources and opportunities in the classroom (U.S. Department of Education, 2014), there are low numbers of K-12 public schools implementing single-sex classrooms. Recently, however, there has been a small increase in the number of schools implementing some form of single-sex classrooms. Single-sex schools are typically held in higher esteem by the public and are thought to attain higher academic successes than coeducational schools (Harker, 2000). To best help students be most successful in the classroom, policy makers, educators, and scientists need a better understanding of whether single-sex schooling is a more effective learning environment for students, compared with coeducational schooling (Pahlke, 2014). Exploring single-sex education and weighing both the pros and cons of this specific schooling for boys can provide information on whether the separation may benefit the students by creating an emotional and academic climate. The needs and long-term benefits of all-male education is not being taken into consideration as many states are not allowing this separation because of constitutional rights that allow males and females equal opportunities (Bunting & Watts, 1996).

With only five public single-sex schools in 1996, the number had increased to over thirty by 2005 with the implementation of No Child Left Behind before it evolved into S.1177, Every Student Succeeds Act (2015) (Arms, 2010). Because of the large drop-out, failing, and push-out rate among African American male students, many urban schools decided to take advantage of the 2006 option offered by President George Bush that would allow for single-sex public schools (Dwarte, 2014). This was a response to the National Assessment of Educational Progress that showed that boys are being outperformed by girls in advanced level classes, graduation rates, and
especially in language arts grades 4th, 8th, and 12th (Dwarte, 2014). Research in Catholic and private schools in the early 1980s and 1990s supports single-sex education by noting that females experience fewer sex-role stereotypes and were expanding into more often into STEM fields typically dominated by males. This same experience is noted by males who became more open to expand their verbal and creative skills required in English Language Arts classes (Arms, 2008).

A sense of community and faith can be a strong pull for students and their families so the merging of a single-sex education with a religious based school is also a possibility to explore as it may benefit not only the student but create stronger ties to the school community’s beliefs, values, and mission (Shah & Conchar, 2009). Even though No Child Left Behind’s deliverance and implementation failed in many areas, its intention was positive because it brought to the forefront the fact that every child can learn and should be afforded equal opportunities to do so. It is, however, a matter of tapping into exactly how students learn best. This will require educational reforms to acknowledge that these equal opportunities should not be pigeonholed because every child has different needs. A specific, unique classroom setting can be more effective and because of this has existed in the classrooms of private, preparatory, and/or religious schools (Cable & Spradlin, 2008). With federal policies beginning to allow single-sex education, districts must provide a comparable single-sex classroom or school for the opposite gender (Viets, 2009).

**Implementing Practices to Achieve the Benefits of Single-Sex Education**

Proponents of single-sex education believe separating males from females, at least in core curriculum classes, is a beneficial method with a variety of strategies to aid students in processing and comprehending knowledge, especially when focusing within a specific gender environment. Understanding what sparks male student interest and caters towards their learning
styles has shown great success in all-male classrooms. Providing a nontraditional education format, such as same-gender classrooms, also helps male students behave in ways that reduce the number of disciplinary infractions and special education referrals (Piechura-Couture et al., 2011). Implementing intentional practices encompassing various teaching strategies and male benefitting learning styles provide a more individualized educational system than that of a coeducational classroom.

**Differentiated Instruction for Various Learning Styles**

Biological differences and brain development play a pivotal role in how males learn, making them more likely to be misunderstood. In coeducational environments, boys are considered less engaged, less capable, and less motivated in a classroom setting when compared to their female peers (Gurian & Stevens, 2005; Sax, 2005, 2016). This may lead to greater behavior problems in the classroom, not because of their lack of capabilities but because educators are not sure how to best serve the young men. One way to combat boys’ lack of attention is by offering instruction that utilizes multiple senses to encourage the male brain to stay more alert (King, 2013). Differentiated instruction can use several various learning styles and intelligences to stimulate the frontal lobe and other cortical areas of the brain.

Research demonstrates boys most commonly incorporate one or more of the following intelligences: visual-spatial intelligence, musical intelligence, and bodily-kinesthetic intelligence (Aguayo et al., 2021; Brualdi, 1996; Gardner, 2006; Wilson, 2018). When utilizing both bodily-kinesthetic and musical intelligences, males are stimulated by physical movement and are often humming, tapping, or moving to rhythmic beats (Brualdi Timmins, 1996; Gardner, 2006; King et al., 2010; Reichert & Hawley, 2010). Males are also graphic, visual-spatial thinkers who have active imaginations and can use guided visualizations and mental images to maneuver through
their environment physically and mentally (Gurian & Stevens, 2005; Tamilselvi & Geetha, 2015). Although the American educational system places an emphasis on core academic classes such as math, English, science, and social sciences, it is also important for males to focus on the arts (Gardner, 2006). The single-sex classroom space breaks down gender stereotypes (Sax, 2005, 2016) allowing boys to be more reflective of their truer self, wants, and needs. This environment for the arts not only promotes creativity but expands students’ views by introducing them to abstract thinking rather than measurable scholarly material. Incorporating more movement, more expressive, and free-thinking opportunities into the structure of classes has received positive results.

Latest scientific technology provides supporting data that males have less active frontal lobes, an area vital to language development, problem-solving, and memory. Because students’ physiological and personal backgrounds vary, embracing differentiated instruction within a classroom will aid all student learning (Gurian & Stevens, 2005; Tamilselvi & Geetha, 2015). If educators do not specifically redirect a male student’s energy into a positive component through unique learning strategies that are geared to help the more diverse way of understanding that many boys need, these students will continue to suffer academically.

Studies show that students learn better from teachers who avoid traditional schools’ antiquated approach of memorization that often forces regurgitation. Male brains require different stimulants and while “certain stimulations enhance its perception and expression toward the high end of the success spectrum, a lack of those stimulations can move its learning toward the lower end” (Gurian & Stevens, 2005, p. 69). Boys may appreciate and therefore aim to please if they feel there is a conscious effort to provide them with an opportunity to connect their
academic and personal lives (Reichert & Hawley, 2010) through gender-specific and culturally relevant, relatable, and meaningful tasks.

**Tone and Language**

Feedback from educators around the world at a NASSPE conference for best practices in single-sex classrooms further supports Sax’s (2006) conclusion that the volume of an educator’s voice either engages or distracts males. Males are more responsive to loud, short, and direct instructions instead of soft-spoken statements open to interpretation. Although teachers encourage verbal repetition in most early childhood classrooms, encouraging self-repetition for any aged male student is a simple method to guide the male brain that easily forgets. It also aids the auditory learner who uses words and sounds for understanding (Gardner, 2006; Gurian & Stevens, 2005). Teachers using a louder voice with specific purpose will command attention and make males more interested, motivated, and engaged.

**Brain Breaks**

Instruction is not isolated to just pedagogy and academia. MRIs reveal a male’s brain uses less blood flow than a female’s and naturally enters a neural “rest state” that allows for his brain to reset and refresh (Gurian & Stevens, 2005). When the brain is not stimulated it enters a state of rest, which ensues boredom or even the desire to nap while the teacher is talking. Incorporating brain breaks has been shown to be a positive reinforcement in the classroom (Gurian & Stevens, 2005; King et al., 2010). While this may seem like a simplistic approach, these are often taken for granted moments that have a major impact on the classroom. Those who are overstimulated have a moment to compose themselves and let their brains catch up with their fidgety mannerisms, while those who are sluggish are allowed to get their blood flowing to increase attentiveness.


**Building Relationships**

Males generally like to be in charge and a traditional classroom presents them with a power struggle. Boys who are perceived as unmotivated in the classroom are sometimes inspired by a “will to power,” a term coined by philosopher of Friedrich Nietzsche (Sax, 2016). This drive makes them sometimes forget that others, such as teachers, are trying to help them, not control them. Instead, developing relevant lessons, relatable materials, and original assessments engages a male student’s attention and organically encourages him to use his energy as a strength to promote creativity and maturity (King, 2013; Reichert & Hawley, 2010). This provides the male student with ownership of his education and creates a learning partnership with the teacher. It is the development of these significant relationships in the all-male classroom that encourages a supportive community trickling down from the teachers and students to the administrators, parents, and all stakeholders of the school.

**Summary**

With many overlapping concerns and commonalities in themes, this literature demonstrates the need for more studies on single-sex education, specifically on all-male classrooms. Because current American educational policies limit single-sex classrooms making them less accessible, the focus of this research will reside within a private school that is able to be more selective in the guidelines that govern their school system. The literature illustrates a modern day need for inquiry while offering a roadmap to explore the academic teaching efforts of teachers catering to the learning needs of their male students. Extensive numerical data analysis over some time will provide statistics that prove or disprove single-sex education plays a role in measurable academic achievement. Further empirical research, however, should be conducted through the exploration of the strengths and flaws of educators in their understanding
of student needs and deliberate execution of content to better assess the outcomes of providing an all-male education.

**Theoretical Framework**

Much research has revolved around the concept of intelligence and the inquiry into whether it is innate or learned. Almost fifty years after its development in the late 1970s and public introduction in the early 1980s, psychologist Howard Gardner’s (1983) theory of Multiple Intelligences is remerging in school curriculums across the country. Multiple Intelligences, or MI, offers a perspective that pluralizes the traditional concept of intelligence and expands the idea of what makes people smart (Brualdi Timmins, 1996; Gardner, 2006). Because children have diverse intellectual profiles, using an IQ test as the only method to measure intelligence hinders educators when planning, evaluating, labeling, and teaching all students. Embracing an MI approach accepts and encourages the use of differentiated instruction to embrace learners’ talents as they continue their cognitive development.

**Development of Multiple Intelligences Theory**

The theory of Multiple Intelligences developed as an expansion to previous research such as early 1900’s Swiss psychologist Jean Piaget who formed his studies around observations and human behaviors, just as Gardner would later do. Piaget’s theory of cognitive development examines constructive thinking and intelligence in stages (De Lemos et al., 1985), while Gardner’s theory is an explanation of how the mind works.

Born before the start of World War II to newly arrived German Jew immigrants, Howard Gardner was always fascinated with the arts and played piano from a young age. By the time he was a graduate student studying philosophy, he was curious as to why the arts were not recognized in major textbooks (Terada, 2018). His time as an assistant in the educational
research organization Project Zero and his work with people recovering from brain injuries only fueled his desire to better understand what constitutes knowledge and intelligence. Gardner’s theory of Multiple Intelligences that emerged from this inquisitive side extends beyond the cognitive process of gaining knowledge and focuses more on how humans learn best (Coffield et al., 2004; Mineo, 2018). His theory is a departure from the early twentieth-century traditional concept that intelligence is measured only by IQ tests which served to assess students’ abilities and explained why some children excelled more than others (Davis et al., n.d.; Terada, 2018). Gardner argued there is not one knowledge confined by a singular model. Instead, there are multiple intelligences, or even talents, which are not exclusive of each other but able to merge and change as children move into adulthood.

These independent yet interactive pieces are not limiting to a young student’s mind (Moran et al., 2006). Convinced that intelligence was not only limited to logic and reasoning, Gardner expanded his idea that intelligence included seven original, then eight, and now possibly nine, specific types of intelligences: 1) logical-mathematical intelligence, 2) linguistic intelligence, 3) spatial intelligence, 4) musical intelligence, 5) bodily-kinesthetic intelligence, 6) interpersonal intelligence, 7) intrapersonal intelligence, 8) naturalist intelligence, and the possible 9) existential intelligence. Linguistic and logical-mathematical intelligences are commonly associated with school knowledge as they are the two assessed the most in an academic setting, yet every intelligence should be considered (Gardner, 2006, 2016; Gardner & Hatch, 1989). These intelligences help demonstrate how human beings respond or fail to respond to a particular lesson focusing on a variety of platforms. It is through the understanding of Gardner’s theory that people can maximize their many intellectual qualities and skills.
Eight Multiple Intelligences

While each intelligence focuses on specific skill sets that can be used to boost learning and aid in low academic performance, the following intelligences are not intended to be used in isolation from others.

**Logical-mathematical Intelligence.** Students with a logical-mathematical intelligence are inclined to be strong problem solvers who can analyze, recognize patterns, make connections, and categorize more easily than others (Tamilselvi & Geetha, 2015). These students think logically and most often do well in science and math classes (Brualdi Timmins, 1996; Gardner, 2006).

**Linguistic Intelligence.** Linguistic intelligence involves language in a written or oral format. Language is universal and though that may be expressed in many ways, including sign language, this intelligence allows for meaningful thoughts arranged in specific ways (Gardner, 2006). These students enjoy word games, public speaking, storytelling, reading, and often have a good memory (Tamilselvi & Geetha, 2015).

**Spatial Intelligence.** Spatial, or visual, intelligence allows students to generate and manipulate mental images to help understand and solve problems (Brualdi Timmins, 1996). They learn best with the additional aid of pictures, videos, and charts (Tamilselvi & Geetha, 2015). These students are often good at decorating and designing because they can visualize what the final project may look like.

**Musical Intelligence.** Students who utilize musical intelligence are drawn to sounds and learn better when music is playing (Brualdi Timmins, 1996; Gardner, 2006). While these students may be able to recognize pitches and tones, it is not necessary to hear rhythm...
(Tamilselvi & Geetha, 2015). Music can activate the brain, relieve stress, assist the memory process, and offer a transition from one thought to the next (King, 2013).

**Bodily-kinesthetic Intelligence.** Challenging a belief that physical and mental activities are unrelated, bodily-kinesthetic learning involves movement (Brualdi Timmins, 1996; Tamilselvi & Geetha, 2015). Students, especially males, enjoy moving often and link these actions to sensations and muscle memory. Physical movement boosts student engagement in the classroom (Reichert & Hawley, 2010).

**Interpersonal Intelligence.** Those with strong interpersonal intelligence are connected to the feelings and needs of others, as well as pick up on verbal and non-verbal cues (Tamilselvi & Geetha, 2015). They are cooperative and have a strong desire for acceptance, solidarity, and cohesion among their group (Gardner, 2006; Reichert & Hawley, 2010; Tamilselvi & Geetha, 2015).

**Intrapersonal Intelligence.** Students with intrapersonal intelligence are self-reflective, nonconformists. These individuals think about thinking and set goals to best prepare and guide their own behavior (Gardner, 2006; Tamilselvi & Geetha, 2015).

**Naturalist Intelligence.** A natural phenomenon and patterns are easy to recognize and understand for students who possess naturalist intelligence (Tamilselvi & Geetha, 2015). They can more easily make distinctions, be sensitive to nature, and have strong survival skills (Brualdi Timmins, 1996; Gardner, 2006).

While there are a variety of intelligences, there are three key factors that need to be remembered when thinking of the cognitive side of the human brain: 1) all humans have a range of intelligences they use to mentally collect and process knowledge, 2) no two people have the same intelligence profile, not even twins, because everyone’s experiences and perspectives are
different, and 3) just because a person is highly intelligent, does not mean he always behaves intelligently (Gardner, 2006). It is important to not only utilize the specialized talents of each student but to also understand that these learning styles may overlap to create a unique learning profile (Aguayo et al., 2021; Brualdi, 1996; Gardner, 2006; Gardner & Hatch, 1989; Wilson, 2018).

**MI’s Evolution**

As time and technology progress, Multiple Intelligences theory has become a more scientific explanation for the cognitive development of humans while Gardner’s definitions and understanding of intelligences continue to evolve. Some of his early twenty-first-century research now advises educators to understand that enhancing the various intelligences will be challenging in three different ways: it is hard to define the unique characteristics of human development; there are individual differences of intelligence; display of intelligences can be executed differently based on interpretation (Gardner, 2006). Gardner himself also recognizes that his theory may have yet another intelligence emerging.

Since the 1983 publication of his first book *Frames of Mind*, Gardner (2006) cautiously refers to the more recent existential intelligence as a possible half intelligence and not quite a ninth. This intelligence references the students who will ask the “big” questions others are not quick to answer, seek meaning while looking for connections, and enjoy being involved in social, political, and spiritual causes (Gardner, 2006; Tamilselvi & Geetha, 2015). While it is still not determined if these thoughts are a direct result of the brain or more of a philosophical approach, Gardner (2006) acknowledges the possibility of existential intelligence but continues to speak of the definitive eight intelligences. These intelligences are meant to help people better learn and understand the content, not categorize, or limit learners. Exploring these intelligences
allows humans to understand how their talents may be useful in remembering and applying knowledge.

**Using MI**

With the world quickly evolving into a faster-moving digital environment, educational research suggests incorporating advanced practices into the classrooms of students everywhere (Wilson, 2018). Knowledge does not constitute intelligence if a student is not able to understand or apply the learned information. Approaching lessons through a variety of methods, such as incorporating auditory, visual, or hands-on learning offers different perspectives on the skills or concepts being taught. Educators most commonly use Gardner’s (2006) theory of Multiple Intelligences to bring about effective learning by providing opportunities to help students better learn concepts in a way they can understand and relate to (Tamilselvi & Geetha, 2015). These teachers will create lessons and use creative approaches to capitalize on students’ strengths by transforming students’ classroom experience using real concepts and actions that are part of common, daily life encounters. Using the lens of Multiple Intelligences also promotes the development of valuable instruction and assessment methods that allow for cross-curriculum exploration.

Outside of the physicality of the classroom, MI has inspired programs such as Harvard University’s Project Zero. In its over fifty years of existence, this organization in the Harvard Graduate School of Education is responsible for the 1984-1993 Project Spectrum (Krechevsky, 1991; PZ, 2022). This program administered interactive assessments for preschool children to evaluate each of their specific intelligences to provide those students with assistance in utilizing and heightening their strengths and weaknesses. Researchers used it to study best practices for developing curriculum and assessment to aid teachers in continued education. Project Zero has
grown in its over fifty years of existence and now offers a plethora of resources, classes, and professional development opportunities to education majors, teachers, students, and parents.

Although often used in education, the theory is also applied outside of the academic world in a variety of areas such as psychology, physiology, anthropology, and personal and cultural history. Gardner’s theory has been regularly supported by studies on child development, changes in cognition throughout history and within cultures, and cognitive skills in patients with brain damage (Gardner, 2016; Silver et al., 1997). MI emphasizes the ability to solve problems and learn in different ways through the activation of a variety of intelligences, whether it be hands-on or visual, for example. Although MI in the classroom can be an effective tool, it is not an educational goal that must be achieved. Gardner explains that teaching solely to children’s strengths cannot be an educator’s only strategy to reach students.

**Strengths of MI**

Proponents of MI imply that educators should be thoughtful and engage their learners through means of instruction that will produce critical thinking (Wilson, 2018). Only when students think critically can learning and quality education effectively begin. The MI theory recommends using strategies that cater to students’ varied intelligences, which will be explored specifically in the single-sex classrooms of this study. Students’ inherent abilities may be further developed with educators and pedagogy that is open to the potential that Multiple Intelligences should not be confined to a specific set of skills. Instead of limiting students to generic tests, it is best to discover and nurture students’ abilities (Gardner, 2006) to enhance and challenge their strengths while strengthening their weaknesses.
Weaknesses of MI

The theory of Multiple Intelligences allows for focus on learning themes, behaviors, and other content within the classroom. MI cannot, however, provide students with an individualized process of learning (Silver et. al, 1997). This is entirely dependent on several variables such as the teacher and resources. The lack of guidance on how to apply these intelligences often leads to confusion between MI and learning style theories as well as frustration with the creation, implementation, and grading of lessons and assessments.

While Gardner’s theory offers various ways in which humans learn, it lacks a set of standards to measure MI’s intelligence profiles (Rousseau, 2021). There are differences within each intelligence that should not be measured to another person’s distinct style. For example, there are many genres of dance, music, and art, which display intelligence and understanding of a concept in a variety of subjective ways. This absence of a series of standards can turn objective into subjective, making it hard to assess fairly.

Critiques of MI

Proponents of MI imply that educators should be thoughtful and engage their learners through means of instruction that will produce critical thinking (Wilson, 2018). While there are supporters of using MI as a lens to help teachers explore best classroom practices and study techniques for their students, other researchers are critical of Gardner’s theory of Multiple Intelligences. Some researchers believe there is not enough research that proves students, especially young children, process information more effectively when educators teach geared to their students’ preferred learning styles (Coffield et al., 2004). It is through the challenging and scrutinizing of theories that researchers can further discover, develop, and support evidence in the ever-changing scientific fields of study.
Although there are critics who are undecided if Multiple Intelligences constitutes a psychological, neurological, or psychobiological theory, most agree MI is still a plausible scientific theory. Gardner’s work has been criticized by some researchers not for the theory that has become so popular in education but for not providing student assessments to accompany these types of intelligences (Rousseau, 2021). If Gardner did so he would be backtracking on the original intelligence theories that he once critiqued and expanded on. Setting standards within the theory would only pigeonhole students.

**Distortions**

For centuries educators have been fascinated by the connection between the study of the nervous system, also known as neuroscience, and educational learning practices. Sometimes this desire to combine the two can lead to misunderstandings. These misinterpretations of scientific facts in brain research create neuromyths in education. (Dekker et al., 2012). The unqualified misreading of brain studies, for example, has helped coin the terms left-brained vs. right-brained and has often made learning styles synonymous with intelligences. There is much more to these thoughts than the oversimplification that has occurred within today’s popular culture and educational world. Gardner acknowledges in an interview that his “theory is not experimental in the traditional sense; but it is strictly empirical, drawing on hundreds of findings from half-a-dozen fields of science” (Checkley, 1997). He, however, does not believe that his theory is a neuromyth because this would limit his research specifically to the brain and neuroscience when instead it spans numerous areas of study.

Dominant learning styles are not permanent and will further develop as a student grows and adapts (Silver et al., 1997). Focusing only on a young child’s strengths and never working to seek to enhance other intelligences is the opposite of what Gardner set out to do when supporting
a multifaceted approach to learning. If misunderstood, this may inhibit students from venturing out of their comfort zone to broaden their abilities and reach their full potential.

**Using MI to Study Educators and Students in All-Male Classrooms**

When studying single-sex education, specifically all-male classrooms, the Multiple Intelligences theory allows for an analysis of how teachers in these classrooms plan, teach, and assess their students, allowing the researcher to explore how incorporating diverse styles of learning in this single-gender environment can help males tighten the gender academic achievement gap. While MI has been refined since its beginning, little progress in the outside world has been made in changing pedagogy or curriculum to recognize and apply the various abilities of students (Reichert & Hawley, 2010). Intelligence defined by the ability to understand complex ideas has become an abstract concept that offers little assistance in guiding educators and their classrooms. Reviewing curriculum and observing lessons through the lens of these eight intelligences, however, may offer insight into which methods best provide academic, instructional knowledge in an all-male classroom.

Research demonstrates males often incorporate visual-spatial, musical, and/or bodily-kinesthetic intelligences to help code, sort, and process information (Aguayo et al., 2021; Brualdi, 1996; Bunting & Watts, 1996; Gardner, 2006; Gurian & Stevens, 2005; Wilson, 2018). Studying single-gender classrooms using MI encourages the researcher to explore educators who may use gender-specific instructional strategies and curricula that support males’ strengths and weaknesses while enhancing specific individual learning processes.

**Why MI?**

There are numerous theories that could be utilized; however, MI is best suited for this journey into an all-male education since it allows for a restrained yet free approach to better
understand teachers’ planning, observe approaches to lessons, and explore the interactions between teachers and students. Understanding MI helps without stifling creativity with a detailed plan on how to get there.

With MI, educators can rethink measurable intelligence focusing more on the content and outcomes of learning (Silver et al., 1997). Educators create lesson plans and see firsthand the successes and failings of various learning strategies. Using the theory of Multiple Intelligences to observe educators’ planning and teaching based on their students’ physical and academic needs in an all-male classroom could further incorporate neuroscience into the world of education. Gurian and Stevens’s (2005) and Sax’s (2016) research in addition to Gardner’s (1983; 2006) theory not only seem to support gender differences but also suggests that a classroom separation may allow boys the freedom to be themselves while providing teachers an opportunity to use strategies that may be more conducive to their students’ learning preferences and prior knowledge. This may produce children who are more actively involved in their own learning while promoting more creativity and maturity than the traditional teaching-learning education of the past.

Observing and researching educators within all-male classrooms through the lens of MI presents material that will allow the exploration into a specific type of classroom to see if more individualized and male-centered learning strategies created around a variety of intelligences help promote the mastery of skills. This may prompt updated Professional Development (PD) & training tailored to gender-specific instructional strategies. Teaching educators how to develop lesson plans through the lens of Multiple Intelligences will aid in designing and implementing a valuable lesson. Allowing these intelligences to guide specialized lesson plans and assessments has the potential to cultivate a more authentic learning experience for students. On a larger scale,
it may even influence policies that allow for & encourage change to traditional public school co-educational classrooms.
Chapter 3: Methodology

The purpose of this study was to explore how students’ preferred learning styles and behaviors in an all-male classroom may influence educators’ teaching methods and interactions as they work with their students. Using a multi-case study, I hoped to explore *How do educators in all-male classrooms make decisions about classroom instruction?*

The research focuses on the experiences of educators in all-male classrooms through a multiple case study that allowed the researcher to analyze a specific case in depth and interpret the findings (Creswell & Creswell, 2018; Stake, 1995; Yin, 2003). The adolescent males in the secondary classrooms were generally defined as a boy ranging from twelve to eighteen years old in grades 6th through 12th.

Literature reviews are referenced; however, because this research is exploratory, I sought a first-hand classroom experience with all participants involved to build an understanding based on what is seen and heard (Creswell & Creswell, 2018). Observations and interviews assisted me in understanding teachers’ instructional decisions by analyzing the distinct qualities, intentional methods, natural behaviors, relationships, and inner workings of the single-sex classroom. These interviews allowed for “up-close information gathered by actually talking directly to people and seeing them behave and act within their context” (Creswell & Creswell, 2018, p. 181). The data collected allowed for analysis of first-hand accounts that are “imperative to a study that seeks to determine the interplay of cultures across social, religious, and gender hierarchies” (Bickett, 2008, p. 85). It was an asset to observe teachers in real-time classroom activities and interview them about their lived classroom experiences.
Research Design

A multiple case study produces knowledge dependent on context that includes a mixture of narrative methods obtained through interviews and conversations as well as the exploration of real-life situations with all their complicated details (Riessman, 2008). The inductive approach to analysis that comes with a multi case study produces essential results for the advancement of a discipline. This allows me an opportunity to utilize interviews, observations, and documents to focus on a particular time and space. Compared to other qualitative approaches, a case study was the most beneficial choice for me to use as I researched boundaries between a phenomenon, such as an all-male classroom, and context that is not obvious (Stake, 1995; Yin, 1981; Yin, 2003). This is particularly true in the study of all-male classrooms, as teachers and students coexist in classrooms as the influences on teacher selection of instructional strategies are vast. Thus, separating the influence of student gender on instructional decisions would be an exceedingly difficult task from a quantitative approach. A multiple case study allowed for some complexity.

Qualitative research using an analytical approach provides access to what occurs in a particular setting and with particular people. It is a way to learn about the research subject (i.e., communities, organizations, and people) while allowing for the possibility of developing theories to understand these worlds. There are flexible guidelines for the collection and analysis of the qualitative date (Charmaz, 2006). The combination of conducting two simultaneous case studies in my dissertation’s research on single-sex education allowed me to analyze and learn more about what occurs in an all-male classroom setting so that I could not only better understand what may or may not influence my participants’ experiences, but one day be able to offer research that may provide more guidance as to how educators can design effective instruction.
A Multiple Case Study

Qualitative analysis allows for triangulation by “examining evidence from the sources and using it to build coherent justification for themes” (Creswell & Creswell, 2018, p. 200), as well as offering validity for different methods that may lead to the same results. More than one collective case study allowed me as the researcher to study multiple individuals simultaneously in similar environments at more than one location (Yin, 2003). Using this methodological approach allowed me to develop a thorough analysis of educators in their all-male classrooms through a variety of means including observations, interviews, and examination of documents, such as lesson plans and tests.

In the 1960s, sociologists Barney G. Glaser and Anselm L. Strauss collaborated during their studies of patients who died in hospitals. Through analyzing observations, interviews, field notes, and other sources of data, the two men “developed methodological strategies that social scientists could adopt for studying many other topics” (Charmaz, 2006, p. 4). While these combined efforts would allow them to formulate and publish on *The Discovery of Grounded Theory* (1967), which “contested notions of methodological consensus and offered systematic strategies for qualitative research practice…generating abstract concepts and specifying relationships between them to understand problems in multiple substantive areas” (Charmaz, 2006, p. 8), their research was instrumental in sparking a research revolution as qualitative methods at the time were considered less valuable and less valid without the support and stability of numerical data. These “small-scale environments and micro activity where little previous research has occurred” (Grbich, 2012, p. 80) made qualitative methods such as case studies a more feasible approach at a time when positivist quantitative methods were most popular and
accepted. Using a multiple case study for qualitative research lets the analyzed data guide the themes as they emerge.

I, the researcher, am aware of the pros and cons of various data collection methods. A multi case study does not force any preconceived theories directly upon the data (Charmaz, 2006; Stake 2005; Yin 2003), but the MI theory will be an integral lens used in analysis. Keeping an open mind and a constant awareness of potential biases allows the depth and scope of what is collected to matter and help later during the analysis. When collecting data through interviews, however, researchers may bring their own ideas based on either their lived experiences or outside influences; therefore, it is important to report and document in as much detail without bias. All subjects must be respected to preserve human dignity by “making concerted efforts to learn about their views and actions and to try to understand their lives from their perspectives” (Charmaz, 2006, p. 19). One should not interject their personal opinions nor persuade their participants to feel or believe in any way. Glaser (2007) warns that lack of respect, as well as the lack of rigorous data collection, can pave the way for researchers to force their existing data into a category of preexisting theories. A multiple case study requires the researcher to investigate an empirical topic and to be open to whatever information and/or material that presents itself, as well as embrace where the journey leads (Charmaz, 2006; Yin 2003). After the data is collected and deciphered into thematic categories, then the writing process may begin.

Using each of the experiences of the interviewees, the observations of classroom activities, and behaviors that occur in these all-male classrooms enabled me to analyze all collected data for themes that overlap the educators’ understanding and stylistic approaches (Creswell & Creswell, 2018; Yin, 1981). This allowed for an in-depth evaluation of the information collected through conversations, the teachers’ lessons, and witnessed learning in the
classroom. This multi case study produced an opportunity to potentially uncover practices that are overlooked or underutilized by focusing attention on the many facets that may emerge from data collection and analysis.

Single-Gender Education Research Using Case Studies

Exploring other case studies assisted the researcher in preparing to conduct her own study. Previous single-gender studies exploring educators’ perspectives, lessons, and interactions with students in classrooms served not only as examples but demonstrated the possible advantages and disadvantages of an in-depth case study. As shown in the below examples, observations provided opportunities to view the actions and behaviors of both the teachers and male students within the class environment. Additionally other examples of case studies showed how the use of interviews could allow the researcher’s participants a more participatory role in the data collection. The educators sharing their personal experiences through interviews became an asset to understanding the teachers’ strategies in the classroom while offering varying perspectives.

Younger and Warrington’s (2002) research develops a case study centered around a school in England serving as a co-educational environment offering a single-sex experience since the early 1970s. After conducting and analyzing observations and interviews in addition to artifacts such as past test scores, both males and females showed signs of academic growth when removed from each other. Both sexes declared a more comfortable environment as the girls also experienced more of a “no-hassle” atmosphere. Teachers in all-male classrooms offered different classroom pacing, whereas teachers in the female classrooms did not have to change much of their approaches. This qualitative information was significant to my own study as I believe
observing educators in two different all-male schools provided my research with a wider variety of classroom pacing and approaches.

Although much of the research using observations in single-sex educational settings happens outside the United States, Laster’s (2004) research focuses on 99 students in American classrooms. The study centers on collecting and analyzing data after the observations of a classroom of 33 young males, a classroom of 33 young females, and a coeducational classroom mixed with a total of 33 students. The study found positive effects of single-gender classrooms on both academic learning and behavior. Stakeholders such as teachers, students, and parents in Younger and Warrington’s (2004) and Laster’s (2004) case studies mostly agree that separate classrooms provide a productive environment geared toward males or females through relatable material. Each study evaluated single-sex schooling as a possible method to raising academic achievement levels. Additionally, Younger and Warrington’s (2002) study acknowledges the difficulty in understanding separated classrooms without creating a single-sex environment that uses different instructional approaches for teaching, implementing, and evaluating. Because of the qualitative nuances of example case studies such as Younger and Warrington’s (2002) and Laster’s (2004) research, I decided to focus solely on all-male classrooms, specifically in secondary grade levels, as a way of narrowing down my research environment.

In contrast, qualitative research by Eliot (2013) proposes that classroom separation by gender would be detrimental to all that education is supposed to achieve. The study suggests a small group of studies are making such large claims about single-sex education. His data, gathered from medical reports, narratives, and sources accessed through the Department of Neuroscience at the Chicago Medical School of Rosalind Franklin University, concludes that boys and girls do not learn differently. While quantitative research may focus on testing scores
and brain functions, some qualitative studies used in educational research have focused between male and females’ adult brains, making the push for single-sex classrooms invalid because children’s brains greatly vary from adults (Eliot, 2013). Unlike Younger and Warrington’s (2002) focus on classroom observations and teachers’ interviews, Eliot (2013) introduces research that eventually shifts from the brain to the variances in hearing and vision between males and females, which he believes plays a significant role in the classroom yet still does not warrant a separation of the sexes. This unique case study rooted in neuroscience analysis recommends that not only is it illogical to separate males from females in the classroom, but it is also a scientific misrepresentation of the cognitive abilities of the brain. The variance in empirical research on single-sex education further supports my desire and the necessity to study educators’ strategies with their male students.

**Research Site and Participants**

To obtain more diverse and authentic data, I chose to conduct a multiple case study. All participants (teachers and administrators) and student classrooms came from one of two locations: a private, college preparatory school and a type 1 charter NOLA Public school. The schools are referred to as Site 1 or Site 2, and participants are referred to by their academic subjects for confidentiality purposes. Using a multi case study with two different schools allowed me to explore similar but different educational institutions to provide a more thorough look into educators and their all male-classrooms. Together, the two sites granted access to educators in a variety of all-male secondary academic classrooms including honors, Advanced Placement (AP), and Special Education (SPED) courses. The two schools’ locations allowed accessibility and continuity with many educators from a variety of backgrounds and professional training for single-sex classrooms, as well as possible co-educational backgrounds.
Site 1: Private School

Site 1 is a private, college preparatory school in New Orleans, Louisiana with an all-male student body encompassing grade levels Pre-kindergarten through twelfth. The cost of attendance is approximately $10,000 per school year with the possibility of academic scholarships and need-based financial assistance. Because this is a private institution, students may live in any parish but must apply and be accepted after a series of interviews and placement tests.

The school, affiliated with a religious entity, consists of approximately 900 male students ranging from ages four to eighteen. The average class size is 23 students with a student-teacher ratio of 12 to 1. The school’s racial and ethnic diversity is an accurate representation of the demographic of the metro New Orleans area. The school’s mission is to not only educate young men academically but also spiritually, cultivating both the mind and soul. Embodied in the school’s code is the continuous legacy and motto of raising young boys into men. At this site, six interviews and four classroom observations were conducted between November 2023 and January 2024.

Site 2: Charter Public School

Site 2 is a type 1 charter NOLA public school located in New Orleans, Louisiana with an all-male student body. Because the school is a public charter, there is no tuition fee. Prospective students must live in Orleans Parish and register for the NOLA-PS Common Application process through enrollnolaps.org. The free tuition school is open to all-male residents of Orleans Parish in grades eighth through twelfth.

Named after its founder, the school has served young men for nearly a decade. The school consists of approximately 120 male students ranging from ages twelve to eighteen. The
average class size has fourteen students, but these class sizes will vary as the school also offers
Special Education classes with paras and unique classes for English Language Learners. The
school’s student population is largely low-income and predominantly African American. Its
mission is to use young men’s intelligence to best prepare them for college and career, while also
producing men who will give back to their communities despite any adversities. At this site, five
interviews and four classroom observations were conducted between November 2023 and
January 2024.

Participants

This study had the participation of eleven educators with various backgrounds, teaching
experiences, and disciplines. Eight of these are still actively teaching in classrooms while three
have moved into administrative positions. While according to the federal government more than
77% of the education system consists of female teachers (Loewus, 2017), I chose to utilize four
male teachers and four female teachers to allow a larger scope of feedback, interactions, and
observations. The benefits of multi case studies can be limited with less than four but bogged
down with more than fifteen (Stake, 2005) so keeping my overall educator participants to eleven
with eight in-classroom teachers allowed me a large but more manageable number during
analysis.

At my request, the schools’ top personnel recommended a list of teachers they believe fit
the diverse spectrum sought out for this study. I requested educators from a variety of secondary
grade levels, content, and those who have taught in both co-educational and single-sex
classrooms and solely in all-male classrooms where possible. These “gatekeepers” (Creswell &
Creswell, 2018) permitted the research to be done by providing access to the needed resources,
such as teachers and live classrooms with students. Based on the suggested list of personnel, I
sent an email (see Appendix A) to prospective teachers inviting their participation in this study. The roster of participants was then assembled with diversity as a priority, specifically a variety of grade levels and content areas. Along with the three administrators’ interviews, the eight secondary classroom teachers’ interviews and observations help validated the qualitative data collected and used for thematic analysis. These teachers’ interviews and observations occurred within both Site 1 (Private School) and Site 2 (Charter Public School). The below table (Table 3.1) is organized by years in Education and includes a simple summary of each teacher observed; while the next table (Table 3.2) is arranged in a similar manner but briefly summarizes the administrators interviewed.

**Table 3.1**

*Teacher participants in their classrooms*

<table>
<thead>
<tr>
<th>Years in Education</th>
<th>Educator’s Biological Sex</th>
<th>Teaching Background</th>
<th>Observation Location</th>
<th>Course(s) Observed</th>
<th>Grade Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Male</td>
<td>only all-male</td>
<td>Site 2 (Charter Public)</td>
<td>Intro. to Coding &amp; AP Government</td>
<td>10th – 11th</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11th – 12th</td>
</tr>
<tr>
<td>6</td>
<td>Male</td>
<td>co-education &amp; all-male</td>
<td>Site 1 (Private)</td>
<td>English 8</td>
<td>8th</td>
</tr>
<tr>
<td>15</td>
<td>Male</td>
<td>only all-male</td>
<td>Site 1 (Private)</td>
<td>World War II Honors</td>
<td>11th – 12th</td>
</tr>
<tr>
<td>16</td>
<td>Female</td>
<td>only all-male</td>
<td>Site 1 (Private)</td>
<td>English V</td>
<td>12th</td>
</tr>
<tr>
<td>17</td>
<td>Female</td>
<td>co-education &amp; all-male</td>
<td>Set 1 (Private)</td>
<td>Math</td>
<td>6th</td>
</tr>
<tr>
<td>17</td>
<td>Female</td>
<td>co-education &amp; all-male</td>
<td>Site 2 (Charter Public)</td>
<td>AP Enviro. Science &amp; Bio. Lab</td>
<td>11th – 12th</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9th – 10th</td>
</tr>
<tr>
<td>24</td>
<td>Female</td>
<td>co-education &amp; all-male</td>
<td>Site 2 (Charter Public)</td>
<td>English II Honors</td>
<td>9th – 10th</td>
</tr>
<tr>
<td>25 +</td>
<td>Male</td>
<td>co-education, all-female, &amp; all-male</td>
<td>Site 2 (Charter Public)</td>
<td>Trigonometry &amp; Trig. Honors</td>
<td>9th – 11th</td>
</tr>
</tbody>
</table>
Table 3.2

*Administrators interviewed.*

<table>
<thead>
<tr>
<th>Years teaching, coaching, and/or leading in Education</th>
<th>Educator’s Biological Sex</th>
<th>Administrators’ background in teaching, coaching, and/or leading</th>
<th>Interview Location</th>
<th>Current Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
<td>Male</td>
<td>co-education &amp; all-male</td>
<td>Site 1 (Private)</td>
<td>Principal, grades 8-12</td>
</tr>
<tr>
<td>26</td>
<td>Female</td>
<td>co-education, all-female, &amp; all-male</td>
<td>Site 1 (Private)</td>
<td>Principal, grades PK-7</td>
</tr>
<tr>
<td>36</td>
<td>Male</td>
<td>only all-male</td>
<td>Site 2 (Charter Public)</td>
<td>President &amp; Co-Founder</td>
</tr>
</tbody>
</table>

Data Collection

*Semi-Structured Interviews*

Semi-structured interview questions were prepared in advance and given to each participant for consistency. The interview protocol (Appendix B) consisted of 10 open-ended questions on classroom experiences to allow participants to veer off into other relevant topics they feel necessary to discuss. During the initial interview, the teacher had an opportunity to introduce the planned lesson to be observed. Each interview was audio recorded while the researcher also took extensive handwritten notes (Creswell & Creswell, 2018; Yin, 1981).

Conducting interviews are a vital part of qualitative research because they allow the researcher a one-on-one opportunity to delve into the opinions and experiences of someone with inside knowledge on a particular topic. Using the responsive interview approach (Rubin & Rubin, 2012) allowed for the teachers to feel comfortable and casual during the interview, while still sharing specifics that welcomed the researcher to enter their world and become privy to their lived experiences.
Once the teacher’s class was observed, I followed up with a shorter, less formal discussion. This provided an opportunity to review the students’ participation, understanding, and successes/failures during the lesson, as well as discuss any unplanned deviations by the teacher from the lesson plan to correct the male students’ attentiveness and/or behavior.

**Classroom Observations and Researcher’s Notes**

Each observation lasted approximately 80 minutes. Observations were recorded by hand and consisted of areas to record date, time, person being observed, setting, classroom layout diagram, general notes, and possible commentary heard during observation. Each observation culminated with an end-of-the-day reflection by the researcher documented into a journal to wrap up any thoughts that may have been unable to be captured in the moment. After one full class observation per teacher, a follow-up conversation occurred with any additional notes documented. All observation notes were then scanned into PDF form to have both a physical and secure copy saved to the computer.

**Data Collection Procedures**

After informal introductions through email and acceptance into the study, participants signed letters of consent to join in the study by opening their classrooms for observation and sharing their lived experiences while remaining anonymous in the production of the final results. Eleven interviews were conducted with nine of them being audio recorded for reviewing purposes. One interview that consisted of the researcher and two administrators was not recorded and this technical difficulty was only realized after the interview was conducted. This particular interview was documented by the researcher’s notes over the hour interview and additional journaling occurred the same day as soon as the technical issue was realized. This allowed me
the opportunity to capture any other thoughts, feedback, and comments while still recently discussed.

**Data Analysis**

Multiple case studies are so complex that they almost need to be done by one person (Stake, 2005) with the lead research thoroughly analyzing each case; however, outside of dissertations, multiple researchers usually work together because of the depth and brevity of the data. Data collected through interviews, observations, and other resources forms the foundation of theories while analysis of that data generates the concepts created. By “studying data, comparing them, and writing memos, we define ideas that best fit and interpret the data as analytic categories” (Charmaz, 2006, p. 3). The research problem helps determine what methods a researcher will use to collect data. Once the research problem is determined, "theoretical sampling in which emerging analysis guides the collection of further data” (Ezzy, 2002, p. 87).

As data is obtained, meaningfully sifting through collected information allowed for the sorting and synthesizing by attaching labels and grouping data based on commonalities (Stake, 1995). This process, known as coding, allowed for comparison and identification of patterns. It provided an opportunity to recognize where there are holes in the data to guide me in collecting more refined data. The richer the data, the more opportunities for inquiry (Charmaz, 2006).

Glaser’s use of data “prefers the constant comparison of incident to incident and incident to emerging concepts in order to enable the development of new theoretical explanations rather than framing data with existing conceptual positions” (Grbich, 2012, p. 81). His management of data by “generating connections and ideas and explaining them theoretically” (Grbich, 2012, p. 81) is a looser process than that of Strauss’s. Glaser challenges researchers to move through the analytic process continuously asking themselves “What is this data a study of?” (Charmaz, 2006,
p. 138). In repeatedly asking this question and seeking “the most fundamental answer that fits, we might discover that particular meanings and actions in our studied world suggest theoretical links to compelling ideas that had not occurred to us” (Charmaz, 2006, p. 138). Keeping this in mind during the case study encouraged me to make connections and notice patterns among the various participants’ perspectives.

It is equally important that what was collected is quality and credible data. In using Glaser’s style, “achieving intimate familiarity with the studied phenomenon is a prerequisite” (Charmaz, 2006, p. 68). My time in an all-male educational setting provided a good starting point for looking at data but would not produce automatic codes for analyzing. Textual analysis is beneficial as it “draws on particular discourses and provides accounts that record, explore, explain, justify, or foretell actions” (Charmaz, 2006, p. 35). Glaser (1978), however, warns that using extant texts, such as public records, where the researcher does not affect the data can be problematic; therefore, it is important to obtain additional data that comes from lived participants’ experiences. It is also important to be aware of the shortcomings that may come from elicited texts, such as journals and questionnaires, as focusing solely on the writing of research participants may also hinder the possibility of pursuing other methods of data collection because of participants’ biased perspective.

All interviews were audio recorded, manually transcribed, and are easily accessible for continuous review and replay. While there are computer software programs to assist with coding, such as MaxQDA, that I have explored, I manually sorted and coded all data using hand-written annotations and Microsoft Word tables. My undergraduate degree in English and graduate degree in Teaching with a concentration in Secondary English allow me to identify and organize emergent themes from individual interviews. Through examination, data analysis came from the
organizing, analyzing, and interpreting of the various forms collected. As themes emerged, I created visual tables with a color-coded key to lay out emerging themes and accompanied each theme with four selected examples of cross-case significant statements used as evidence and each presented from four of the eight different interviewees.

I conducted an extensive analysis of components such as teachers’ lessons and students’ learning styles to describe and determine teachers’ decisions to foster male students’ academic growth in a single-sex classroom. The theory of Multiple Intelligences, or MI, guided this study to answer the research question with explanations through the development and categorization of themes instead of the prevalence of numerical data. MI with a focus on eight specific intelligences encourages educators to provide diverse methods to further develop a student’s strengths with advanced opportunities and bolster their weaknesses through continuous practice (Moran et al., 2006) no matter how pronounced the variation between the intelligences may be.

Once observations occurred and interviews had been conducted journaling began “as soon as possible after the interview is finished” (Rubin and Rubin, 2012, p. 101). Data was analyzed to evaluate if and how educators formulate lessons geared to the styles and needs of a variety of students, specifically in all-male classrooms. Interviewing and observing teachers allowed an opportunity to see if instruction in these classrooms is centered around the male students’ specific learning needs or if there is a more traditional teaching approach. It also provided an opportunity for commonalities and differences to emerge. Observations and interview notes and audio were closely examined to familiarize, code, generate themes, review themes, and define and name themes. MI provided specific intelligences, which may thematically cross and create abstract categories that cannot be mathematically labeled, therefore making a case study a logical approach for this research.
**Cross Case Analysis**

After all information from every interview and observation was collected, all data was sorted and coded manually using hand-written annotations with the assistance of Microsoft Word tables to help me better visualize, track, and determine emergent themes. With the use of different colors for identification purposes, I was able to organize, examine, analyze, and interpret all data to review not only within each case and school but through cross analysis of data collected from both schools.

Searching for patterns and consistencies in certain conditions allows for the acknowledgment of the reappearance of themes over and over. Reviewing and recognizing “an early commitment to common topics facilitates later cross-site analysis” (Stake, 1995, p. 25). The data interpretation described in detail the teachers’ instructional decision making in both Site 1 and Site 2 based on the interviews and observations collected from just that school. Once I analyzed information collected from each school independently of the other school and presented my findings from each site separately, I then cross analyzed. The cross-case analysis allowed me the opportunity to keep rereading and taking apart my major findings from each school site to make sense of any emergent common themes and differences in teachers’ instructional decision making by identifying topics worthy of continued attention (Stake, 1995, 2005). With a descriptive and then interpretative collection, the “important data and claims will be deliberately triangulated” from the two cases and presented in tables (Stake, 1995, p. 112). This allowed an opportunity to see if what I am finding and reporting results in similar or different themes when found under different circumstances, such as different sites.
Role of the Researcher

Serving strictly as the researcher and observer, not as a participant in any classroom instruction throughout the multiple observations occurring at varying lengths, allowed me to have an outside perspective and remove myself from my belief that there is value in separating the sexes in the classroom. At no point did the researcher offer any lesson suggestions, classroom management advice, or any other input into the teachers’ lessons and classroom time so as to not skew the study one way or another.

This qualitative case study was inspired by my own personal experiences as a high school English teacher turned Dean of Student Life and parent of children in both co-educational and single-sex schools. The research developed around my initial interest in exploring the possible academic and social influences that result from attending a single-sex school. My bachelor’s degree in English and master’s degree in the Arts of Teaching with a concentration in Secondary English afforded me the ability to identify and organize themes from all data collected. My goal was to not only gain a better understanding of and analyze relevant literature but also construct meaning from various data collection methods, such as in-person interviews and the reality of observations, to merge the unknown and enhance what is known of single-sex education and the educators who teach in this specific setting.

Ethical Considerations

A bias may exist because of researcher’s employment at the chosen site. I (the researcher) am aware that the findings could appear to be shaped by my own personal experiences as a former female educator at Site 1, the parent of a current student, the relative of several alumni, and a current administrator. However, none of the possible faculty participants are supervised by me, so my rapport with the educators as colleagues may enhance my study by providing a more
organic, trustworthy, open, and safe environment. I have no connections to Site 2 which afforded me the opportunity to enter into the school with little knowledge of the environment, minimizing any preconceived biases.

To reduce any further bias, I presented all findings. This included but was not limited to results that are positive, negative, expected, and/or contradictory to my beliefs (Yin 1981), even if the information “contradicts the general perspective of the theme” (Creswell & Creswell, 2018, p. 201). IRB approval and documentation through the University of New Orleans was also obtained to support the participants’ safety.

**Credibility**

To best provide a true, credible, and dependable study, data samples were collected after approved IRB during the months of November 2023 through January 2024. All participants were permitted a secondary discussion of their interviews and observations to further validate they were cited correctly. All observation notes were recorded in a document created by the researcher for a format to be replicated and used in every observation. Conducting two interviews with each participant, pre and post observations and observing 75-minute class periods per teacher added reliability to the study.
Chapter 4: Findings

The purpose of the doctoral dissertation is to discover how students in all-male classrooms may influence their teachers’ lessons and engagement with their students. Because the study focuses on single-sex, all-male education from many perspectives four women and four men were chosen to participate. They teach a variety of different subjects and different secondary grade levels (grades 6-12) at two different schools, one private and the other public, were chosen to participate. A total of three administrators, one female and two males, from these schools selected educators based on their time in education, experiences, and willingness to participate in the study’s interviews and observations. Recognizing the semi-autonomous role of educators and their use of educational tools to best guide instruction is critical to the study. Guided by the theory of Multiple Intelligences (Gardner, 1983), this collective multiple case study attempts to answer the following research question: How do educators in all-male classrooms make decisions about classroom instruction?

Conducting semi-structured interviews and classroom observations allowed for the researcher to understand the teachers’ personal and professional backgrounds before seeing how this translates into their classrooms and approaches with students. Less formal conversations with the teachers after the bell allowed for a recap of the classes’ goals, plans, and unanticipated attempts to direct and engage the all-male student body. Interviews with administrators added an additional opportunity to learn more about the specifics of each school and their more holistic views on instructional planning and design for their all-male student bodies. These administrators are veteran educators who not only taught but also now lead their respective all-male schools and are instrumental in the hiring and continued training of their teachers.
With the first few interviews occurring in no particular order other than convenience of each teacher’s or administrator’s schedule, the researcher noticed similar themes beginning to emerge. Developing codes during the audio reviews, transcription, and field note analysis from observations assisted with the cross referencing of the data that also permitted unexpected themes to emerge as I began to better explore through their own words and experiences just exactly *How do educators in all-male classrooms make decisions about classroom instruction?*

**Multiple Case Study**

**Case #1: Private School**

During the fall 2023, I interviewed and observed teachers and administration at a private, college preparatory school for males in Pre-K through 12th grade in New Orleans, Louisiana. In asking both principals what expectations they have for their school, they echoed similar hopes of preparing them for eternal life and forming men who are “not ignorant of everything we should know” with the high school principal’s more specific desire to form “great husbands, great fathers, and great citizens.” The PK-7 principal’s experiences from single-sex schools have shown her the importance of “identifying and meeting the boys where they are so we can teach them How to think and the Why.” With no female students present in the classroom, she says the boys are not hindered by a strong girl presence and instead must take the lead and responsibility themselves of mapping things out and being creative. Creating an atmosphere utilizing the boys’ differences and desire to move and converse, for example, creates interactions that allow for those “Ah ha, I get it!” teachable moments.

She also stressed the importance of hiring teachers that not only have experience and proper qualifications but also those that she believes “fit in with the school’s philosophy” and can captivate an audience. As she stated, “not everyone can teach only boys.” Teaching requires
dedication so understanding that male students may be more apprehensive of engaging in the lessons is an additional factor in the selection of teachers. The school’s two principals, the PK-7 principal and 8-12 principal, both discussed the importance of putting teachers in positions to connect with students and faculty. It is important to them that teachers new to the school make an immediate connection to the school community, so they assign them a mentor teacher that they see as a good fit. This mentor teacher does not necessarily have to be in the same subject department as the new teacher because he/she will have their department head to guide them. This mentor is a veteran of the all-male educational world and can offer support or advice on real world applications that pertain to the interests and needs of the boys. The high school principal believes teachers “have to ride the bus with them.” While he does not mean this literally, he wants the teachers to be involved with and share experiences with the students. In this type of environment, it is the community, the conversations, and the connections that are as equally as important for these males as the academia in the classroom.

With the private school also being rooted deeply in the Christian faith, participants discussed the importance of incorporating and encouraging appropriate male behaviors into their classroom assignments and discussions. Although there are no female peers their age in the classrooms, the history teacher believes it helps when studying hard, “uncomfortable material such as the rape of the Nanking women.” While it is natural to laugh sometimes at uncomfortable situations, he believes that these conversations are much more effective and meaningful with the boys being able to process and understand the information in a manner that does not embarrass them or keep them quietly uncomfortable or obnoxiously deflecting in front of females.
Teacher participants from the private school discussed factors that play into the instructional decisions they use in their all-male classrooms. Each constructed their classroom management methods and lesson plans based on their experiences with the boys they teach. Some even reflected on differences in the past co-educational classrooms they taught. The male English teacher, newer to the single-sex school but experienced in co-educational schools, says that “boys see though you if you are unprepared. They don’t like busy work.” Because of this, he says that everything he does in the classroom is purposeful from intentionally designing the classroom space to make “cool places” for work and collaboration to incorporating relevant material from the beginning of class with his “Scholarly Start” bellringer to his final “Exit Ticket.” This not only engages the boys but also reminds them that everything they do matters in the creation and finality of every class assignment or assessment they produce. The male history teacher echoed similar sentiments that “boys want to know the purpose and the why” so he strives to challenge his students to not only understand the why but to take risks in the classroom. He intentionally designs lessons that promote more dialogue in the classroom instead of students who simply listen to the teacher. Incorporating fun enrichment opportunities with activities such as “allowing students to recite the Gettysburg Address in costume” is also another approach to allowing the boys to freely use their passions and talents in their learning. He believes this approach redirects the “squirmy guys who can’t sit still” and helps the boys to think for themselves and learn through attrition. All participants implied that the success of this type of education is at its core about the brotherhood and community these young men build together based on comfort and connections developed in the all-male classroom.
Case #2: Charter Public School

Observations and interviews were also conducted during the fall 2023 at a charter public school located in New Orleans, Louisiana. It is important to the president of the school that his young men learn “to respect and be respected.” The goal is for them to be comfortable going into any room and navigate it not just for their own good but to make things better for the community. His own experiences as both a student and educator in all-male schools makes him prioritize having teachers that are relevant and impactful people. He wants teachers who understand that this type of education is “much bigger than us” in producing good people and not just scholars. Similarly to Case 1, the President wants teachers and all supporting staff to be people who “have to understand the mission and be willing to meet students where they are.” Many of the school’s teachers were personally selected at the founding of the school because they are “proactive in the community, give back to what we are building, advocate for the school, invest in its students, and impact the school community in some way no matter their role.” He believes “love motivates, inspires” so forming a familial community with the faculty and staff is a priority. Providing opportunities for higher learning, maintaining competitive pay scales, and offering retention bonuses not only supports the staff but also helps keep the right people.

A veteran public school English teacher who has taught in both single-sex and co-educational classrooms notes that the boys are “extremely comfortable together, in their failings and successes, in a way that I don’t believe they would be with girls in the room.” She believes the boys develop a “pressure, anger” that is often misunderstood in the co-educational classrooms she has been a part of and instead sees the all-male classroom as an opportunity for teachers to specifically help students work through their educational frustrations and reintegrate
them into the learning process. With all boys in the classroom, these participants stated that these natural frustrations are kept in mind when creating instructional lessons. Incorporating movement, concern, and a comfort that allows for questions lets the students see that the teachers care and often “curtail their drifting off” by intentionally keeping them active and engaged.

With a smaller school and a single-sex classroom environment comes the ability to focus more directly on the needs of male students and explore instructional strategies not always utilized in larger, co-educational classrooms. The school is heavily centered around speech and debate. Speech and debate style discussions in the classroom requires the students to “bring their expectations to the table while being gentlemen” who are respectful of and civil with their peers. This helps build these young men to be “resilient, thick-skinned, and unselfish” in a world where they will often face resistance. Everyone interviewed mentioned debates, and almost every observation incorporated and encouraged the students’ abilities to demonstrate their level of understanding. With the school’s largest extracurricular activity being the Speech and Debate team, it was not a surprise that even during their down-time the students were overheard discussing previous classroom debates and weekend tournaments. It was implied by all that this style of instruction shows the males that there is value to their thoughts and gives them an opportunity to more directly showcase who they are. Teaching at the charter school used techniques such as debating in the classroom to engage and assess the students while also encouraging respectful conversations and developing positive relationships.

**Cross-Case Thematic Analysis**

Five noteworthy themes presented themselves throughout the review of teachers’ interviews and observations. With all participants discussing the same unprompted topics, two major themes quickly emerged. These themes, movement and Social and Emotional Learning
(SEL), both deal with the physical and socio-emotional aspects of males during their adolescence years in classroom settings. Three secondary but relevant themes also emerged: motivation, organization, and relationships. Although not as prominent in discussions and observations as the two major themes, these topics had reoccurring similarities.

**Designing Instruction for Boys’ Movement**

Without any prompting every teacher and administrator within this study focused heavily on the males’ constant movement, whether the students’ behavior is intentional and/or unconscious. All participants acknowledged that it is not ever any one particular moment or time period in class that they can pinpoint because the boys are moving around so much that one male veteran math teacher even joked “if you have seasickness, you're in trouble because they're all moving in different directions at the same time.” Participants described that males are constantly moving, have the need to fidget more in a classroom setting, and respond better to non-traditional teaching practices, such as *Think, Pair, Share* or *Four Corner* activities that encourage movement (Gurian & Stevens, 2005; Gurian & Stevens, 2011; King, 2013; Reichert & Hawley, 2010).

**Acceptance of Student Movement.** One female veteran math teacher discussed a former male student who would sometimes complete his work by placing his notebook on the floor, his stomach on the chair and positioning his body similar to that of an upside-down U. The teacher made sure to note that although one student laying across a chair while working in a group may have seemed disruptive, the young man was not misbehaving and instead working diligently and more focused in his group no matter how odd this position seemed. It was interesting that she veered to this topic unprompted and after quickly jotting this down in my notes, I was able to quickly reference it later in the interview when she admitted that this is not always typical in her
classroom; however, she allowed it because of how immediately engaged and focused he became. When he was ready to, he moved back into his seat properly, and none of the other students seemed to be distracted by the action. This overall acceptance of physical movement seems to be a hallmark of teachers’ design of instruction. At times this is student initiated, as above, and sometimes it is teacher-initiated and part of a lesson design.

Participants expressed that standing, tapping, and walking around for no significant reason is a common and normalized occurrence in their classrooms no matter what type of assignment is presented. One math teacher turned a review for multiplication and division of fractions and mixed numbers into an opportunity to encourage students to move. The rules are reiterated and remind the boys that they can “quietly trade with a neighbor” or “swap out for a different card on the back desk.” It was obvious the students had participated in a similarly structured assessment and acknowledged that this was fun and motivating even though it was work. This teacher made sure to point out the intention behind this particular type of assignment was specifically geared to their inherent need to move and recognized “if I just give this sheet to them, they will complain. But if I let them move around the class and make it a puzzle, they are all about it.” This math teacher noticed her young males losing interest in the mundane repetition of tasks such as multiplying and dividing. When presenting her students with a more challenging task such as moving from whole numbers to fractions, she realized she needed to do something to grasp their interest, incorporate their need to move, and make the task feel more worthwhile for them. All participants, no matter the subject matter or grade level noted that the often menial but constant movements of their students are a direct factor in both their lesson plans and the classroom expectations they set.
**Planned Incorporation of Movement.** Movements, described as getting up to go to the bathroom, walking across the room to get hand sanitizer or tissue, moving, bouncing, and shaking legs, or even standing near a desk or against a wall, are viewed by the participants as not always intentional but sometimes almost involuntary. Each of the teachers, however, emphasized that those moving students moving hardly disturb or distract other boys because no special attention is directed to it. Five of the teachers mentioned using some form of a pass system as an understood freedom that allow the students to quietly pick up if they need to walk out to use the restroom and “no one pays any mind to it.”

One young, male high school English teacher relates to his students and believes it is unfair to expect his students stay still as he himself moves around the classroom when teaching. Instead, he intentionally designs “a classroom space so that they can move about different cool places with less restrictions but definitely still structure, not constraints. Sometimes moving to gather in groups of three or four to discuss and then returning to seats is just enough. I walk around the whole time so I can’t expect that they are still the whole time.” Participants who have taught in either co-educational systems or all-female environments suggest that this type of constant movement during activities is often disruptive for females in other classrooms and the need to move is not universally accepted in mixed gender or all-female classrooms.

Kinesthetic movement was described as a pathway to engagement. The interviews and observations of constant movement led each of the eight teachers to discuss specific kinesthetic learning methods used to utilize the boys’ constant motion to maximize classroom success. The high school English teacher’s use of role play is a method she uses to help the boys better engage with and understand the material. She believes “that if they're having fun doing it, they're learning it.” Seven of the eight teachers used the boys’ urge to move to their classes’ advantage
by using tools such as individualized white boards or movement to utilize the classroom screen for the boys to demonstrate their understanding through written response. Two math, a science, and an English teacher discussed the use of personal whiteboards as a method to not only provide the males with different methods of answering a question, but also enabling an easily accessible and effective method for checking student work while allowing everyone to participate in an orderly manner by simply holding up his own individual answer.

The participants share similar beliefs that creating an environment catered to the understanding that boys have different needs allows the teachers to utilize kinesthetic movement as an additional educational tool when lesson planning. Interestingly, both the public and private school participants say their boys, no matter their age or personal background, are still children at heart. Participants despite teaching in grades 6 through 12 acknowledged that no matter the age, their male students enjoy tapping into childhood play by cutting and gluing whether it be to create mathematical number lines or puzzle together satirical pieces of literature with modern day song lyrics. In math they like to cut and glue a lot, in science they enjoy drawing to visualize, and in English "as much as they will groan or roll their eyes when given an assignment that involves some form of play, song or dance, when they actually get down to doing it, there having fun.” If the male students are actively involved, they are engaged in the required material.

Social and Emotional Learning

One surprising factor that I did not anticipate being so dominant but was pleased to observe focused not only on kinesthetic, audio, visual and other learning styles, but more specifically on the importance of socio-emotional learning (SEL). SEL focuses on the skills, values, attitudes that will help them as one high school teacher said become “respectable men, young men striving towards better community.” Participants, including both teachers and
administrators, echo multiple personal development goals for students to “be the [best] version of themselves,” “respect multiple perspectives,” “help a friend out,” “become resilient,” “learn self-control, and hold themselves accountable.” This desire to produce not just educated males but also positive citizens for their communities was explicit throughout both studies. In both schools, these sorts of non-academic outcomes were front and center as teachers talked about their approach to designing instruction.

While raising hands and not blurting out answers is typically viewed as an ideal behavior, during one observation the English 8 teacher used a soft knit frisbee to manage classroom participation. He tosses the frisbee to one volunteer and the classroom immediately quiets down as that student has the floor to speak. Once he is finished, he then tosses the frisbee to another classmate thus taking on the role of identifying, empowering, and respecting what his peers will contribute to the discussion. This continues effortlessly until the teacher quietly raises his hand and the frisbee is returned to him. The simplistic yet powerful gesture promotes student preparedness and accountability in case he is the next chosen participant, respect while the boys quietly listen when someone else is speaking, and the responsibility as they then control who the next student participant is. To the students the tossing of the frisbee is a tool that allows them to talk and make the lesson more fun but also unbeknownst to the students it is motivating them to participate and engaging them in the lesson’s discussion while subtly providing them with the necessary movement they desire. The most effective lessons observed in classrooms at both sites were lessons that allowed for not only movement but a learning community.

A veteran female, public school English teacher who has served in a variety of classroom types described how she strives to build a classroom and school community on not just academics but also respect. She acknowledges that while male students like hand-on lessons,
they also need to understand their emotional intelligence in addition to their academic intelligence. She states that “in co-ed schools it’s harder to focus on socio-emotional learning, whereas with all boys it is easier to set expectations because of less a mix of factors.” Information can be diverse still but more geared to their interests and because they feel more comfortable there is a physical, emotional, and even spiritual respect while they all try to understand themselves. This respect is perhaps harder to capture in co-educational classes with somewhat more heterogeneous groups of students. Her colleague, also a participant in this study, firmly believes in the importance of SEL to develop interpersonal skills that are important in life outside of the classroom, too. Together these teachers are even implementing downtime lessons to incorporate tenderness and modeling kindness. Everything is based around debate in this public-school science teacher’s classroom. It teaches the male students the socio-economical skills that they need to learn through self-control and respect. She also finds that “offering PBL (Problem Based Learning) with hands-on labs” offers additional opportunities for self-awareness “because then these guys in class are inquisitive, excited, and interacting with others” in ways that encourage them to respectfully challenge or expand on their peers’ perspectives. The same sentiments were echoed by the teacher and administrative participants from Site 1. The private school’s faith-based mission, strict discipline model, and theology classrooms also support the school’s promotion of SEL in the classrooms and in service to the school and community.

Another part of developing and fostering this learning community is by increasing self-awareness. All participants mentioned levels of comfort amongst students in the classroom. The veteran science teacher discussed classrooms that are filled with just boys who are comfortable and not embarrassed by much, for example “passing gas or just being stinky after playing outside.” Three teachers, two of which were females, said these natural occurrences often go
unrecognized and cause little to no distractions. The boys are not worried about impressing anyone or embarrassed of themselves with the absence of the young female sex, and instead are focusing more on what they are interested in in terms of the lesson. These teachers believe that this self-awareness does not inadvertently shift the class’s attention and can help keep the focus on the concepts being taught.

This self-awareness was also observed in another way as one high school teacher explained that although teachers are the “lead counsel,” the boys in single-sex classes naturally create their own community by recognizing and utilizing each other’s strengths and talents to help each other and benefit the classroom. This was also apparent during each observation. I noticed a relaxed posture and a level of ease with no desire to impress and no oversexualization in discussions where one may have expected it, for example during a discussion of Romeo and Juliet. This Shakespearean work is often viewed as a tragic love story and while those portions are acknowledged, the males wanted to cling to and investigate the close bonds and strife that each character has with others. The single-sex environment promoted the learning of concepts through specific themes that are specifically intriguing to their interests as a method to help them engage and better understand the objectives of the literature lesson.

**Various Forms of Motivation**

A surprising theme the researcher did not expect to stumble upon was the educators’ focus on what motivates their male students. Participants who had previously taught girls say the largest takeaway they notice is, as the 20+ year female English teacher at the public school put it, “boys are more reluctant; girls are more confident” in themselves, their work, their preparation, and their willingness to participate. The lack of females in the classroom makes the boys more “willing to share, excited, independent, and motivated by other factors,” says the female, private
high school English teacher While these motivators vary by student, it is implied that a “small win” whether through acknowledgement, something tangible, or accomplishing a personal goal is a great male motivator that exceeds an accomplishment far greater than a grade on an assessment. The private school math teacher even chuckled that food or a few pieces of candy would make her students want to pay more attention and be eager to participate. Others reiterate the same idea by mentioning that leaving the classroom even thirty seconds early motivates the young men to work that much harder. The following sources of motivation emerged during analysis: competition and relevance.

**Competition.** Through interviews and observations, it was obvious that teachers used competition to fuel the students’ energy and desire to be more successful than their peers. One senior English teacher has even found ways to capitalize on their love of competition by using a sporting event like college basketball’s *March Madness* and turning it into a relevant literature competition. Using literature that they would have read in their high school careers starting from English I all the way up to what they are currently reading in the English IV or V classroom, she creates brackets. These brackets include American literature versus British literature and small works versus large works so that the boys then create their own brackets just as they would for the NCAA tournament bracket. It is an exciting lesson that allows the young men to individually decide, explain, and debate over literature, when it is typically challenging to get the boys passionate and excited about reading. This requires the boys to pull up textual evidence and analyze the material to convince each other why one is better than the other and why one should move on to the final four versus another. She said that this is one of her favorite times of the year because to “see them actually remember literature that they studied from up to three or four years ago is an incredible experience and the boys actually surprise themselves.” The English teacher
creates this lesson to actively engage her students in discussions and debates about the context, themes, and stylistic formatting of literature to earn points in class by adding in the elements of fun and good sportsmanship that comes with competition.

Three participants also acknowledged a “Shout Out!” board where something positive in behavior, properly using a term in discussion, or helping a fellow student gets acknowledged on a board in the classroom for all others to see. The males are proud and become determined to not only earn their name on the board but also turn it into a competition to see who makes it on the board more. This was apparent in one observation as the boys immediately wanted to show their work and/or see their names displayed. I observed one class that even denoting group scores on the board during a review game with no prize at stake was still enough to get the boys participating, motivated, and engaged. Participants from each site mentioned competition as a driving force and believe it has a positive effect on the boys in all-male classrooms. The private-school history teacher and public-school science teacher shared similar sentiments that although “boys are competitive in everything we do in class, it’s also great because after working in co-ed rooms, I feel when alone the boys are more likely to mentor without being asked and naturally migrate to motivate others.” This begins to foster individual and collective independence and self-awareness parallel in the socio-emotional theme.

**Relevance.** Triggering the boys’ interests is a valuable tool. Participants described students are motivated by their interests so if it is relevant and connects more personally to them and their classmates, they care more. A public-school English teacher tries to use every lesson to remind her students they are “a canvas for who they will be tomorrow” so that they may learn more about themselves through the relatable but challenging material, as well as set high expectations for themselves. As the public-school science teacher pointed out, “I am here as a
resource to teach them that everything we do is valuable as you learn how to find your own path and ways.” Providing texts, examples, and creating lessons more specific to the young men’s interests encourages ownership. She wants the boys to become responsible for their own education and realize that they are the most important role in not only their scholarly journey but also in life as they mature from adolescents into adulthood.

Always speaking to the students appropriately but sometimes in a more relevant manner that reaches them is also a great motivator. In this digital era full of shorthanded texting, young males talk in slang. One young history teacher observed used this to create a grading scale that the students would use to let the teacher know where they were in their understanding of the material. Before reviewing for a test, the students would let the teacher know where they stood before the review and then again used this grading scale to talk to the teacher one-on-one about how they believed they did after the test was complete.

Table 4.1

*Grading Scale using Slang to Judge Student’s Knowledge and Understanding*

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Student’s Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>“Slay”</td>
</tr>
<tr>
<td>B</td>
<td>“Alright”</td>
</tr>
<tr>
<td>C</td>
<td>“Oof”</td>
</tr>
<tr>
<td>D</td>
<td>“Kinda cringe”</td>
</tr>
<tr>
<td>F</td>
<td>“L”</td>
</tr>
</tbody>
</table>

The same young history teacher as well as a veteran math and veteran English teacher notice their boys like instant gratification and that something as simple as going over a test after everyone is finished. While they will not receive their grades immediately after, the participants believe when able it is more beneficial to go over the information while it is still “fresh in their minds.” The intentionality of these teachers’ decisions allows the students an opportunity to feel
more invested in their own learning and understanding. Providing extra credit or allowing students to redo work for partial credit to enhance their understanding of a topic also helps. Participants do not view it as “busy work” but instead as an important tool in the learning process that is taking place. While motivating factors may vary by classroom subject and structure, each participant found similar ways to stress that it is important to remind the males that they themselves are responsible for their own education and therefore should be their greatest motivator.

**Supporting Male Students’ Organizational Habits**

Although seven of the eleven participating educators from the two schools had previously worked at co-educational schools with both males and females, all participants brought to light another unexpected theme they have noticed in their all-male classrooms, disorganization. The lack of organizational skills seems to be a hinderance for boys’ success that received special attention in the all-male classrooms in this study. The participants who have taught both females and males stated that females are more responsible with their belongings and organized, often carrying extra supplies and color-coding and/or using specific notebooks and binders for the varying classes. Participants, especially the science and math teachers, described their male students’ messier and disorganized ways present problems as they often misplace important class documents and/or “shove things in their schoolbags” before finding “millions of papers at the bottom.” There was an implication that this disorganization can play a large factor in the male students’ grades suffering. Three participants noted the time spent looking for a class resource is a distraction and instructional time wasted, with a math teacher expanding further by recognizing the most disorganized students are often missing homework because either it never made it home or was returned. These students are unable to reinforce the skills they are learning in class.
because either the work is incomplete or unable to be corrected the following class period. Without the additional practice of math problems or a lost study guide for a science test, the student is entering into assessments with a weaker foundation and possibly less understanding of the material.

While observing the public-school science teacher’s class consisting of students in grades 10 through 12, it became apparent that many of the boys were missing a specific handout. After multiple requests for another copy of the assignment, the teacher asked her students to raise their hands if theirs was misplaced. After more than half the class raised their hands, she then asked the students to raise a specific folder in the air. This folder check is one she assured me that all students were given in the beginning of the school year to keep the class’s materials. Interestingly, only three students were able to produce the required folder for the class. Those that had the handout but not in their folder were pulling them from the bottom of their school bags and straightening them out by unfolding/uncrumpling them. Similar examples were expressed by all participants creating a need for them to design their lessons and classrooms with intentional means of intervening and consistently reminding the boys to “write this down,” “pack this in your class folder now,” and “step up” to learning the importance of organizational responsibility.

**Reminders.** Participants stated they are constantly reminding their students to bring all materials to class not only because it is necessary to the learning process but also because the teachers themselves only have so many extras that they can provide the students. The public-school math teacher stressed “the boys are always needing to borrow tools such as pencils, calculators, and notebook paper” and due to both personal and school funding, he is only able to provide so much help, especially when the boys forget to return materials borrowed.
The public school has a different set of computers for each classroom and teacher. Teachers at this school say not only is it a cost issue but that it helps ensure the students will at least have a computer in every class because many of them do not even remember to bring items to class. Having set computers in the room ensures they have another valuable tool in class to use as a resource; however, the giving and receiving of the computers each class period takes up valuable class time. Although students at the private school have their own laptop computers, the boys often forget to charge their computer or leave it at home thus creating the need for loaner laptops that can be checked out in the school’s technology office. Participating teachers say they must always be prepared to adjust so as to avoid countless students needing to leave for the technology office. Sometimes this is done by having another student pair up with a peer and his laptop, having extra copies of textbooks or handouts, or even allowing students to borrow another student’s charger. No matter what the temporary resolution may be, five of the participating teachers admit they are always thinking of ways to stay one step ahead of the students by expecting that not everyone will have all necessary tools and resources therefore they find themselves creating a variety of ways to have all students actively working in class.

“Girls prepare while boys repair,” says the veteran, male, public high school math teacher who perfectly captures what other participants said directly or implied in every interview. The teachers combat this to the best of their ability by constant reminders to put things in a safe place, write down information that will be needed for future independent work, and encouraging class specific materials. Some participants keep a drawer for each class period full of extra materials, while others teach their students organizational skills they can use such as documenting, labeling, and a table of contents. The end goal for these teachers’ reminders and prepared assistance is for the male students to learn skills that help them not only organize their
materials and learn responsibility but also maintain all information learned so they can become conscientiously independent of their needs both in and outside of the classroom.

**Nurturing Relationships**

There are several factors impacting the educational experience of individual students with a significant impact attributed to student-teacher relationships. Based on classroom observations and individual interviews, students’ behavior is affected by the intrapersonal relationships with their teachers. Specifically, the information below identifies students’ experiences based on whether the teacher is male or female.

**Female Educators.** While national statistics show that females make up 77% of the United States teaching workforce (Loewus, 2017), it was interesting that both all-male schools in this multi-case study were almost evenly split with 51% female faculty and 49% male faculty members. With four of the five female participants using the term “maternal” in their interviews, each female repeatedly mentioned that they felt their personal life roles as a mother allowed them to be more understanding and nurturing to the young males in comparison to their male counterparts. Because boys often internalize emotion, sometimes a simple look or gesture encourages the young men. The younger boys felt comfortable not just leaving their belongings unattended in the 6th grade math teacher’s room but also confiding in her about serious personal and family issues. Currently she has a student whose family member just committed suicide “so he's having a rough time, but we will catch eyes and he gives this look, and we silently nod. It’s a way of saying, ‘Yeah, I need to talk’ and I'm like, ‘Yeah, I know’ and then I make it a point to touch base with him after class or he stays behind on his own.” Not every teacher will have the same connection with every student, and female participants, whether they were mothers or not, wanted to take care of the boys and make them feel safe.
Although both the public and private school English teachers went into more depth about molding the young men, the female participants discussed the gentler side of the males when it came to teaching them how to be kind and respectful to the females they encountered. Because of the lack of females in the classroom, all participants echoed the importance of not only teaching them to be polite, have good manners, but more importantly as one teacher put it, “show them females are strong, independent, capable, and respected. Sometimes just sharing some of your hobbies makes the teachers, especially the female ones, more relatable.” One participant is also able to know the students a little better outside of the classroom as she is the director of intramurals at her school. She stated “I was athletic and sometimes they've never seen an adult female who is athletic. I’ll throw a football and they’re shocked that I am not just a sit down and be quiet teacher.” She believes that a large portion of the relationship and trust she has built with her students is both maternal and her ability to show the boys that even as female teacher, she can still relate to them.

Male Educators. The male participants also recognized they have an equal part in the development of these young men to teach them how to be respectful to not only each other but especially to the women they encounter since there are no female peers their age within the confines of the schools. One male participant who not only comes from an-all male educational system as a student but was also raised by a single-mom recognizes “the importance of that balance of the right kind of male role models and strong female women who are going to support you with tough love, too.” All of the male participants, most who are athletic coaches at their respective schools, believe that they must lead by example as the male students are seeing the interactions the male teachers have with everyone they encounter and will emulate the behavior that is demonstrated and accepted.
Creating a Safe Space. Although each of the participants’ roles vary from teacher to coach to administrator, it is implied that there is always an adult the boys on campus can respond to. These relationships which may reflect maternal, paternal, or even fraternal connections are important for the males to know school is a safe place to learn and develop. The private school’s high school history teacher, an alum, reflected on his relationship with teachers and goes even deeper into those bonds by recognizing that boys have a natural deflection to laugh when they feel uncomfortable. He believes challenging them in class but laughing with them in positive ways helps redirect them and forms a bond “based on real connections that let them know you’re here to take care of them outside of academics, too.” They need to be reminded that not only is it cool to be smart, but everyone is learning together. No one is valued more than others.

Between the administrators’ interviews and the teachers’ interviews, observations, and follow up discussions, I learned of young men at both schools who experience tough home lives. Many of these males have few male mentors outside of school and/or come from communities where violence and drugs are prevalent. Participants discussed holding themselves to the same standards they set for their students, such as apologizing when wrong. This shows a level of respect and mutual understanding that enhances the bonds formed and allows the students to remember that the adults are there to help recognize what they may need. In one case it was a sweater with a hole in it that needed to be sewn for the second time by the public-school English teacher, who often self-reflects on “how I want a teacher to treat my son.” The science teacher simply stated what all others implied, “You must care. At the end of the day these are just kids.” For many of these boys the educators are the stability in their lives so nurturing these relationships is effective in educating them in the classroom.
Summary

It is evident that educators in all-male classrooms make decisions about classroom instruction based on their past experiences and evolving understanding of the young male students they teach. Acknowledging the necessary and sometimes uncontrolled movements of the boys that may otherwise be distracting in classes with girls helps shape the educators studied. The educators promote respect and socio-awareness not just for and amongst their male students, but because there are no adolescent females in the classrooms, they recognize an additional, necessary duty. They also strive to ensure the males learn proper behavior and respect for every female interaction, which will occur on campus with faculty and staff and more importantly outside of a school environment.

Lessons are intentionally planned to allow for specific and subtle movement, interaction with peers, and a comfortable, engaging, safe environment rather than learning silently from the lecture. The lessons go beyond academia as it is important to make connections with these male students so that they may take the knowledge, respect, determination, and encouragement found in the classroom into the world outside of a school. These educators recognize they are a valuable support system for the young men they teach and that any positive relationships formed helps to ensure the students learn the material and skills needed to be successful and productive citizens. The intentional actions of the educators at both sites demonstrate they are empathetic to the young men’s specific needs.
Chapter 5: Discussion

Purpose of the Study

The purpose of this study was to explore if and how educators in all-male classrooms construct lessons and cater specifically to the learning styles, behaviors, and needs of their male students. The study was inspired by research suggesting that males are being outscored, outperformed, and are more distracted in classrooms than females of the same age (Alfarhan & Dauletova, 2019; Piechura-Couture, et al., 2011; Sax, 2016; Smith, 2004). Using the research question *How do educators in all-male classrooms make decisions about classroom instruction?*, I was able to investigate and analyze what influences the lessons and methods of public and private school educators in their single-gender, all-male classrooms as they attempt to bridge the gender academic achievement gap between boys and girls.

The case study consisting of two schools, one an all-male public charter school and the other an all-male private institution, allowed for exploration into educators’ decision-making and the reasons behind the way their instruction and classes are formulated. Throughout these firsthand experiences and accounts, the researcher not only noted that teacher planning seemed to consider the biological and physiological developmental needs of the boys, but it was also explicitly expressed by participants whether they had taught in single-gender or mixed-gender classrooms. The findings of this study offer a better understanding of how educators in all-male schools cultivate a classroom experience geared to increasing male participation, understanding, and ultimately academic success.
Contextualizing Research Findings in the Literature

Instructional Decisions

By the early 1800s, schools colonial New England shifted from informal schooling to what would soon shape into the outline of the co-educational public elementary schools of today (Tyack & Hansot, 1992). Initially, American schools moved to a coeducational education system because it provided “an economical, convenient, and standardized pattern of discipline and instruction” (Tyack & Hansot, 1992, p. 289). While instructional decisions in educational institutions are currently primarily based on the state’s objectives and standards to assess the level of student mastery, the data provided from this research suggests instructional decisions may be multi-faceted. Higher test scores document academic progress in the classroom but it is also the educational system’s responsibility, more specifically the teachers’ job, to ensure students maintain a desire to be lifelong learners who at the least respect the subject matter instead of just regurgitating menial facts (Silver, 2005). The five emergent themes evident in this multiple case study – movement, Social and Emotional Learning (SEL), motivation, organization, and relationships – are reflected in existing literature regarding the general differences between boys and girls. The data collected demonstrates how these other factors have a specific role in teachers’ lesson design and implementation. While verbal and written cognition are important, “there has been little visible progress in altering either pedagogy or curricula in ways that recognize and exercise noncognitive abilities” (Reichert & Hawley, 2010, p. 33) by utilizing multiple intelligences, specifically for boys. Using this study’s results as a proactive tool to better understand the biological factors and explicit needs can have a positive role with an informative approach in the education of male students to lessen the overwhelming number of male students who have “checked out, kicked out, or dropped out” (King, 2013).
Sax (2016) believes that gender differences should not be ignored. The all-male classrooms observed in this research create a space for the participating teachers to utilize not only their formal training and knowledge of their subject content but also make instructional decisions specifically based on their experiences and observations of their male students’ interests and needs in order to engage the adolescent boys they are trying to teach. This is further supported by both schools’ administrative teams and the ability to use a variety of texts and methods to make lessons more engaging and specifically relevant to the interests of boys. This freedom allows the teachers to use the boys’ desire to be more hands on in creating projects, such as writing and producing a satirical video for an English class, assessing the mastery of terminology by tossing balls or a Hecostix, or moving to varying corners of the room while contributing to a debate. One participating veteran female high school teacher says instructional plans for the boys focus on “what has to be done” while using motivational tools to expand the lessons in ways “they will want to participate.” These types of hand-eye coordination games and visual learning aids allow not only for movement but for the gratification they receive in playing activities such as sports or video games (Reichert & Hawley, 2010). The more invested the student is, the more information he will retain.

Movement

Research in a 2011 study by the Division of Adolescent and School Health, Center for Disease Control and Prevention reported that physical activity in the classroom has positive outcomes on “academic achievement, academic behaviors, and indicators of cognitive skills and attitudes, such as concentration, memory, self-esteem, and verbal skills” (King, 2013, p. 142). The participants’ understanding of the male students’ physical need and desire to move by allowing boys to stand in the classroom demonstrates a foundation of trust between the teacher
and student. The subtle but mutual respect allows the student to stretch while not disturbing his peers and remain attentive to the lesson. School rooms were once viewed as sit, listen, and learn institutions and while many of the end goals are the same, educators should no longer be reducing movement but instead incorporating this physical release into the classroom so they can begin to self-manage it (King, 2013; Gurian & Stevens, 2011). This research shows that intentionally bringing movement into a lesson, such as the observed role playing of a piece of literature, can help further produce the intended learning objectives (Reichert & Hawley, 2010) while reaching out to more kinesthetic learners who can physically express themselves or even visual learners who will be able to witness the motor activity of others. This intentional instructional decision provides a more tangible approach to learning instead of trying to mentally understand and theoretically comprehend the information that is being presented.

Boys focus more on activity and not necessarily conversation (Sax, 2005) so finding a way to merge the two is a win in the classroom. As seen in the 8th grade English teacher’s class, throwing the knit disc as form of permission to speak provides another management tool that not only allows for movement but also encourages conversation. The boy is able to constantly feel the soft object in his hands while not disrupting the class but keeping his brain and hands physically stimulated instead of sitting in a blank trance or state of rest (Gurian & Stevens, 2005).

**Social and Emotional Learning**

In addition to academic stressors and changing hormones, adolescent boys are still learning how to process their own feelings and to properly make themselves aware of others. Because they are “slower to develop the skills of self-regulation” (King, 2013, p. 83), emotional literacy can be challenging. Removing females from the classroom forces the males to coexist
with their peers more naturally. This can be encouraged in something simplistic like desk arrangement and seating in the room. In a co-educational classroom the females typically seat themselves near the front of the classroom while most of the boys will group together to sit near the back and furthest from the teacher and others (Sax, 2005; 2006). A single-sex classroom of all males, however, does not allow this so it is vital the young men learn self-awareness and respect not only for themselves but for others in the room. Learning and understanding himself, identifying his unique character traits, and growing emotionally confident is necessary to the development of boys. Recognizing and helping to develop this in all-male classrooms will bring self-awareness and problem-solving skills that will not develop as easily, especially for males with unreliable parents/guardians, disruptive home lives, and any other unhealthy personal circumstances faced outside of the classroom (Gurian & Stevens, 2005; King, 2013).

Sax (2016) believes boys should be a part of “a community of men that can give healthy and prosocial examples of what it means to be a man” (p. 208) An all-male student classroom can be this familial place, especially for those who may not have a male presence at home. The participants in this study, including the teachers and administrators, stand behind the positive and constructive process of helping a boy turn into not just a man but a gentleman who is tender, honest, civil, responsible, and self-disciplined. That same soft toss frisbee activity not only promotes movement but also indirectly creates a mutual respect while participating and actively listening, just as the history and science teachers’ Socratic Seminars and debates foster similar skills. One teacher participant’s continuous statement of “we will power through this together” encourages the students by reminding them they are not alone during this confusing and sometimes awkward time in life. This is important especially in the smaller, less strict public-school setting observed as students are not as readily sent out and disciplined for misbehavior.
The implied goal of all participants interviewed is to create a safe space for these male students that fosters not only academic but also self-growth.

**Motivation**

While history indicates that males used to be more driven and higher achievers, society is constantly changing. Although males may seem unmotivated to be successful in school, they just prefer to have more control of their environment, also known as the “will to power,” a term coined by German Philosopher Friedrich Nietzsche (Sax, 2006). This male desire to be in charge can be viewed in a classroom as a student may show resistance by disrespectfully defying a teacher’s rule or even ignoring a teacher’s simple request to stand up. The male student’s defiance is his way of trying to show his control in his own decisions and exert his force even if in such a subtle way. A student’s achievement correlates to his interests (King, 2013). If the boys in the class feel bogged down with information that is either not presented in an interesting way or could be taught using more relevant texts, their lack of interest will derail their effort. The public-school English teacher who pulls in newspapers enriches the discussions and deepens the understanding by using modern real-world occurrences.

A great deal of verbal instruction can be overwhelming for undermotivated boys (Gurian & Stevens, 2005). As the rookie public school teacher discovered, simply speaking to the boys using common terms and slang they are familiar with can help engage the boys. Hands-on demonstration and instruction can also make a task seem less daunting or trivial while also providing student ownership for the work ahead. It encourages the imaginative potential that a student can use to demonstrate a learned concept, and “There is no substitute for the boost in confidence and pride in accomplishment the boys feel when entrusted to figure it out themselves” (Reichert & Hawley, 2010, p. 116). Confidence and pride are also exhibited in
males who enjoy competitions. Some boys thrive with competition as a motivator (Sax, 2006). The private school English teacher who creates a competitive NCAA March Madness bracket as means to rate, discuss, and defend works of literature recognizes that “boys are less motivated to study unless they find the material intrinsically interesting” (Sax, 2005, p. 81). If an assignment is arbitrary or there is no set outcome, male students will often disengage.

**Organization**

Teachers in this study demonstrate how an all-male classroom can systematically and intentionally teach organizational skills to the boys they observe are inherently less organized. As the private school math teacher creates specific steps for storing work, organizing handouts, and turning in papers, she is both creating and modeling a routine which is a helpful practice for academic success (King, 2013; Sax, 2005). As noted in King’s (2013) research and echoed by participants of this study, “a boy’s organizational ability is directly correlated to his grades” (King, 2013, p. 126) so since boys have a much higher tendency to be disorganized, they cannot be expected to embrace learning let alone a challenging academic curriculum. While these lower academic grades do not solely demonstrate a student’s knowledge, comprehension, and application of material, it will discourage and disengage the student from his classes, thus making the teachers’ instructional decisions even more methodical.

The participants resound similar sentiments that specific routine strategies and expectations should be set while allowing room for flexibility. Setting standards, such as not accepting crumbled up and torn assignments found in the bottom of a schoolbag, allows for flexibility from the teacher while structuring the protocol for turning in classwork (King, 2013; Reichert & Hawley, 2010). Explicit rules, monitored routines, and accountability is demonstrated
in the all-male classrooms observed specifically to design a structured environment and help implement helpful organizational behaviors.

**Relationships**

Extending research on the teacher and student relationship will be important to further understand how the instructional decisions and demeanor of a teacher in an all-male classroom may influence the engagement of the students. “Boys experience their teachers before they experience the lessons they teach” (Reichert & Hawley, 2010, p. 191) so how teachers present themselves – their tone, tolerance, understanding, desire to be there, and relatability – makes an important early impression on both the students’ behavior and eagerness to participate. When a teacher is unable to connect with a student by engaging him in active learning and is unable to forge a relationship with him, the teacher loses an opportunity for the student to learn (Reichert & Hawley, 2010). Because “bonding helps promote emotional processing in boys” (Gurian & Stevens, 2005, p. 293), it can be helpful and equally as important to build relationships not just between students and classroom educators but also including the males’ athletic coaches and/or club moderators. Opening a line of communication between the classroom teachers and the coaches is imperative for many male students who neglect their class assignments and underperform on assessments but care to dedicate themselves to bettering their talent in an activity outside the classroom. Boys are appreciative of teachers and coaches who provide tools to succeed and assurance that they can be successful while also allowing room for self-exploration and innovative discovery (Gurian & Stevens, 2005, 2011; Reichert & Hawley, 2010; Sax, 2005). Simply knowing there is a team behind them can drive males’ performance and decrease behavioral problems.
Most males are reluctant to ask teachers for help compared to females who tend to view their teachers as allies they hope to please (Sax, 2005). Redirection with a laugh, as seen by the private school history teacher when he recognizes visual cues from his boys that they are unsure of material, can often defuse an uncomfortable situation (King, 2013) and lighten the mood. As noted in the interviews, it is important that these laughs are mutual and respectful. The relationships formed not only provide mentor/mentee opportunities for teachers and their students but it also “restores the bonds across generations” (Sax, 2016, p. 255). In a world of such technological advancements such as the internet and video games that often socially disengage boys from daily conversations and in-person interactions, it is important to build relationships and reconnect with the young men while they are in their most influential years. Instructional design that provides group activity during a lesson, for example, allows teachers class time to meet one-on-one with students which opens conversations and shows concern for each individual students’ needs. Five of the participants stated this gives them an opportunity to focus on an independent assignment with one student or provide remediation and intervention time with another student, especially since they find boys are less confident and more reluctant to ask for assistance in front of their peers.

**Implications for MI Theory**

Education has evolved from learning at home to a formalized public environment. During the Progressive Era there were “attempts to differentiate coeducation in order to cope with the boy problem” (Tyack & Hansot, 1992, p. 164). The concern was for the increasingly high number of males either dropping out or being kicked out of classes. Educational emphasis became based more on experiences and societal needs as a means to fixing the school system, instead of learning more about the boys’ needs in the classroom. This later shifted into the more
modern educational system now used that places a heavy emphasis on objectives in learning and the outcome of testing scores. A checklist of objectives to ensure students master standardized skills does not provide teachers or administrators with a helpful manual on how to obtain these goals. Just as with the Multiple Intelligence (MI) theory, participants echoed there is more than one way to be smart in ways that standardized objectives cannot always measure. Based on this study’s findings, focus needs to be expanded more directly to teachers’ instructional decisions and how they can further expound on ways to enhance male students’ engagement and understanding.

This is often done by incorporating differentiation that is geared to reach more students at their learning needs. However, utilizing gender differentiation in the classroom to shape instructional decisions based on the recognized cognitive and physical differences between the sexes is often ignored. Further exploration of Gardner’s (2006) Multiple Intelligences theory would offer guidance in the expansion of teaching strategies. Many of the participants’ strategies were specific to trial-and-error experiences in their classrooms in attempts to engage and encourage their male students. The participants’ creation of lessons that incorporate music, puzzles, specific language, and even non-verbal cues are all ways to reach out to the boys. In the push to help boys comprehend and retain knowledge, incorporating MI and the various intelligences during lesson planning and decision making is a strength that engages students by acknowledging their preferred learning styles and needs.

Implications for Practice

Teachers

This case study may further empirical studies that seek to explore the dynamics of single-sex classrooms, how boy brains “work” differently than girls, and how a male’s physical, mental,
and emotional growth, especially at a prepubescent age, affect his ability to sit still and concentrate in a classroom. Because boys learn differently and tend to follow the lead of their peers, single-sex classrooms may help (Viets, 2009). Detailed teacher preparation and attention to motivational techniques and classroom lessons that encourage movement should be a major factor in these same-sex classes. All-male classrooms may lead to increased engagement and subsequently educational accomplishments that help bridge the gender academic achievement gap. This type of environment could not only decrease preconceived gender stereotypes by providing an unrestrictive atmosphere that removes any quasi-masculine stereotypes or behaviors often exhibited in co-educational classrooms but also allow for the increase of focus on pedagogical differences based on gender (Gurian and Stevens, 2005; Mertens, 2008).

Teachers of males must be purposeful in the creation of their lesson plans. They need to explore methods using the eight intelligences offered by Gardner’s (1983, 2006) research to create strategies that support various outlets for expression, student demonstration of knowledge, and management of unprompted movement. There can still be structure with less constraints. Providing brain breaks as well as being specific and direct with tone and language, for example, are free but important teaching strategies in classrooms with all-males. These same teaching strategies, such as explicit instructions, relatable content, and engaging assignments may also be productive factors in all-female and co-educational classrooms; however, additional findings of this study suggest that factors such as movement and competition may give teachers in all-male classrooms less leniency to use more passive learning methods. There is the possibility that these behaviors are tolerated by females in single-sex and coeducational classrooms but may not be optimal strategies for girls at all. Movement and competition, instead, seems to be more specific to the engagement and enhancement of male students’ learning. Providing curriculum and
assessments that encourage the male brain to stay more alert because material is relevant and reflective of their own experiences through relatable themes and activities that encourage movement, conversation, and critical thinking will also increase male student engagement and accountability, potentially furthering their understanding of the presented academic content.

**Administrators**

These findings promote the need for a conscientious effort by administrators to focus on the specific needs of male students. All teachers and administrative participants stressed the important value of movement in the classroom, whether it was throughout the day or in the classroom during a lesson. Often times, however, students misbehave, and the disciplinary infraction provides students with the loss of recess, an hour of stillness in detention, or a day home for suspension. According to research on male brains, “a brain that has fine and gross motor skills is a smart brain, as is a brain that can manage social hierarchy well, move the body without awkwardness, and relate to others freely” (Gurian & Stevens, 2011, p.141). Taking away the movement the boys naturally need may actually hinder them instead of helping them. Even worse, sending them home for the day will only further discourage and therefore disengage them. Administrators should consider additional punishments for disciplinary infractions that may discourage the inappropriate or restless behaviors of the young men, while not further suppressing something as necessary as the urge to move. It has been documented that implementing a variety of reasonable and set practices in the classroom and school help males behave in ways that reduce the number of disciplinary infractions and special education referrals.

It is also the responsibility of administration teams in all-male schools to provide proper professional development (PD) opportunities that specifically focuses on the needs of male students. If funding permits, sporadically providing instructional strategy coaches who can
evaluate, offer, and demonstrate methods to create safe spaces and effective lessons that encourage and entice the boys could also be helpful. Any of these opportunities should specifically focus on methods to incorporate kinesthetic assignments that allow the boys the ability to move about and stretch, encourage healthy competition with positive reinforcements, and not only allow but also encourage the expansion and incorporation of texts to include more modern world relatable characters, problems, and interests to further enhance the understanding and appreciation of the universal and timeless themes in each specific content area.

Administrators need to recognize that boys need specialized instructional strategies and therefore should advocate for and provide experiences to further develop teaching styles in the classrooms.

**Policy**

The data collected and themes discovered highlight the need for more in-depth research, observations, and analysis. The results of this study demonstrate the need to further develop the deficient literature needed to explore the separation of the sexes in a classroom setting. This type of research will be hard to conduct in American public schools as long as Title IX, a policy created within the Education Acts of 1972, remains in place as is. The policy that provides equal educational opportunities to federally funded programs has had little revision since its implementation and sits with outdated verbiage that still does not provide equal and equitable opportunities for all students. In the meantime, the policy makes it hard but not impossible for any federally funded public schools to operate with separated single-sex classrooms. However, if using the lens of Multiple Intelligences, the multi-case study’s findings could be a useful push to not only update Title IX’s outdated verbiage but also expand the possibilities by supporting the idea of federally funded public single-sex schools.
While it is unknown still if increasing the number of all-male schools would be most beneficial to bridging this gap, this research provides support for more specific funding. This can be done with more training for teachers on strategies to engage their male students as well as the inclusion of a broader set of learning outcomes such as SEL and organization when assessing schools and student learning. This would provide opportunities to increase classroom engagement with specifically geared strategies while learning positive behaviors with the goal of improving academic success and molding males into good citizens.

Limitations and Delimitations

Two possible limitations were presented during the study: chosen participants and interview settings. Data analysis was identified as a possible delimitation.

Chosen Participants

With three of the eleven participants in administrative roles at their schools, the eight teachers were suggested by these gatekeepers based on the request of a mixture of teaching backgrounds, experience, and a variety of specialized curriculum. The request was for two male and two female teachers from each site willing to participate in both interviews and classroom observations. Each teacher suggested by the administrators and invited by the researcher all participated. This offered a wide range of educator participants that the researcher did not have a role in choosing. The number of participants utilized in the study, however, increased from the original number in the early planning stages and in turn offered a larger, more diverse sample size than anticipated. The researcher recognizes that although people may encounter a similar classroom setting, not everyone has the same experience; therefore, I cannot possibly capture all facets of all-male education by looking at it from a one-dimensional point of view and analysis over a brief amount of time.
**Interview Settings**

With most interviews taking place during school hours and in many of the educators’ own classrooms or workspace, there were unexpected interruptions that the researcher did not anticipate. This included all-school announcements over the PA system, students and/or colleagues knocking on the door or walking in unannounced, and not a set location for all interviews to take place in the same environment. While the original plan was to interview one administrator from each site, one particular drop-in allowed the researcher to interview an additional veteran principal who was not initially included simply for consistency but provided helpful insight and feedback.

**Data Analysis**

This qualitative study relied on the researcher’s collection of data, interpretation, and reporting. One researcher’s judgement and analysis of data can produce results that may not be replicated in their entirety. The researcher did her best to minimize bias by not only audio recording but taking copious notes in interviews and observations no matter how relevant or not the information may have seemed at the time. This provided an ample amount of data for the researcher to sort and decipher through allowing themes to emerge without any obstruction.

**Recommendations for Future Research**

Although my research and analysis of my findings on instructional decision making in all-male classrooms is complete, this may be the foundation for future studies on the long-term impacts of teachers’ instructional decisions for boys. This may further our understanding of the effects of single-sex schools for boys. Fully understanding both the positive and negative effects of allowing students the option to separate based on sex requires an analysis of the distinct qualities, relationships, and inner workings of the educational institution. Title IX tries to ensure
that both males and females may have equal opportunities in the classroom, but their academic success rates are anything but equal. Because America has laws against segregation in order to afford equal opportunities for males and females, there is not enough extensive research done on the positives that could emerge from separating boys and girls in an educational environment.

In future research I would suggest the researcher incorporate quantitative data to follow students’ progress in all-male classrooms over a longer period of time, possibly an entire semester or academic year. Learning that educators will shift their lessons, classroom management styles, and even mentoring relationships to specifically accommodate the young men they teach can answer not only my research question of How do educators in all-male classrooms make decisions about classroom instruction? but also demonstrate if these changes based on biological factors and needs produce a stronger learning, understanding, and more positive academic results on assessments.
References


Appendices

Appendix A: Email Recruitment Letter

Dear [insert name],

My name is Kelly Clark, and I am a doctoral student from the Department of Educational Administration at the University of New Orleans. I am writing to invite you to participate in my research study about how male students’ development and behaviors in a single-sex classroom influence the teaching methods of educators. You are eligible to be in this study because you are an educator at an all-male school. I hope you do not mind, but I obtained your contact information from your school’s principal.

If you decide to participate in this study, you will meet with me at times of your convenience during November 2023 to December 2023 for a classroom observation and two interviews. I would also like to audio record any of our interviews for analysis purposes related to the study.

Your participation in this study is voluntary. If you choose not to participate or to withdraw from the study at any time, there will be no penalty or repercussions. The results of the research study may be published, but your name will not be used. Although there may be no direct benefit to you, the possible benefit of your participation may lead to the exploration of how teachers make instructional decisions to educate boys learning in an all-male student environment.

Thank you in advance for your consideration.

Sincerely,

Kelly Clark
Appendix B: Letter of Consent

Letter of Consent for Adults

Dear ________________,

I am a doctoral student under the direction of Dr. Brian Beabout in the College of Educational Administration at the University of New Orleans.

I am conducting a research study to explore how learning styles and behaviors in an all-male classroom may influence educators’ teaching methods and interactions as they work to help their students achieve academic success. I am requesting your participation, which will involve classroom observations and/or open-ended interviews from approximately November 2023 to January 2024.

Your participation in this study is voluntary. If you choose not to participate or to withdraw from the study at any time, there will be no penalty or repercussions.

The results of the research study may be published, but your name will not be used. Although there may be no direct benefit to you, the possible benefit of your participation may lead to the exploration of how boys academically and socially benefit from learning in an all-male student environment.

If you have any questions concerning the research study, please call me at (504) 920-7510 or Dr. Beabout at (504) 280-7388.

Sincerely,

Kelly Clark

By signing below, you are giving consent to participate in the above study. You also acknowledge that you are aware that your classroom observations and/or interviews may be recorded for the researcher’s analysis for purpose of the study.

__________________________     _______________________________       __________
Signature                     Printed Name                           Date

If you have any questions about your rights as a subject/participant in this research, or if you feel you have been placed at risk, please contact Dr. Ann O’Hanlon at the University of New Orleans (504) 280-3990.
Appendix C: Interview Protocol for Teachers

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NEW ORLEANS

Interview Questions

Interviewer: Kelly Clark
Interviewee: [insert name]
Interview date and time: [insert date and time]

[Mrs. Clark]: Thank you for your participation in this interview. My overall purpose for scheduling this interview is to better understand your experiences as a female educator in an all-male school environment and learn about the pros and cons of single-sex education from your perspective.

I have planned this interview to last approximately 30-45 minutes. During this time, I have planned approximately ten questions that I would like to discuss with you, but others may arise as we speak. If you do not feel comfortable answering a particular question, please let me know and we will skip to the next question.

I would also like to indicate that I will audio record discussion to turn into a written transcript. The contents of your interview transcript will not be published or publicly disseminated in any form. The following individuals will have direct access to your interview transcript: Kelly Clark (UNO doctoral student) and Brian Beabout (UNO Advisor).

Before I begin with our questions, is there anything that you would like for me to clarify regarding the purpose or structure of this interview? [Pause]

1. Can you briefly describe the process that inspired you to focus your career on education?
   a. (if not answered) How long have you been teaching?
   b. (if not answered) What subjects/grade levels do you teach or have taught?

2. Can you elaborate on some of the schools you have been a part of?

3. Can you tell me what brought you to teaching in an all-male school?

4. What kind of expectations do you have for the males that you teach?
   a. And do these differ from what you would have for females?

5. Can you describe a typical day in your classroom as a teacher in a room full of boys?

6. Can you describe what you do to motivate your students?
   a. And how has this differed from your experiences in a co-educational classroom?
7. What role do you as a teacher play in an all-male environment?

8. Have you experienced a time when a male’s physical growth, especially at a prepubescent age, has affected his ability to sit still and concentrate in a classroom?

9. Have you experienced a time when a male student’s brain “worked” differently than a female’s brain?

10. Finally, what are the biggest lessons you take away from your role in an all-male institution?
Appendix D: Interview Protocol for Administrators

Administrator Interview Questions

Interviewer: Kelly Clark
Interviewee: [insert name]
Interview date and time: [insert date and time]

[Mrs. Clark]: Thank you for your participation in this interview. My overall purpose for scheduling this interview is to better understand your experiences as an educator in an all-male school environment and learn about single-sex education from your perspective.

I have planned this interview to last approximately 30-45 minutes. During this time, I have planned approximately ten questions that I would like to discuss with you, but others may arise as we speak. If you do not feel comfortable answering a particular question, please let me know and we will skip to the next question.

I would also like to indicate that I will audio record discussion to turn into a written transcript. The contents of your interview transcript will not be published or publicly disseminated in any form. The following individuals will have direct access to your interview transcript: Kelly Clark (UNO doctoral student) and Brian Beabout (UNO Advisor).

Before I begin with our questions, is there anything that you would like for me to clarify regarding the purpose or structure of this interview? [Pause]

1. Can you briefly describe the process that inspired you to focus your career on education?
   a. (if not answered) How long have you been in Education?
   b. (if not answered) Did you teach in the classroom before moving into Administration?
2. Can you elaborate on some of the schools you have been a part of?
3. Can you tell me what brought you to working in an all-male school?
4. What kind of expectations do you have for the students in your school?
5. What role do you as an administrator play in an all-male environment?
6. How do you ensure longevity in those you hire?
   a. Aside from educational background, are there any specific factors considered when hiring teachers?
   b. What key qualities/indicators do you look for in your 1st year teachers? Your teachers with 5+ years of experience?
7. Can you describe what you do to motivate your faculty?
8. Finally, what are the biggest lessons you take away from your role in an all-male institution?
Vita

Kelly Marie Rodriguez-Oldenburg Clark was born in Rhode Island on September 7, 1982. She has, however, lived in southern Louisiana most of her life. Following graduation from Archbishop Hannan High, she earned her Bachelor’s degree in English from the University of New Orleans. After teaching high school English courses for years, she earned a Master’s in Arts of Teaching with a concentration in Secondary Education from the University of New Orleans in 2015. Once becoming a member of her school’s administration team, she successfully defended and earned her Doctorate in Educational Administration in May 2024 from the University of New Orleans. She currently resides in Louisiana with her husband and two children.