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Do Teachers Modify Classroom Instruction and Management Plans Based on Student Gender

Mitchell Raymond Stubbs

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DO TEACHERS MODIFY CLASSROOM INSTRUCTION AND
MANAGEMENT PLANS BASED ON STUDENT GENDER?

by

Mitchell Raymond Stubbs

Abstract of a Dissertation
Submitted to the Graduate School
of The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

May 2012
ABSTRACT

DO TEACHERS MODIFY CLASSROOM INSTRUCTION AND MANAGEMENT PLANS BASED ON STUDENT GENDER?

by Mitchell Raymond Stubbs

May 2012

National education statistics and data indicators show that a significant portion of both male and female learners struggle through their educational experience with little to no success. The male learner is less successful in school than the female learner and drops out of high school more often. It is even more alarming when these numbers are examined within minority populations. In 2009, almost twice as many African American males and females and three times as many Hispanic males and females dropped out of high school than Caucasian males and females. Caucasian males and minority students of both genders overwhelmingly populate special education classrooms, are more frequently disciplined in the classroom and schoolyard, and placed on medication in order to be successful in school. Each day, repeated across the nation, significant portions of both male and female students struggle and fail when instructional and behavioral plans are implemented with little to no consideration to the differences in how both genders learn and behave.

This study examined whether or not educators receive sufficient preparation at the university level or training and professional development at the district and school level regarding the learning and behavioral differences between the male and female learner. Do educators recognize these gender-specific differences? In addition, do educators make adjustments in their instructional techniques in regards to the male and
female learner? Furthermore, do educators make adjustments to their classroom behavioral management programs to take into account the maturity and behavioral differences in males and females? This study is intended to gather information in regards to whether or not formal course work, professional development, or training has a significant impact on gender specific instructional techniques educators’ use, and to what extent, while teaching male and female students.

The findings showed that formal courses and professional development regarding the how females learn and behave did have a moderate positive correlation to teachers’ practices in the classroom. The study also found that teachers strongly agree that both males and females learn best when taught utilizing a variety of teaching methods. In regards to discipline, the study also found that teachers strongly agreed the male learner creates a majority of the classroom discipline problems and is more often referred to the office for discipline related incidents, and that the female learner does not create a majority of the classroom discipline problems and is not referred to the office for discipline related incidents.
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May 2012
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I have often likened my PhD experience to swimming a large, cold body of water. There was a destination, a distant shore in mind. Equipped with my orange and white life jacket, I always wanted to have the ability to swim back to my starting point. However, at some point during the crossing, I realized I was closer to my intended shore than the one from where I had departed. I realized there was no stopping, no turning around, no going back. At some point, I suddenly realized that I was not alone while making the journey. From the very beginning, I had been surrounded by people who were guiding, encouraging, and challenging me to continue moving forward. This both comforted me, and it gave me the confidence to continue. I owe so much to so many for making this journey possible.

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# TABLE OF CONTENTS

ABSTRACT .................................................................................................................. i

ACKNOWLEDGMENTS ............................................................................................ iv

LIST OF TABLES ...................................................................................................... viii

CHAPTER

I. PURPOSE OF THE STUDY ................................................................................... 1

  Introduction
  Statement of the Problem
  Purpose of the Study
  Research Questions and Hypothesis
  Assumptions
  Delimitations
  Definitions of Terms
  Justification
  Summary

II. LITERATURE REVIEW ...................................................................................... 17

  Introduction
  Theoretical Framework
  The Creation and Transformation of the American School System
  Graduation Rates and Gender
  Dropout Rates by Gender
  Consequences of Dropping Out of High School
  Special Education Rates by Gender
  Medication and the Learner
  Gender and Learning
  Learning Styles
  Gender and Behavior
  The Value System of Educators
  Gender and Single-Sex Schools
  Response To Intervention
  Science Technology Engineering and Mathematics
  Summary

III. METHODOLOGY ............................................................................................... 84
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Teacher Gender, Education and Certification Level</td>
<td>93</td>
</tr>
<tr>
<td>2.</td>
<td>Years of Experience</td>
<td>95</td>
</tr>
<tr>
<td>3.</td>
<td>University or College Courses: Learning Styles of Males</td>
<td>96</td>
</tr>
<tr>
<td>4.</td>
<td>School or District Level Training: Learning Styles of Males</td>
<td>96</td>
</tr>
<tr>
<td>5.</td>
<td>University or College Courses: Managing the Behavioral Patterns of Males</td>
<td>97</td>
</tr>
<tr>
<td>6.</td>
<td>School or District Level Training: Managing the Behavioral Patterns of Males</td>
<td>98</td>
</tr>
<tr>
<td>7.</td>
<td>University or College Courses: Learning Styles of Females</td>
<td>99</td>
</tr>
<tr>
<td>8.</td>
<td>School or District Level Training: Learning Styles of Females</td>
<td>99</td>
</tr>
<tr>
<td>9.</td>
<td>University or College Courses: Managing the Behavioral Patterns of Females</td>
<td>100</td>
</tr>
<tr>
<td>10.</td>
<td>School or District Level Training: Managing the Behavioral Patterns of Females</td>
<td>101</td>
</tr>
<tr>
<td>11.</td>
<td>Means and Standard Deviation for Formal Training</td>
<td>101</td>
</tr>
<tr>
<td>12.</td>
<td>Means and Standard Deviation for Informal Training</td>
<td>102</td>
</tr>
<tr>
<td>13.</td>
<td>Teachers’ Perceptions Regarding Males and Females</td>
<td>103</td>
</tr>
</tbody>
</table>
CHAPTER I
INTRODUCTION

The American education system is in the midst of crisis. National education statistics and data indicators indicate that a significant portion of both males and females struggle through their educational experience with little to no success. According to the National Center for Education Statistics (2009), the male learner is less successful in school than the female learner. In 2009, 9% of all males between the ages of 16-24 years of age dropped out of high school. In the same year, 7% of females between the ages of 16-24 dropped out of school. It is even more alarming when these numbers are broken down by sub-groups. According to NCES in 2009, 6.3% of Caucasian males, 10.6% of African American males, and 19% of Hispanic males dropped out of high school. In that same year, 4.1% of Caucasian females, 8.1% of African American females, and 16.1% of Hispanic females dropped out of high school. While these may seem innocuous printed in black in Caucasian on paper, in reality, these statistics represent millions of individuals from across the nation. It is an alarming phenomenon that many schools fail to address while in recent years relying more heavily on high-stakes testing during a time when graduation requirements are increasing and graduation rates are decreasing from coast-to-coast. The problem ultimately manifests itself as both males and females from multiple sub-groups continue to fail high school (NCES, 2011). This phenomenon also produces dropouts, GED recipients, and higher incarceration rates. In addition, indicators of the phenomenon are male students from all sub-groups overwhelmingly populating special education classrooms (Tschantz & Markowitz, 2003; Whitmire, 2010). As students from both genders progress through middle, junior, and the high school years, some have opportunities to participate in athletics and extra-curricular
programs and clubs. However, this is not nearly enough, traditional extra-curricular programs have been shown not to provide the catalyst or motivational factor needed for those who need more academically based interventions (Stevens, 2006).

The early origins of education in our nation lie in religious purposes. The job of educating children was originally a responsibility of the home and family. Laws were written and passed so that sons and daughters would be able to read the Bible in order to have protection for the Devil (Records of the Governor and Company of the Massachusetts Bay in New England, 2005). However, as a territory began to grow in size and complexity, those responsible for educating children, and the reasons for an education, began to change. Even before the United States of America existed, towns and territories began to require schools to open and operate as townships reached certain population benchmarks. In addition, even as early as the American Revolution, Benjamin Franklin was advocating for universities that would provide a European-type enlightened education for the citizens of the United States of America.

Being rich in experiences and events that would build upon each other over a period of hundreds of years, the nation would eventually require schools that were desegregated by race and provide equal protection for both genders. Coinciding almost within thirty years of the desegregation of schools based on race, Brown vs. Board of Education of Topeka (NPS, 1954), and within 10 years of equal protection based on gender, Title IX, schools were thrust into the world high stakes accountability with the release of A Nation at Risk in 1983. The report would be the birth of the accountability, high-stakes or achievement testing, and the standards based movement (Jorgensen &
Hoffmann, 2003). In addition to ushering in the age of accountability, Jorgensen and Hoffmann state that *No Child Left Behind* roots can be traced to *A Nation at Risk*.

The poor academic performance of a certain percentage of both males and females have been largely accepted by educators through the years, but within the past few years, have increasingly caught the attention of state and federal government officials. It has become less acceptable to attribute blame to socio-economic status, subgroup affiliation, or whether or not a student is a regular or special education student. In fact, with the implementation of high stakes testing, males have been identified more often than females as either learning delayed, emotional/behavior disordered, or both (Whitmire, 2010). Whitmore also states that the numbers of males and females being removed from the degree track and placed on a non-degree track have increased. In addition, while new teacher training programs offer instructional methods courses and provide instruction about various learning styles, these programs fail to take into account the issue of gender, learning, and how the two influence each other. Only within the past eight to 10 years, brain-based learning has emerged as a science and possible explanation regarding how males and females learn differently (Davis, 2004). In an added effort to address the crisis, the federal government has recently required school systems to implement Positive Behavior Interventions and Support and Response to Intervention programs to support those students who may have traditionally been at-risk for dropping out of high school.

Males and females’ brains develop differently, mature differently, and learn differently (Gurian & Stevens, 2005). This will produce vastly different outcomes, even within the same age group. Yet, with decades of research available indicating that male
and female learners are struggling, universities should begin to address instruction in brain-based learning styles. Traditionally, teacher preparation programs generally offer future teachers instruction and methods courses regarding the variety of learning styles that exist. This would include auditory, visual, and tactile learning. However, these courses fail to address brain-based learning. Brain-based Learning is a wide-ranging approach to instruction using current research from neuroscience that emphasizes learning styles, multiple intelligences, movement education, gender differences, and how the brain learns naturally (Spears & Wilson, 2009). In addition, universities must begin to emphasize the importance of the different value systems both future male and female teachers bring to the classroom. Yet, if the concept of infusing new teacher programs with instruction on brain-based is rare, even rarer is the teacher preparation program that not only addresses gender learning preferences, but also addresses teachers’ attitudes and paradigms and the impact on the male and female learner in the classroom.

In one attempt to address gender-learning differences and school achievement, many schools and school systems have implemented the single-gender classroom. The nation is witnessing a growing trend in ‘single-sex’ classrooms in public schools (Sax, 2005). Schools and school systems in California, Washington, and New York have attempted to legislate and enact single gender classrooms (Datnow, Hubbard, & Chonchas, 2001). While controversial and with plenty of critics claiming it takes the nation back to the days of segregation by gender, when done correctly, evidence suggests that single-gender classrooms are effective (Sax, 2005). However, Leonard Sax cautions that while single-sex classrooms can be beneficial, the use of these classrooms must be paired with professional development and matching the teachers’ temperament with the
task of educating males or females. Simply separating students by gender, placing an instructor in the classroom without the necessary training, skills, and disposition for the task will only continue to produce more of the same results. Teachers must develop and implement both instructional and classroom management plans that address the differences in both the male and female learner.

Statement of the Problem

The results of standardized tests are used to make critical and important decisions about school districts, states, students, teachers, and administrators (Mississippi Department of Education, 2009). These decisions effect control of entire school systems, funding decisions, the re-constitution of school personnel and administrative teams, and whether or not to allow charter schools. All states wanting to receive federal funding must implement some type of standardized testing. This began in 1965 with the implementation of the Elementary and Secondary Education Act (Social Welfare History Project, 2012) as part of the federal government’s ‘War on Poverty’ (Office of Superintendent of Public Instruction, 2011). Now with the increasing in popularity in political offices and communities around the nation of holding teachers, schools, and school district accountable, schools find themselves under a tremendous amount of pressure to find ways to increase test scores and raise student achievement (Council of Chief State School Officials, 2011). Also, gaining popularity in both public and political circles is the phenomenon of paying and/or rewarding teachers, schools, and school districts based on student performance (Podgursky, 2006). This has created the unfortunate consequences of school districts and officials caught altering students’ standardized tests and schools being removed from local control and being placed under
the control of state education authorities. Across the nation, public officials and various education corporations have united to establish a new educational governance structure which often removes control of public schools from local communities and school boards to charter schools or private businesses established to turn education into a private enterprise (Baskin, 2006).

As cited by Whitmore (2010), there is a preponderance of evidence showing that the male learner is not as successful in the classroom as the female learner. More males and females are being identified with some form of learning disability and placed in special education classrooms. In recent years, more males and females are being diagnosed with Attention Deficient Hyper-Activity Disorder (ADD/ADHD) and placed on medication (Center for Disease Control and Prevention, 2008). While statistics may show that fewer males graduate from high school than females, the number of both genders that fail to graduate is unacceptable (Sax, 2005). Unfortunately, this has lead to the national epidemic of state and federal prisons being overwhelmingly populated by male and female high school dropouts (Harlow, 2003). Causes of these unfortunate statistics may be that there is little attention paid by educators and teacher preparation programs in regards to the differences in how the brain works and learns in the male and female learner (Gurian & Stevens, 2005). Both genders are overwhelmingly instructed utilizing similar instructional strategies and practices. In addition, both males and females are expected to conform to similar behavioral expectations that do not take into account the difference in maturity rates of the two genders and how males and females behaviors are greatly influenced by the different hormones present in the two (Rhoads, 2004).
Purpose of the Study

The National Center for Education Statistics (2011) indicates that while dropout rates have become more difficult to lower, and graduation rates have become more difficult to raise, it is incumbent upon educators and policy makers to realize that it is the professionals that must adapt in order for the learner to be successful. Are educators, across the spectrum of elementary, middle, secondary, and post-secondary levels, prepared to adapt how they teach and manage the learner in order to address the variety of ways males and females learn? The purpose of this study was to determine whether or not educators receive sufficient preparation at the university level or training and professional development at the district and school level regarding the learning and behavioral differences between the male and female learner. Did educators recognize these gender-specific differences? In addition, did educators make adjustments in their instructional techniques in regards to the male and female learner? Furthermore, did educators make adjustments to their classroom behavioral management programs to take into account the maturity and behavioral differences in males and females? This study was intended to gather information in regards to whether or not formal course work, professional development, or training has a significant impact on gender specific instructional techniques educators use, and to what extent, while teaching male and female students. In addition, to what extent did educators modify or adjust their classroom management practices based on what they know about male and female learners?

Research Questions

This study was guided by the following research questions:
1. Are the gender specific learning styles and differences in behavior of males being addressed in teacher preparation programs and/or district-based professional development?

2. Are the gender specific learning styles and differences in behavior of females being addressed in teacher preparation programs and/or district-based professional development?

3. Do middle school teachers modify or initiate instructional strategies to increase males’ success rate in the classroom?

4. Do middle school teachers modify or initiate instructional strategies to increase females’ success rate in the classroom?

5. Do middle school teachers understand the behavioral patterns of the male learner and do they modify or initiate a classroom management program to best suite those differences?

6. Do middle school teachers understand the behavioral patterns of the female learner and do they modify or initiate a classroom management program to best suite those differences?

The hypotheses tested in this study were:

H1. There will be no statistically significant relationship between the amounts of formal training addressing gender differences middle school educators receive and how they instruct the male learner.

H2. There will be no statistically significant relationship between the amounts of formal training addressing gender differences middle school educators receive and how they instruct the female learner.
H3. There will be no statistically significant relationship between the amount of formal training middle school educators receive and how they set-up their classroom management plans and discipline males.

H4. There will be no statistically significant relationship between the amount of formal training middle school educators receive and how they set-up their classroom management plans and discipline females.

H5. There will be no statistically significant relationship between the amount of informal training middle school educators receive and how they instruct males.

H6. There will be no statistically significant relationship between the amount of informal training middle school educators receive and how they instruct females.

H7. There will be no statistically significant relationship between the amount of informal training middle educators receive and how they set-up their classroom management plans and discipline males.

H8. There will be no statistically significant relationship between the amount of informal training middle educators receive and how they set-up their classroom management plans and discipline females.

Assumptions

For the purpose of this study, it was assumed by the researcher that the participants responded to all survey items honestly. It was also assumed that the participants have had experience teaching middle school males and females.
Delimitations

This study was limited to a public school system in southeastern Louisiana. The survey instrument was administered to teachers who taught sixth, seventh, or eighth grade. For the purpose of this study, the findings were reported for this limited group of teachers.

This study also determined if teachers could identify the numbers of courses or hours they have received regarding gender specific learning and behavioral strategies regarding the male and female learner. In addition, information was collected regarding whether or not teachers received any instruction regarding the learning and behavioral styles of males and females during their teacher preparation program or while pursuing any advanced degrees.

The goal of this study was to determine if course work, professional development, or training the teachers have had during their career made an impact on their classroom practices and their attitudes towards the male and female learner.

Definition of Terms

*Brain-based Learning* is a wide-ranging approach to instruction using current research from neuroscience that emphasizes learning styles, multiple intelligences, movement education, gender differences, and how the brain learns naturally (Spears & Wilson, 2009).

*Childhood ADD/ADHD* is defined as the most common neurobehavioral childhood disorder that may result in a lack of impulse control, prolonged periods of inattention, and frequent excessive movement (Centers for Disease Control and Prevention, 2010).
**Constructivism** is a philosophy that holds that learners construct their own knowledge and meaning through various activities by testing their understanding of the world and events within (Oxford Dictionary, 1997).

**Disability** is a physical or mental impairment that substantially limits one or more major life activities (U.S. Equal Employment Opportunity Commission, 2008).

**Graduation Rate** is the percentage of students, measured from the beginning of the school year, who graduate from public high school with a regular diploma (not including a GED or any other diploma not fully aligned with the state’s academic standards) in the standard number of years (Education Commission of the States, 2011).

**The Individuals with Disabilities Education Act** is the nation’s special education law. In exchange for federal funding, IDEA requires states to provide a free appropriate public education (FAPE) in the least restrictive environment (LRE). It deals with the special needs of those with disabilities from birth to age 18 or 21 (Department of Education, 2005).

**Individualized Education Plan** is a legally binding document that spells out exactly what special education services a child will receive and why. It will include a child's classification, placement, services, academic and behavioral goals, a behavior plan if needed, percentage of time in regular education, and progress reports from teachers and therapists (Mauro, 2011).

**Middle School Teacher** is someone who possesses the unique understanding of and ability to work with a particular population (5th-9th grade), by having knowledge of adolescent development, being able to employ multiple teaching strategies for the varied
learning modalities, and blending the characteristics of both an elementary and secondary teacher with respect to content knowledge (Grim Hunter, 2007).

*No Child Left Behind* a federal law passed under the George W. Bush administration in 2001. NCLB represents legislation that attempts to accomplish standards-based education reform. The law reauthorized federal programs meant to hold primary and secondary schools measurably accountable to higher standards (Lewis, 2009).

*Positive Behavior Interventions and Support* is a decision-making framework that guides selection, integration, and implementation of the best evidence-based academic and behavioral practices for improving important academic and behavior outcomes for all students (Office of Special Education Programs, 2009).

*Response to Intervention* is a general education process that provides students with high-quality research based instruction and interventions that are matched to the student’s specific academic or behavioral needs by utilizing data to base decisions about student progress and to determine the appropriate instructional plan and/or behavioral support necessary for a student to achieve grade-level success (Louisiana Department of Education, 2010).

*Section 504* of the Rehabilitation Act of 1973 protects students from discrimination based upon their disability status. A student qualifies as disabled if he or she has a mental or physical impairment, a record of impairment, or is regarded as having such an impairment and is substantially limited in his or her major life activities that include abilities such as (but not limited to) self care, breathing, walking, seeing, performing schoolwork, speaking, and learning (Logsdon, 2010).
Special Education are educational programs and assignments including, special classes and programs or services designed to develop the educational potential of children with disabilities including, but not limited to, educational placements of children by school committees delivered through an Individualized Education Plan (Silver Lake Regional School District, 2003).

Title IX is Title IX of the Educational Amendments Act of 1972 federal law prohibiting gender discrimination in educational institutions and denotes that no one shall not be prohibited from participation, benefits, or be subjected to discrimination under any education program or activity receiving Federal financial assistance (University of California Santa Cruz, 2011).

Justification

In an environment where young males and females are expected to adhere to a value and belief systems in which they have little in common and where instruction is not adjusted to best suit how they learn, is this creating a situation where the learning styles or value systems of students are not taken into account when it comes to instruction and discipline? Males comprise seventy percent of the special education population. However, they do not sit alone in those classrooms. According to LeFever, Arcona, and Antonuccio (2003) ADD/ADHD diagnoses began to climb for both male and female students in the 1960s. Now, medicating children without first exploring the effectiveness or viability of various instructional or behavioral strategies has become the norm in schools across the country. LeFever et al. report that at some point in the recent past, American parents accepted the notion that various powerful medicines, instead of teacher and school interventions, were the best and only answer to student success in school.
However, large numbers of males and female continue to fail to graduate. While teacher preparation programs provide training in learning styles and, to an extent, classroom management, is there enough being done to address the brain-based learning, teacher paradigms, and value systems?

The importance of this study is that it will create an awareness that unacceptable numbers of students fail to find success in the very school houses trusted to prepare them for the future. Most educators subscribe to the notion that all children can learn. However, not all children may learn with the methods in which they are being taught. Males and females learn and behave differently due to physiological and bio-chemical processes that effect rates of maturity and learning and behavioral patterns. These rates of maturity and learning and behavioral patterns that have been studied and are predictable across all age groups. Unfortunately, what is known about how males and females learn and behave does not translate into what the instructional or behavioral environment looks like on a daily basis. The average learner is overwhelmingly taught, class after class, utilizing the primary instructional strategy of the auditory-based classroom lecture and note taking, also known as ‘sit and get’. This research may prompt educators, school administrators, and teacher preparation programs to provide both present and future educators with the education, training, hands-on experiences, and professional knowledge needed in order to address the differences in how males and females are instructed and managed. Finally, this study may prompt classroom teachers to realize that more students may find success if instructional techniques and management programs are designed around the needs of the learner.
Summary

With overwhelming evidence that and stretches back for decades indicating that far too many males and females are failing to graduate from high school, the awful truth is that both males and females must be more successful in the classroom (NCES, 2009). This may be due to both males and females finding themselves in classroom environments that are less suited to how their brain learns. Students are also expected to conform to behavioral expectations that stand in opposition to how they behave naturally. In reality, the accepted model that has existed regarding how schools and classrooms should operate overwhelming favors specific types of student behaviors. Middle and high school students are often expected to sit for extended periods of time engaging in little movement or interaction. They are often expected to write, listen, and respond to a central figure for extended periods of time regarding topics that generally do not interest them. Students of various backgrounds and cultures are often expected to behave in a submissive and passive manner while in the classroom and are often punished or disciplined when they fail to do so. Both males and females are often expected to control their physical movements both in-and-out of doors. Often schools initiate rules or policies regarding their actions on the playground or commons area that limit a student’s need to move and behave in a physical manner. Due to society’s fear of violence and school shootings during the past 20 years, schools have even attempted to control young primary age students’ bodies and natural play habits when they are kept from making play guns at school with sticks, Legos, or even their fingers (Huffman, 2008). Schools across the nation have passed policies that prohibit children from using their imagination (Holland, 2003). Due to an environment that is often structured in opposition to how
they learn and behave, the percentage of students diagnosed with ADHD is three times
greater than the number of individuals diagnosed with the other common disorders
(Center for Disease Control and Prevention, 2008). The phenomenon of medicating
young students so that they can be successful in school can be described as medicating a
square peg so that it can fit into a round hole for seven to ten hours of the day. Often the
quality of life for those who choose to drop out of school will be remarkably different
when compared to those who graduate. Statistics indicate that most high school dropouts
will struggle with prison and economically as compared to their peers who graduate.
Dropouts are imprisoned three times more often than high school graduates (Alliance for
Excellent Education, 2004). Over the course of their lifetime, a dropout who works until
age 65 will earn over $300,000 dollars less than someone who graduates from high
school (Wise, 2007). Public officials, district leaders, and school administrators must
begin to address the origins of these terrible realities. Teacher preparation programs and
school districts must address brain-based learning and what is now known about how
males and females learn and behave. Intervention programs, such as Response to
Intervention, when implemented correctly, have the ability to gather data and create
academic and behavioral intervention plans tailored to the needs of the individual
regardless of whether they are male or female.
CHAPTER II
LITERATURE REVIEW

Introduction

Schools are constantly monitored by local, state, and federal agencies that expect schools to graduate students, produce educated students capable of competing in a global economy, and held to standards of accountability with both incentives for success and severe consequences for failure (Mississippi Department of Education, 2009). However, schools and school districts must contend with an assortment of issues that make continued improvement difficult. Many educators are beginning to voice their concerns about how school accountability policies and laws are written in such a manner that it makes it difficult for schools to succeed (Owens & Sunderman, 2006).

Chapter II will explore the many factors that have created a system of educating students where far too many are unsuccessful. Topics will include the transformation of the American school system from one of families educating students for the purpose of religion to the formation of official school systems responsible educating the children of the upper class in the towns and cities across multiple regions. Over a period of years that predate the birth of the nation, the purposes, reasons, and who was educated by our nation would change drastically.

Within the past few years, there has been a great deal of debate and attention regarding graduation rates. Both political and educational officials have begun to explore in more detail high school graduation rates. In addition to how graduation rates are different by gender, the phenomenon of various graduation rates by races and socio-economic status will also be explored and the various laws that have been passed and
changed over the years to address inequity towards specific groups of citizens. The variety of dropout rates across the nation and how those dropout rates are calculated have recently become a matter of the federal government when, through No Child Left Behind, it redefined of how high schools calculate dropout rates. Statistics indicate that dropping out of high school almost certainly begins to happen in middle and junior high school (National Research Council, Committee on Educational Excellence and Testing Equity, 2001). The cost and impacts of dropping out of high school have life-long consequences such as the loss of economic potential, quality of and access to health care, increased incarnation rates, and increased rates of poverty. Traditionally, it has been more difficult for certain groups to graduate than others. These groups would include African American males and females, Hispanic males and females, Caucasian males compared to Caucasian females, and students classified as special education students. One trend that has emerged in the American family and education culture has been the ever-increasing acceptance of medicating young boys and girls, often as early as four and five, with powerful schedule two narcotics with brand names such as Ritalin, Adderall, and Vivance in order to be successful in school.

With the introduction of programs such as Response to Intervention and Positive Behavior Interventions and Support mandated by the federal government, schools, classroom instruction, and teacher preparation programs must change. In addition, with new discoveries and learning regarding brain-based learning and how both genders learn, universities, school districts, schools, administrators, and classroom teachers have to look beyond the quick and easy solutions of medicating children to implementing research-based intervention plans that will often modify how instruction is delivered.
Furthermore, RTI should require changes in how schools and classrooms look at student behaviors and discipline. Brain-based learning supports the notion that students behave the way they do, largely, due to biological and chemical processes taking place in their bodies as they move from one developmental stage to the next. Most school administrators, teachers, and parents have a practical understanding and knowledge of the differences between males and females; unfortunately, this does not often lead to instructional and behavioral plans in the school that acknowledges these differences. Both males and females are overwhelming instructed using similar techniques and held to the same behavioral expectations.

As a result of the movement towards holding school accountable for student success and insight in the past few years regarding brain-based learning and gender differences, several school systems across the nation have established single-gender schools or classrooms in order to more effectively instruct males and females (Gill, 2004). While controversial in the sense that it amounts to segregation, a practice looked upon with an unfavorable opinion in our nation, and counter to the notion that all children should be educated together, this recent trend of single-gender schools has met with a mixture of both success and failure. Leonard Sax (2001) states that, if done correctly by matching training and teacher disposition, single-gender schools can be successful.

Moving forward and building upon programs such as Response to Intervention and promoting minority and female participation in science, technology, engineering, and mathematics initiatives, also known as STEM, universities must begin to incorporate into their teacher preparation programs more instruction regarding the learning and behavioral differences between males and females. Simply offering methods courses that do not
address what is now known about the similarities and differences in how males and females learn and behave is no longer enough. School administrators and teachers must possess a working knowledge base so that they can better understand the elementary, middle, and high school student. Without this knowledge, administrators and teachers will continue to apply universal instructional and behavioral expectations to two totally different types of learners. Once this is done, then schools may begin to see a sustained improvement in student achievement, increased graduation rates, lowered dropout rates, and fewer children on medication.

Theoretical Framework

The theoretical framework for this study revolves around the theory of constructivism. Constructivism is the process of building one’s own understanding of reality based on interactions with the surroundings (Oxford, 1997). In its purest state, constructivists believe that the only reality is the reality that individuals create for themselves. It is through the interactions and experiences with their environment that individuals construct a working knowledge of the world around them and the rules of that world.

According to Glasersfeld (2002), constructivism can only be understood by considering both ontology and epistemology. Ontology looks at issues concerning the nature of existence and attempts to answer questions such as, what is being? What is the nature of reality? Within the field of ontology is a branch known as Idealism. Idealists believe that no claims on external realities can be made because they are all dependent on the observer and are not absolute.
According to Ozmon and Craver (2008) epistemology, also a fundamental root of constructivism, deals with the origins, foundations, limits, and validity of knowledge. Epistemology’s central theme is the transmission of knowledge. It looks at constructs such as defining knowledge, the source and origin of knowledge, and the level of contribution of the individual to the learning process. While the premises of constructivism had been around for many years, it was not until 1710 when Giambattista Vico published an exposition on the construction of knowledge (Sanna, 2001). His work made the connection that knowledge is constructed by the knower. He is credited with understanding that the mind can only know what it has created. While Vico may have brought forth the ‘constructivist’ term, Piaget is viewed as the original constructivist.

In his book, The Psychology of the Child, first published in 1969, Piaget regarded the child as someone who creates his or her own understanding of the world (Piaget & Inhelder, 1969). The child was often viewed as a scientist discovering and creating truths about the world around them. Piaget believed that biological development occurred through organizing and adapting to the environment. He believed this also occurred for cognitive development, as well. Although Piaget understood that much of learning often occurred in a social context, he would continue to maintain his focus on how the individual constructed their knowledge of the world. This would not be the case for other constructivists.

Where early philosophers of constructivism primarily concerned themselves with the individual learner creating their own knowledge, Dewey and, years later, Vygotsky, would come to understand that the construction of an individual’s knowledge was embedded in a group framework. With the publication of My Pedagogic Creed (1897)
all the way through to *Experience and Education* (1938), Dewey introduced several recurrent themes. He continually purposed that education and learning are social and interactive, and so the school is a social institution through which social reform and how we view the world is created. In addition, Dewey believed that students can succeed in a classroom and school environment where they are allowed to experience and interact with the curriculum, where they have an opportunity to take part in their own learning, and when teachers create learning experiences with how their students learn in mind. The instructional and behavioral expectations are established for students when the teacher best understands how to create learning opportunities based upon the needs and learning preferences of the student.

Unfortunately, many teachers today do not have a thorough understanding of constructivism. It is often incorrectly thought of as a method of teaching and learning instead of a philosophy of how individuals create or obtain knowledge. This has a critical implications on the what occurs in the classroom. Teachers who subscribe to constructivism theory believe that learning and obtaining information must come from the child taking part in a variety of experiences designed to communicate, or reveal, the information or knowledge. In this sense, the student discovers the knowledge and owns the knowledge. All too often, unfortunately, instruction in classrooms across the nation consists of the teacher giving the student facts and information. The students simply must memorize the information. He has not discovered, and therefore, does not own the information. The model of education that was built upon the assembly line model continues to fail millions of students each year. It forces them to choose between staying in school and dropping out. It is those very students that would benefit the most from
taking part in discovering their own knowledge and giving it meaning. By researching what teachers know and understand about how children learn and behave, and that universities must begin to adapt their teacher preparation programs, school systems, schools, administrators and teachers may begin to more fully understand how to create learning experiences and establish behavioral and classroom management programs based in the differences and similarities of each gender.

The Creation and Transformation of the American School System

The American formal education system was born with the creation of the Boston Latin School in 1635. Up until this time, the schooling of children had long been fulfilled by the family or church. Boston Latin School is the oldest public school in the nation. Reverend John Cotton founded the school for the purpose for teaching Latin and Greek to those individuals who would pursue positions of leaders as priests, attorneys and judges, government posts, and the Boston elite (Tikkanen, 2010). Soon afterwards, in 1636, Harvard University was founded in Cambridge, Massachusetts. Harvard was named after its primary benefactor, Minister John Harvard, who left his library and land for use by the school. It is the oldest institution of higher learning in the United States.

It was during the mid-1600s that Massachusetts would pass several laws that would provide a strong foundation for public education. In 1642, Massachusetts passed The Massachusetts Bay School Law (Constitution Society, 2005). This law required parents to ensure that their children understood the importance of religion and important laws of the commonwealth. In 1647, Massachusetts passed The Massachusetts Law of 1647, also known as the Old Deluder Satan Act (Records of the Governor and Company of the Massachusetts Bay in New England, 2005). This law required that towns of at
least fifty families would hire a schoolmaster that would teach the children how to read and write. This law was the creation of formal public education in the United States (Matzat, 2007). In addition, towns of at least 100 families would be required to hire a Latin grammar school master in order to prepare students for Harvard University. The law’s purpose was to provide all individuals with the ability to read, specifically the Bible, so that Satan would not be able to prevent them from reading it (Black, 2007). Religious freedom was important to the early settlers of this nation. Hence, education had a very important moral purpose and served as one of the primary responsibilities of the community and young government.

In 1690, one of education’s fundamental works, Some Thoughts Concerning Education, by John Locke was published. In this famous work, Locke put forth the notion that the human mind is a tabula rasa, or ‘blank slate’. Up until this time, most people believed that thinking, learning, and innate ideas were a naturally occurring phenomenon. However, Locke’s theory put forth the notion that individuals are born with an empty mind and that learning is a process that occurs through experiences and social interactions. Individuals acquired their beliefs through societal norms, a proper education, and standards of behavior for educated gentlemen of the time. The notion of a ‘social contract’ was developed. This was the belief that people could live and exist as individuals governed by a set of behaviors that regulated their lives and behaviors (Norton, 2007). Locke argued that these rights were present at the moment of birth, endowed by the creator, and belonged to all individuals. Much of the philosophy that Locke brought forth during this time would eventually shape the thinking of the Founding Fathers and guide their efforts during the time of the birth of the nation. Also
during this time, a second university was established in the colony of Virginia, The
College of William and Mary, opened and eventually schooled Thomas Jefferson.

During these early times of American history, there were many influential
individuals that would shape the course of education for generations to come.
Christopher Dock arrived from Germany in 1710. He later established a school in
Montgomery County, Pennsylvania. In 1770, he would write and publish *Schul-
Ordnung*, which translated means ‘school management.’ It is the first book printed in the
colonies about the subject of teaching. During the 1730s, Christian von Wolf asserts the
*Faculty Psychology* principle, which embraces the belief that the mind should be subject
to ‘mental discipline’ in the form of repetitive drills that emphasize the importance of
repeated basic skills in order to better understand and learn philosophy, literature, and
languages. Benjamin Franklin established the English Academy in 1751. It brought
together the conflicting values of religious dogma and European enlightenment for the
purpose of studying both classical and modern world views. The English Academy
would ultimately become the University of Pennsylvania. In 1772, the Moravians, a
protestant group from central Europe, established the first school for girls. It would
eventually become Salem College- a school that still exists today. In 1791, when
Congress passed, *The Bill of Rights*, no mention of education was made. This being the
case, the Tenth Amendment relegated the function of education to the states rather than
the federal government. At the time, communication and transportation were slow
between the colonies, in addition, education had always been a locally controlled issue,
and so authority over education was assigned to the states by Congress (Guthrie, 2010).
In 1827, the state of Massachusetts passed a law that required any town of five-hundred families to open a public high school.

In 1837, Horace Mann gained a national audience regarding his beliefs towards public education. He argued for more funding for education and better training for teachers. In addition, Mann brought the model of educating children in large groups and similar ages to Massachusetts. He believed in educating those less fortunate than himself and began shifting away from a religious based education to an education philosophy based on moral responsibility towards others (Sanders, 2010). Many of Mann’s practices and policies as the newly appointed Secretary of the Massachusetts State Board of Education continue to have an impact on education throughout the nation. Before the Civil War, North Carolina was the only southern state that had established a functional system of education for Caucasian children, (Foner & Mahoney, 2008). According to Foner and Mahoney (2006), the Civil War would further delay the establishment of southern schools and leave public education across the nation in disarray.

In 1867, the Department of Education was founded to address the establishment of effective public schools across the nation. Also during that same year, Howard University was founded in Washington, D.C. to provide African American youth opportunities to study liberal arts and sciences. During the year of 1865 – 1877, the period of Reconstruction following the Civil War, education was established in the south to serve both Caucasian and African American children. Unfortunately, the system of educating African American children would quickly be dismantled following the end of Reconstruction (Applied Research Center, 2006). For many decades to come, African
American would suffer many legal setbacks that would hinder their legal standing and limit their access to quality education.

In 1875, Congress passed the *Civil Rights Act* banning segregation in public accommodations. However, The Supreme Court would rule the act as unconstitutional in 1883. In 1896, Homer Plessy would challenge Louisiana’s *Separate Car Act*. This law required African Americans to ride in separate railroad cars. The United States Supreme Court upheld Louisiana’s law. The ruling by the U.S. Supreme Court would make “separate but equal” a legal tenet throughout the land. Quickly following the ruling, separate but equal practices and institutions, including schools, would spread across the south. It would be decades later before ‘separate but equal’ would be overturned. With the close of the 19th century and start of the 20th century, many events occurred that would rapidly change the landscape of education across the nation.

In an effort to put American universities on level with its European counterparts, The Association of American Universities was founded in 1900. In 1905, the Carnegie Foundation for the Advancement of Teaching was founded. In 1906, the Carnegie Foundation advanced the adopting of seat time, the amount of time spent in the classroom, to high school credits. This unit of measurement would come to be called the Carnegie Unit. In 1916, John Dewey published *Democracy and Education. An Introduction to the Philosophy of Education*. Dewey’s view involved two important roles in education: (1) respect for diversity, meaning that individuals should be recognized for their individual abilities, ideas, needs, and cultural identity, and (2) the development of critical, socially engaged intelligence, which allows individuals to become responsible citizens in their local communities. Often these views are called child-centered or social-
reconstructionist approaches to education (John Dewey Project on Progressive Education, 2002). In 1929, Jean Piaget published, *The Child’s Conception of the World*. This important work of cognitive development influences the development of American psychology and education for years to come.

Along with changes at the elementary and high school levels of education, changes would soon come to the university level of education across the United States. In June 1944, President Roosevelt signed the Servicemen's Readjustment Act, which would become known as the G.I. Bill. During the seven years it was available, millions of former service personnel attended colleges and universities around the nation. This not only doubled the number of Americans seeking a higher education, it would permanently eliminate the long held tradition that a higher education and college degree was only accessible to the wealthy (Greenburg, 2007). The notion that an education and civil rights belonged to everyone in America was a direct result of World War II (Ohio History Central, 2005). During the 1950s and 60s, Americans would see dramatic shifts in how children were educated in the classroom, who attended those classrooms, and international events that would place more emphasis on the sciences and math.

B.F. Skinner published *Science and Human Behavior* in 1953. It explored the connection between changes in behavior and reinforcements. On May 17, 1954, the United States Supreme Court announced its decision in the famous case of *Brown vs. Board of Education of Topeka*. In its ruling, the Supreme Court stated that “separate education facilities are inherently unequal” (Warren, 1954, p. 4). This decision overturned the 1896 case of *Plessy vs. Ferguson*. In 1957, federal troops were deployed to integrate Little Rock, Arkansas schools- the Little Rock 9. In 1957, Russia launched
Sputnik. Responding to the launch, The U.S. passed the *National Defense Education Act* in 1958. The NDEA would increase funding for scientific research and education. In 1960, Ruby Bridges became the first African American to attend an all Caucasian school in New Orleans, Louisiana. In 1964, the *Civil Rights Act* prohibited discrimination based on race, color, sex, religion, or national origin, and in 1965, the *Elementary and Secondary Education Act* directed federal funds for low-income students. Out of this effort, Project Head Start would begin as a summer program and continues to this day. In 1970, Jean Piaget’s book, *The Science of Education*, popularized discovery-based learning through his Learning Cycle Model. He is credited with greatly influencing the move toward cooperative and hands-on learning experiences seen across most of the nation today (Murray, 2008).

Along with Piaget’s book, the 1970s also saw *Title IX of the Education Amendments* of 1972, a United States law, pass on June 23, 1972. This action amended *Title IX of the Civil Rights Act* of 1964. The late 1960s and early 70s had seen segregation shift in form from racial to gender-based segregation and discrimination. As a result, in 1972, Senator Birch Bayh of Indiana introduced *Title IX* to combat the institutional discrimination faced by females. He pointed out that discrimination in education had consequences in the arena of employment opportunities for females. As stated by Senator Bayh,

> The field of education is just one of many areas where differential treatment [between men and women] has been documented but because education provides access to jobs and financial security, discrimination here is doubly destructive for women. Therefore, a strong and comprehensive measure is needed to provide
women with solid legal protection from the persistent, pernicious discrimination which is serving to perpetuate second-class citizenship for American women (Justia, 2001, para. 4).

While many people associate *Title IX* with women’s and men’s athletic programs, its original purpose was to deny federal resources that would support discriminatory practices of public schools and universities.

In 1983, during the Ronald Reagan’s administration, the National Commission on Excellence in Education released *A Nation at Risk*. This report called for immediate changes in the training of teachers and public education. More than that, however, the lasting impact of *A Nation at Risk* is that it begins the shifting of the dominate force guiding education from the state and local authority to federal authority. The federal government became the principal propelling policy agent behind American education policy (Guthrie & Springer, 2004). In addition, Guthrie and Springer state that for better or worse, this is the ultimate legacy of *A Nation at Risk*. The origins of *No Child Left Behind* can be traced to *A Nation at Risk*.

The 1990s quickly brought changes from simply testing students to determining performance levels to ‘high-stakes’ testing practices. With the continued move towards accountability and standards, Massachusetts passed the *Massachusetts Education Reform Act* in 1993. This law required a common state curriculum and high-stakes, statewide tests designed to hold schools accountable for student achievement. As is often the case, many states soon copied Massachusetts’ example. High-stakes testing has been defined as testing that contains elements of recognition and serious consequences for students, schools and school districts (Marchant, 2004). Students can be recognized for their
achievements, awarded scholarships, and earn labels of distinction based on their performance. When schools and school districts perform well, there are often monetary rewards involved, district and state recognition, various labels of merit, and the status of being a high performing school. In addition to rewards, states around the nation have various punitive and accountability measures tied to test performance for students, schools, and school districts. Individual student advancement to the next grade or retention in the current grade is often a condition of how well the student performs on the test. In addition to punitive consequences for students, high-stakes tests also have actions associated for failing to achieve for schools and school districts. The various actions for schools and school districts include a low ranking scale, school choice by parents, school personnel reconstitution, school closure, and school takeover by state education officials.

For the purpose of standards and accountability, NCLB has had a tremendous impact on the learner. Emphasis has shifted to the performance of the school instead of the performance of the student. Paul Peterson (2007) states that,

Five years later, it has become clear that the microscope NCLB uses to get the information the President said he wanted contains a lens that distorts. Many good schools—both charter schools and inner-city public schools serving the disadvantaged—are not recognized as such, while many poorly performing schools are given a pass. If NCLB is to fulfill its mission, Congress needs to make some major repairs or risk seeing those opposed to all forms of school accountability assume control of the political battleground. (p. 46)

Beginning with the National Defense Education Act, to the release of A Nation at Risk, and its gradual transformation to No Child Left Behind, the unintended consequences of
these efforts have resulted in instructing males and females in similar fashions, a view
that both learn and behave the same way, and that they will respond similarly to teacher
expectations in the classroom. Yet to be seen, however, will be the impacts recently
announced by President Barack Obama regarding applying from certain provisions in No
Child Left Behind.

On Friday, September 23, 2011, President Barack Obama announced that states
would be able to apply for waivers from the 10 most contentious provisions of the federal
education law, including the 2014 proficiency deadline. According to Dillon (2011), this
is seen by many as a move by the President to allow the states to reclaim the power and
authority to plan and implement their own school accountability and improvement
systems. The end result of this announcement is to essentially overturn the bulk of
former President’s Bush’s education reform plan. Dillon writes that President Obama’s
goal was to change the direction of accountability in the nation. States would be
encouraged to raise standards based on their needs, focus interventions on the world of
the failing schools, and use test scores and other indicators to evaluate teacher
effectiveness. The President defended his actions be stating that the he acted because
Congress failed to act. No everyone sees this as a good move for local control of
education.

The common core that has guided education up until the 1950s is that it was
guided by state and local school districts. However, with the desegregation of schools
and the National Defense Act of 1958, the federal government has increasingly moved to
regulate public education. Burke (2011) sees the waivers as just another attempt by the
federal government to exert more control over education. She states that any temporary
relief states will feel will quickly be overwhelmed by an increase in Washington D.C.’s authority over state and local education. As stated by Burke, “Temporary relief will be quickly followed by a new set of debilitating federal shackles” (para. 3). The waivers are seen as a method of enticing states and school districts to adopt the federal preferences. It is expected that many states will pursue the waivers, however, it will take some time for policy makers and education leaders at state and district levels to unravel what the new waivers mean and whether or not to pursue them. The waivers are tied to the new push for national standards, and many states are undecided about pursuing new national standards.

Graduation Rates by Gender

During the 2008-2009 school year, nearly fifteen million students attended high school across this nation (National Center for Educational Statistics, 2011). With graduation rates virtually unchanged for years now (National Center for Education Statistics, 2010). The truth is evident. The middle school and high school learner is in crisis. Over the past 25 years, the education landscape has dramatically changed. In an effort to promote higher test scores, boost achievement, and accelerate the curriculum, American schools assume that all learning is done the same. As a result, classrooms across our nation have adapted instructional techniques that fail to recognize how males and females learn and behave differently. As a result, males and females struggle in school and do not have successful educational experiences (U.S. Department of Education, 2009). The truth is even more evident at the secondary level. The graduation and dropout rates have become stagnant for many years now (National Center for Education Statistics, 2011). Graduation rates from almost every state in the nation
indicate that large numbers from all groups, males and females, Caucasians, African Americans, and Hispanic fail to graduate (National Center for Education Statistics, 2010). It is a phenomenon that educators, community members, and politicians have begun to explore.

Intelligence does not favor one gender over the other. Males and females have become successful in a variety of career fields. One of the core beliefs of the American Dream is that just about any individual can improve their status in this nation by hard work, dedication, ingenuity, and a good education. Our history is replete with such examples. People such as Abraham Lincoln, Martin Luther King, Jr., and Bill Gates all seemingly rose from humble beginnings to historical figure and cultural icon status due to their work ethic and contribution to our nation. Yet, now more than ever, as the nation moves into the 21st century, individuals will need to possess an education and skills in order to advance in society (Greene, 2002).

Yet, with the necessity of a high school diploma greater than ever before, high schools are only graduating about 70% of the students who begin in the ninth grade (Greene & Foster, 2003). Even more alarming, some statistics show that high school graduation rates are declining (Heckman & LaFontaine, 2008). This is despite a tremendous effort by local, state, the federal officials to raise the graduation rate. The picture becomes even more grim for minority students. Traditionally, little more than half of the minority students that enter high school graduate with their peers (Swanson, 2010). This becomes especially important when one considers that the minority workforce population is set to overtake the Caucasian workforce population in the near future (National Center for Public Policy and Higher Education, 2010). Swanson goes on
to state that only two-thirds of male students graduate, a percentage that is seven points lower than their female graduates. Males and minority populations are falling further and further behind their female and Caucasian counter-points.

To further complicate the issue, there is a long and complex history involved with calculating graduation rates. There is often disagreement in how different organizations report graduation rates. In the past, states may have added those individuals who had earned a GED or a certificate of completion to the graduation rate. This practice would artificially increase the graduation percentages. This often created confusion and caused misinformation to be reported to the federal government. With the creation of the four year adjusted cohort graduation rate guidelines, as a part of No Child Left Behind in 2008, the federal government continues to play a larger and larger role in the arena of education. This new definition defined how schools were to calculate their graduation rates. The new guidelines state, “As defined in 34 C.F.R. §200.19(b)(1)(i)-(iv), the four year adjusted cohort graduation rate is the number of students who graduate in four years with a regular high school diploma divided by the number of students who form the adjusted cohort for the graduating class” (South Dakota Department of Education, 2011, p. 1). This has not been without its own controversy. The United States Constitution does not address education. Failing to address education, it relegates aspects of daily life not covered by the Constitution to be consigned to the state and local government entities. However, since the publication of A Nation at Risk, the federal government has made itself a major force in the shaping of policies that effect education across the nation (Ansary, 2007). Further injecting itself onto the education stage, graduation rates used by the states have now been redefined by the federal government.
Dropout Rates by Gender

With the reliability of graduation rates being reported by the various states increasing, policy makers and educators can address the issues associated with graduating and failing to graduate. With building concerns regarding the failure of students to graduate and how this relates to their quality of life, it is recognized that those who earn a GED as compared to those who earn a traditional high school diploma do not have as much earning potential opportunities (Song & Hsu, 2008). The cost of dropping-out of high school is staggering. Dropouts are a tremendous burden on state and the federal governments. In 2004, the average high school dropout only made 37 cents for every dollar (Rouse, 2005). The United States only ranks eighteenth in high school graduation rates (Organization for Economic Cooperation and Development, 2006). It is estimated that more than one million students will fail to graduate this coming school year from across the nation and the District of Columbia (EPE Research Center, 2010). Again, a larger portion of these dropouts will consist of males and minorities. During the course of any typical year, more females graduate from high school than males and more Caucasians graduate than any other minority (Greene & Winters, 2006).

Students generally have many reasons as to why they drop out of school. Whereas both males and females, about 40%, say they drop out of high school for lack of success, this is the only category that is similar (Applied Research Branch, 2000). After a lack of success in school, most males will drop out of high school to begin work according to the Applied Research Branch. The reasons for dropping out are varied. Besides pursuing employment, Bridgeland, Dilulio, and Morison (2006) report that 26% of dropouts became parents, and amongst females, this number represented a full one-
third of dropouts. Another 22% reported that they had dropped out to attend to a family member or help the family. Amongst dropouts, as many as thirty-five percent reported that they had dropped out because they were struggling in school and needed more assistance. These numbers are certainly distressing as the United States attempts to compete in a twenty-first century global market. As we continue to move towards a global economy, research indicates that 90% of the most needed jobs in the global economy will require some post-secondary education (Alliance for Excellent Education, 2006).

The rates of graduating students from high school vary around the country. From 2001 to 2003, most southern states, New York, Alaska, and the District of Columbia saw decreases in their graduation rates while the remaining thirty-nine states were able to increase their rates (Seastrom, 2005). While states and districts claim they continue to improve the graduation rate, research indicates that there was no real change from 1991’s graduation rate of 72% to 2002’s graduation of 71% (Greene and Winters, 2005). Across the nation, a full one-third of students who began the ninth grade four years earlier failed to graduate with a high school diploma along with their peers (Orfield, 2004). In addition, during the school year 2000 – 2001, students from low-income families dropped out at a rate that was six times the rate of students from higher income parents (National Center for Education Statistics, 2011). Of the 47 states whose dropout rates were analyzed for 2007 – 2008 school year, males and minorities had the highest dropout rate in all 47 states (National Center for Education Statistics, 2011). In addition, the dropout rate for males across the 47 states in 2006 – 2007 was 4.6% and for females in was 3.5% (National Center for Education Statistics, 2011). Looking at the situation for dropouts
from the long-term perspective, of those who do not earn a high school diploma, about one-half never earn any type of high school official documentation (Alliance for Excellent Education, 2009). The impacts of dropping out of high school can be crippling and far reaching in the lives of individuals who decide to leave school.

**Consequences of Dropping Out of High School**

The consequences of dropping out of high school can be staggering. In addition, it can bring far reaching, negative impacts for years to those who fail to graduate. During the course of their lifetime, dropouts are three times more likely to be imprisoned than high school graduates (Alliance for Excellent Education, 2006). Stunningly, 59% of federal prisoners and 75% of state prisons are populated by high school dropouts (Harlow, 2003). The earning power of high school dropouts is also significantly impacted over the course of a lifetime. Research conducted by Professor Rouse (2005) of Princeton University shows that a student who drops out of high school will cost the nation more than $250,000. He states that high school graduates, as compared to dropouts, pay about $60,000 more in taxes over the course of a lifetime. If our schools could improve the male graduation rate by only five percent, our nation would see more than 4.5 billion dollars in crime-related costs saved each year (Alliance for Excellent Education, 2006). With more education, comes more earning potential. The annual earnings of a male dropout in 2005 was only $21,268 (Bureau of Labor Statistics, 2006). Once calculated for the varied types of dropouts, the average annual income for dropouts in 2005 was $17,299 (Alliance for Excellent Education, 2009). This is compared to a high school graduate in 2005 who earned $30,316 (Bureau of Labor Statistics, 2006). Over the course of a lifetime, working until age 65, high school dropouts will earn
$322,000 dollars less than a high school graduate (Wise, 2007). Looking at it from the long-range perspective, one group of 18-year-old dropouts will cost the nation $192 billion dollars in combined tax and income losses over their lifetime (Levin, 2005).

Special Education Rates by Gender

*The Individuals with Disabilities Education Act* (IDEA) is a federal law that ensures special education services to qualified infants, toddlers, and school age children with disabilities throughout the nation. Through IDEA, the federal government directs how states and public agencies provide special education services. President George Bush reauthorized it in December 2004. Congress reauthorized IDEA, renaming it from its 1975 original, *Education for All Handicapped Children Act*, in order to protect the rights of and meet the needs of children with disabilities (Department of Education, 2007).

Along with having struggles in graduation from and dropping-out of high school, nearly two-thirds of the special education population across the nation is currently identified as male and minority males and females (Whitmire, 2010). The difference in how males and females learn, and the structure and routines of the American classroom, may attribute to the large gap in the number of males and females being served in the special education classroom. In 2007, over 2.8 million students were being served under the *Individuals with Disabilities Act*, Part B (National Center for Education Statistics, 2009). The numbers of male students having disabilities ages 3 through 21 served under IDEA Part B across the nation averaged 67.24% in 2008 (U.S. Department of Education, 2008). The number of females identified with disabilities was 32.76% (U.S. Department of Education, 2009). The state with the largest number of males identified with
disabilities was Hawaii with 70.46% (U.S. Department of Education, 2009). The state with the lowest number of males identified was Iowa with 64.71 (U.S. Department of Education, 2008). The state with the highest number of females identified was Hawaii with 29.54% (U.S. Department of Education, 2009). The state with the largest number of females identified was Iowa with 35.29% (U.S. Department of Education, 2008).

In addition to the number of males, females, and minorities that are being identified as having a disability, the number of students being identified has nearly tripled in the past 30 years. Elizabeth (2006) states that during the school year 1976-77, 3,694,000 students received special education services. However, during the school year 2003-2004, 6,634,000 students were receiving special education services. This is an increase in 1976-77 from 8.3% to 13.7% in 2003-04. The number of males and females receiving services continues to climb (U.S. Department of Education, 2009). Statistics from The National Center for Education Statistics (2011) shows that while the number of students receiving services nearly doubled from 1977-2004, during that same period, these increases have only served to reduce the dropout amongst males from 14.5% in 1977 to 11.6% in 2004. Amongst females, the dropout rate went from 13.8% in 1977 to 9% in 2004.

Along with the increased number of students receiving services, the cost of educating these students continues to increase. According to Chambers, Parrish, and Harr (2004) over the course of the 1999-2000 school year, the federal government spent about fifty billion on special education services. An additional one billion dollars was spent on other special needs programs for students with disabilities eligible for special education. This would include programs such as Title I, English language learners, or
Gifted and Talented Education. Thus, during 1999 – 2000 school year, the total spending to educate all students with disabilities amounted to 51 billion. At that time, it was only 12.6% of the federal government’s 40% promise made by the government (Education World, 2000). This lack of fulfilling its commitment has left the burden of providing the needed services on both the states and local school districts. The cost of educating special education children is three times the average of the per-pupil expenditure in Maryland (U.S. Department of Education, 2002). In New York, that cost exceeds the average cost by four times the per-pupil expenditure (U.S. Department of Education, 2002). These expenditures continue to rise for all parties involved in educating special education children, and according the Commissioner Douglas Gill, “Federal policy with the respect of IDEA funding must give more discretionary ability to direct funds that best serve children with disabilities in their state rather than a prescribed set of requirements that do not take unique local conditions and needs into account” (U.S. Department of Education, 2002, p. 33).

Medication and the Learner

With the lower graduation rates, higher dropout rates, and more learners placed in the special education setting, parents, educators, and physicians have recently relied on medication to help make the classroom experience for the learner become more successful. In order to be more successful in today’s classrooms, more learners than ever before are currently diagnosed with ADD or ADHD and prescribed medication to treat the disability (Armstrong, 1997). Currently, it is estimated that one out of every eight children, roughly six million, will take Ritalin before they head out the door for school (Hoeller, 2000). The behavior of many students is often viewed by school officials as
being disruptive, counterproductive, and opposed to the stated aims and goals of the school (Younger & Warrington, 2005). This may help explain the 700% increase in ADHD diagnosis that occurred during the 1990s which raised concerns about the possible over diagnosis and improper treatment of many learners. (Antonuccio, Arcona, & LeFever, 2003). As of yet, no one has been able to determine a pathognomonic biological marker for ADHD (Todd, 2000). Traditionally, the medical community has defined mental health disorders based on the concept of statistical rarity. Using this definition, only a limited number of schoolchildren should experience this disorder. This number has traditionally defined as three to five percent. However, during the 1990s, there was a 700% increase in the use of medications used to treat ADHD, with virtually 90% of the world’s supply being consumed by the United States (Mackey & Kirpas, 2001; Marshall, 2000). Currently, the number of children in the United States estimated to be taking some form of ADHD medication is between five and six million (Sinha, 2001). Standing in stark contrast to how mental health disorders and traditionally been defined some studies have indicated that as many as 10% of elementary school children have been diagnosed with ADHD (Rowland et al. 2002). During the 1960s, the number of children using medication for the treatment of ADHD was tiny (Safer & Zito, 1999).

In addition to the over diagnosis of ADHD many have concerns about, educators, parents, and physicians may have more to be worried about when it comes to the specific gender and race of some learners and the prescribing of medications. In a study conducted by Schneider (2006), children who received a diagnosis of ADHD were less likely to be female, only 21%, than children without a diagnosis of ADHD, 50%. In addition the study indicated significant differences amongst race categories; children who
had a diagnosis of ADHD were 80.5% Caucasian, 5.54% African American, 8.6% Hispanic, and 0.48% Asian. Schneider writes, “Schools play an important role in ADHD identification. We found that increased pressures for school performance under accountability laws are associated with increased ADHD diagnoses” (p. e608). As of 2006, the percentage of Caucasian, male learners being diagnosed with ADHD had surpassed 12%, as compared to only 4% of females having been diagnosed with ADHD (Centers for Disease Control and Prevention, 2008). Many parents, educators, and researchers have come to believe that Caucasian males and females, due to various cultural norms, may receive a diagnoses and prescription for ADHD, as compared to other racial populations, in order to increase achievement in the classroom. Schneider warns that diagnosis discrepancies across gender, racial, and ethnic groups may stem from a variety of factors and deserve careful attention.

Gender and Learning

With more than 40 years of compelling data regarding graduation and dropout rates, special education populations, increased numbers of young children on medications, and the lack of success of minority populations in schools, the truth is evident, the learner is in crisis (National Center for Education Statistics, 2011). Universities, school systems, school administrators, and teachers must re-evaluate how instruction is delivered and behavioral expectations established. Instructional techniques and student management plans should take into account how both males and females learn and behave differently, mature at different rates, and view the world differently. Kovalik (2008) reported that discoveries during the past 30 years in the field of brain-based indicate the reason why males and females learn and behave so different is mainly
due to the maturing and growing process of their brains. Male and female brains contain different physical structures. The brains of males and females utilize many different chemicals. As a result, Kovalik points out that males and females process information, learn, behave, and view the world around them differently. Even beginning as early as kindergarten, a male’s brain is already one to two years less mature than female’s brain of the same age (Sax, 2001). Often this means that males will struggle with the reading, writing, and mathematics skills presented in the kindergarten classroom. Teachers must be cautious of not assuming that males may be more or less interested in reading, writing, or mathematics than females. Instead, Sax points out that brain-based learning suggests that delays in males may simply be a matter of the natural growing and maturing process that takes place in young male’s brain. When both males and females are instructed utilizing strategies not designed to take into account differences in both genders, it has the potential to create schools where students struggle, labeled discipline problems, recommended for medication, or referred to the special education classroom.

Brain-based research indicates that there are differences in how the brain works in both males and females (Gurian & Stevens, 2005). Dr. Louann Brizendine (2006) states that by the time males and females are born, their brains are different. It is these differences that drive their impulses and behaviors, value system, and their very reality. Moreover, while these averages may show up as minimal differences when looking at the whole, the differences in how males and females learn lead to vastly different outcomes in the classroom (Marano, 2003). Males and females think, learn, and process information differently (Medina, Stevenson, & Pearson, 2008). In the arena of school, and its artificially created environment, this puts many young students at a distinct
disadvantage (Kafer, 2007). By their very nature, young learners from primary to middle school age are not programmed to sit complacently and perform tedious tasks that do not take into account their gender differences or that hold little to no value for them. Unfortunately, this leads to as many as three times as many males being suspended than females (U.S. Department of Education, 2002).

The underachievement of many learners continues to dominate debate and research within the field of education (Weiner, 1985). While the reasons why the underachievement of the learner is still often debated in some circles, (Salisbury & Riddle, 2000), some suggest that the course of the debate is already beginning to shape public opinion and education policies (Reid, 1987). In addition to setting many learners into an artificially created environment not suited to how they learn or behave naturally, schools are primarily populated by female administrators and classroom teachers. This often leads to the creation of schools and classroom environments, while innocent in nature, that appeal to a feminine value system. The behavior of Caucasian males, males and females from some minority and cultural groups, or males and females from impoverished backgrounds has been well established (Measor & Fleetham, 2005; Younger & Warrington, 2005). It is often viewed as standing in opposition to the school’s academic mission. According to National Association of School Psychologists (2002), many schools view their role as being academic in nature, with not as much emphasis placed on behavioral instruction. The NASP points out that there are consequences for both positive and negative social and classroom behaviors. It is important that educators model, reinforce, and constantly instruct students on how to appropriately behave in school. In a profession where ninety percent of elementary
teachers are female, especially during the formative primary years, many learners are surrounded by a value and belief system and gender expectations that often that stand in contrast as to how the learner may operate or view the world (Kantrowitz, 2010). Many learners are expected to excel academically or exhibit certain behaviors in a classroom environment that has been created that may often contain expectations that stand in opposition to how the some learners operate (Medina, Stevenson, & Pearson, 2008).

It is not that educators should focus on the learning styles of one gender or group at the expense of the other. By keeping gender learning styles in mind, educators can have a significant impact on achievement for both males and females (Felder, 1996). While overall average intelligence is the same in both males and females, the critical factors may lie in the delivery of learning and discipline. It is important that all students, utilizing their abilities, experience success in education. In addition, it is important to realize that all students, despite being grouped by age and grade, may learn in vastly different ways.

Learning Styles

Understanding how the brain operates and the construct of learning has very early origins. As far back as the early Egyptians, humans were curious about the workings of the brain (Finger, 2000). However, knowing the physical structure and understanding complex processes such as thought and learning are vastly different endeavors. While the two are closely linked, the physical construct of the brain and the intangible thought processes it produces, the two quickly diverge in terms of study and understanding. What began to emerge in the 1970s was a field of study that looked at the processes thought of as learning. Since that time, many models and theories have emerged in the field of what
is considered learning styles or models (Coffield, Moseley, Hall & Ecclestone, 2004). Individuals studying the learning process should have a rather in-depth knowledge of the field. Besides the well-established models and theories that have defined the field, there are many that are based on weak instruments of study methodology (Stahl, 2000).

In the field of study thought of learning theory, different terminology is often used to discuss similar concepts. Terms such as learning strategy, learning style, cognitive strategy, and cognitive style are used to describe learning (McLaughlin, 1991). Depending on the phrase used by the researcher, this will give insight as to how the researcher believes the brain works. While complex in nature, generally learning styles are often thought of as practices that combine emotional, cognitive, physiological, and character traits relating to how the individual perceives and responds to his surroundings (Keefe, 1979).

From the various learning styles that have been identified, e.g. Coffield et al. (2004) evaluated more than 10 models and more than 800 texts to categorize those models. Those being cognitive style models, cognitive styles analysis, and perceptual learning style preference. Many of the models studied and accepted today fall within these broad categories. Learning, by its very nature, is a conceptual construct often difficult to define. In looking at the cognitive style models, there are several that fall within this category. During studies conducted in the 1970s, many learners often favored one method of learning as compared to another. Pask’s (1975) model described learners as surrealist or holist, procedure building or description building, and simple patterns as compared to looking for complex patterns. His descriptions also looked at how learners utilized fragmented understanding or overgeneralization in new situations.
David Kolb (1984, 2007) has also completed extensive work in the field of learning styles. In *The Kolb Learning Style Inventory*, concepts in regards to learners were explored such as concrete experience, reflective observation, abstract conceptualization, and active experimentation. In the learning process, Kolb argues that people combine those four elements of learning in different fashions or combinations in relation the learner and the environment. Through the process of combining the four processes by the learner, this is what gives rise to an individual’s preferred learning style. Kolb identified the combinations as diverging, assimilating, converging, and accommodating. Diverging utilizes both reflective observation and concrete experience. Assimilating utilizes both reflective observation with abstract conceptualization. Converging utilizes active experimentation with abstract conceptualization. Accommodating utilizes concrete experience with active experimentation. Kolb believes that learning is best thought of in terms of an overall process, not so much in terms of the outcomes. Learning is the process by which the learner creates their own knowledge of the world around them.

Building upon the work Kolb completed in 1985, a very popular model was produced by Peter Honey and Alan Mumford that is often used in education circles. Honey and Mumford (1982) developed four labels identified as Activists, Reflectors, Theorists, and Pragmatists. In broad terms, Activists like to perform and learn through experiencing. Reflectors prefer to study and review information. Theorists formulate answers and provide conclusions. Pragmatists accept things as presented and plan based on what works in the moment and in the real world. Keeping in mind these learning styles, teachers should plan a variety of learning activities in order to appeal to the
learning preferences of the learner. Educators would find that when a balance is found between the four learning styles, teaching and learning become more effective. However, as is often the case, researchers (Lie, Angelique, & Cheong, 2004; Wehrwein, Lujan, & DiCarlo, 2006) have found that most females are unimodal learners and most males are multimodal learners when it comes to how instruction is delivered in the classroom. Teachers could better serve their students by keeping this in mind when planning instruction for the classroom.

Extrapolating from the work of psychologists Carl Jung, Isabel Myers and Katharine Briggs developed what may be considered the most widely used psychometric tool still in use today. It pairs eight opposite concepts to ultimately produce 16 possible combinations of learning styles (Dietz, 1995). In this model, the learner may be an extravert or an introvert. The extraverted learner is more focused on the outer world and may learn best through instruction that utilizes social interactions and cooperative learning techniques. The introverted learner is focused on the world within and may learn best through tasks that rely on discovery learning and self-guided instruction. The learner may be sensory or intuitive in nature. A sensory learner is guided by facts, procedures, and details. The intuitive learner is more concerned with possibilities and concepts. They look for the meaning, patterns, and relationships among the facts in which they have to work with. Learners may be thinkers or feelers. Being skeptical and logical make the learner more of the thinker. Thinking students like clear lesson and topic objectives. The feeling learner works best when human dynamics are built into lesson design and are often more appreciative of the feelings of those within the group. The feeling learner prefers to work in groups, especially harmonious groups. They enjoy
the small group exercises with their peers. Learners can also be perceivers or judges. Perceivers adapt and gather as much data as possible. Perceptive learners are curious, flexible, and impulsive. They start many tasks, want to know the details of each task, and often find it difficult to complete a task. Judges seek closure regardless of the lack of complete data. The judging learner plans the work and works the plan. Deadlines are sacred. They simply want to get it done.

The Myers-Briggs Type Indicators preferences could be combined into sixteen different preferred learning styles. A learner could be EIFJ (extrovert, intuitive, feeling, judge), or any other of the fifteen combinations. These combinations would results in the individual’s preferred learning style (Myers, McCaulley, Quenk, & Hammer, 1998).

Having a better understanding of these learning types, and what they mean, would aid a teacher during the design of instruction for the classroom. While it may not be necessary, or practical, for educators to know the learning style of each student they teach, it is critical that educators have a thorough knowledge of the learning styles so that instruction can be planned to address the variety of ways students learn. As James Dyer states, “Students learn differently. As such, there is no one teaching strategy, method, or technique that is successful for all students, in every situation” (2008, p. 1).

From work in the field of learning theory that would follow, learners have also been described a visual/haptic, visualize/verbalizer, and serialist/holist. (Jonassen & Grabowski, 1993). In their book, Handbook of Individual Differences, Learning, and Instruction, their work explored the connection between knowledge and concept mapping. According to Jonassen & Grabowski 1993, “Concept mapping is a type of knowledge representation” (p. 433). Structural knowledge is the foundation for the
conceptual basis for why. It describes the mechanism of how prior knowledge is interconnected and attached to new knowledge. This theory allowed many educators to begin to consider their audience in a manner in which the teacher could relate. This learning theory explored learning as either information gathering or information organizing. To a large extent, Jonassen and Grabowski (1993) made the distinction between the visual and verbal learner.

In what may be considered some of the key work in regards to learning style preferences, Joy Reid’s (1987) work with ESL students and her identification of learning styles has become knowledgeable even in popular culture. Learners utilize their learning through perceptual preferences. Learning was done predominately through visual, auditory, kinesthetic, tactile, social group, or social individual. Reid stated that individuals can learn using all the listed methods, but individuals generally favor one primary method over others. In addition, there are what can be considered secondary preferences as well in terms of how learning was best completed.

In the pursuit of understanding the learning process, research has also been conducted in the type of learning that occurs. This type of learning, in conjunction with learning styles, is strongly tied to the students’ intentions and aims (Entwistle, 2001). The learning involved was identified as deep learning when the learner was intrinsically motivated and utilized a variety of strategies in search of understanding. There is also surface learning where the learner is focused on assessment requirements. There is also the combination of the two considered deep, non-apathetic learning. This is generally considered when the learner is focused on the assignment grade or the product of learning.
Gender and Behavior

Many of the struggles that learners face in school have created very real world consequences. Armed with data that is consistent and growing, educators, scholars, and government officials are beginning to understand that the many learners are at an academic and discipline disadvantage. This would mainly include learners that are male, from a minority population, a special education student, or learners who live in poverty (Synder & Dillow, 2009). Schools operate in such a manner that they fail to recognize and take into account the needs of their learners. Scientists have begun to find true differences in the brains of males and females (Rhoads, 2004). Michael Gurian (2004), a psychologist, recently claimed to have discovered as many as 100 structural differences in male and female brains.

The typical public classroom routine across the country repeats itself on a day-to-day basis. Classroom experiences involve extensive reading, sustained attention to tasks that hold little interest or value for many learners, and where students have to accomplish their work with almost little to no movement. On the other hand, it is through physical movement that many learners accomplish most of their learning (Smith & Wilhelm, 2002). It is through their activities, interest in the world around them, and trying to manipulate it that the inherit learning takes place. Primary school and early grades are more busy and active than later elementary, middle or junior high grades. It is during these latter years of schooling, when there is less movement in the learning process and variety of instruction, that learners begin to experience difficulties and are already set on a path that often leads to dropping out of school (Rumberger & Lim, 2008).
For many years, the differences in male and female behavior in school were generally thought to be a function of individual student choice. The students were choosing to either be successful or not successful in school. In addition, success in school was also seen as a byproduct of student’s home environment. Those students that came from stable homes with high expectations would be more successful than those that came from homes that were unstable and lacked high expectations. While there is much to be said about the impact of a student’s home environment and the connection between succeeding in school, researchers are beginning to find that a large degree of learning and how males and females learn is tied to the very structure of the brain (Gurian, 2004). Research shows that the corpus callosum, the bundle of nerves that connects the two hemispheres of the brain, may be as much as 25% smaller in males than females (Carter & Frith, 1999). The corpus callosum allows for the two hemispheres of the brain to communicate with each other. Carter and Frith’s work indicates that having a larger connection between the two sides of the brain would allow females to better access different areas of the brain for a variety of tasks. This seems to indicate that greater multitasking would be one benefit of this increased ability for the brain to communicate with itself.

Another area in which the brains of males and females are different is the neural pathways in the temporal lobes. Brain research indicates that females have stronger connections (Blum, 1998). Blum points out that having fewer connections in the temporal lobes would mean that males retain less when information is disseminated orally, lack recognition in tones of voice, and that males require a more tactile approach to their learning experience. An additional area that may make a big difference in the
behavior of males and females is that the frontal lobes of males are not as active and do not mature as quickly as a females (Diamond, 2003). One of the main roles of the frontal lobe is to monitor impulsivity. The larger and faster maturing frontal lobe of the female may account for the more desirable behavior in school. Males of all ages will be more impulsive- a trait that is not valued in our modern day schools (Sax, 2005). These are just a few of the many structural differences found between the male and female brain. However, differences are not only found in the how the brain is formed and operates, but differences can also be found in the hormones that make up both genders.

Hormones serve as chemical messengers in the body. Hormones travel through the blood stream to all parts of the body to deliver chemical messengers. One of the major differences in males and females is that males have higher levels of testosterone and vasopressin (Rhoads, 2004). Testosterone has been extensively studied in its role in aggression in mammals. Males have additional amounts of testosterone as compared to females, and during the critical educational years of middle school, junior and senior high, the natural development of young males causes substantial amounts of testosterone to increase. The male, due to chemistry, becomes less interested in school and familiar likes, and becomes more interested in social behavior, constant movement, and the opposite sex (Rhoads). More recently, the role of vasopressin has also been studied in its role in male behavior. Along with several key roles it serves in the body, vasopressin has recently been linked to aggressive behaviors, pairing of partners, and males spending time and energy keeping other males away from current or potential mates. Again, these are behaviors that are heightened in males due to the increased levels of this hormone in the body.
An additional element that may factor in regarding males and females’ behavior is the need to belong to a group. Identified by Abraham Maslow in the article “A Theory of Human Motivation” published in 1943, and later fully expanded in the book *Motivation and Personality* in 1954, Maslow attempted to describe human motivation and personality based on a complex set of needs that all individuals possess. Humans strive to have these needs satisfied, and may only proceed to higher stages of development once the lower ones have been met. Individuals are often compelled by a need for belonging, which Maslow describes as more complex than the basic needs of food, shelter, and sense of security. Often students who are unsuccessful in school will gravitate to one another. This may be explained once it is viewed with Maslow’s theory in mind. Maslow states that if the more basic needs are met, people will begin to look for companions. Maslow writes, “He will hunger for affectionate relations with people in general, namely, for a place in his group, and he will strive with great intensity to achieve this goal” (1943, p. 381).

The Value System of Educators

In terms of behaviors, teachers should have an understanding of why their male learners, learners from minority groups, and students from impoverished backgrounds may exhibit some of the behaviors seen in school. However, George & Aronson (2009) indicate that it is often the value system of the educator that makes it difficult for the learner to be successful. Their study examined the role of educators’ expectations played in creating barriers to success. Victims of a hidden curriculum have traditionally been those underserved students who struggle against racial stereotypes. Gandara and Bial (2001) suggests that African American, Latino, and Native-American students all too
often have different learning opportunities due to both their ethnic and socioeconomic backgrounds. Meaning, sadly, opportunities for these students is most often dictated by the predominant cultural beliefs of our society. In reality, this means that teacher expectations have a direct impact on the achievement gap. Like the rest of us, educators bring their own cultural beliefs and expectation, their paradigm of the world, into the classrooms. Gandara and Bial state, “It is through the lens of these beliefs that they (educators) assess students’ abilities, judge their potential for achievement, and help decide their futures by opening doors and closing them” (p.3). Educators most have a conscious understanding that their own cultural expectations and beliefs and the impact it will have on their students. This is paramount as the nation’s population continues to become more diverse.

Across the nation each day, there are thousands of decisions that are made by teachers and administrators in regards to the discipline in the classroom and in the school yard. Most people would typically believe that discipline is fair and consistent in our nation’s schools. However, in terms of discipline, males and minority populations are at much greater risk when it comes to suffering the consequences to what is considered bad behavior (Sax, 2005). Discipline in the classroom or at the school can take many different forms. There is a very typical phenomenon regarding many learners and how teachers view their behaviors. Males in classrooms around the nation are disciplined, on average, five to ten more often than girls (Pollack, 1998). Pollack goes on to state that, parents are told that is because males more difficult. His answer is, it is because the environment and expectations makes it more difficult for them to adjust. In essence, the classroom of today is not well-matched to serve the needs of many learners. As a result,
males, minorities, and students from underserved socioeconomic populations will default to their innate learned behavioral patterns. These behavior patterns traditionally stand opposed to what is considered a well-behaved child or a well-mannered classroom. The School Survey on Crime and Safety reported that almost half, 48%, of public schools took serious disciplinary action against a student: 20% were transfers to specialized schools, 5% were expelled, and an amazing 74% were suspensions that lasted five days or more (Dinkes, Cataldi, Lin-Kelly, & Snyder, 2007). One alarming aspect of removing students from the classroom for extended periods of time manifests itself is a lack of education for the student. Repeated removal of the same student can create serious gaps in the student’s knowledge base.

In order for effective education to occur in the classroom, there must be safety, rules, and order. However, the National Association of School Psychologists (2001) found several concerns have been raised about how this discipline is impacting males across the country, especially with the increased use of zero tolerance policies. Zero tolerance policies have been very popular in the past decade. It is assumed that zero tolerance policies that result in the removing of students who engage in disruptive behaviors will dissuade other learners from being disruptive (Ewing, 2000) and create a positive and productive school climate for the students who remain (Public Agenda, 2004). However, the NASP has reported many problems with these policies. Problems such as the over representation of many minorities of African American students who receive more harsh punitive measures such as suspensions, expulsions, corporal punishment, and less severe discipline than their nonminority peers, even after controlling for socioeconomic status. A greater negative impact on educational services
for students with disabilities that often result in the student being removed from the classroom for more than the ten-day limit set forth by IDEA in 1997. School administrators are often not consistent with the application of zero tolerance policies. NASP reports that these policies, which are reserved for serious discipline incidents, are often applied indiscriminately to much lower levels of rule infraction. In addition, an increasing rate of suspensions and expulsions have occurred all over the country, while school violence generally has been stable or declining. The average length of expulsions have increasing to two-year, three-year, or making it permanent, and high rates of repeat suspensions that may indicate that suspensions are an ineffective intervention when attempting to change the behavior for challenging or special needs students. Above average dropout rates related to the repeated use of suspension and expulsion when applied to Caucasian males and males and females of minority, special needs, and low socioeconomic students. Gandara and Bial (2001) believe that these practices are rooted in the belief and cultural expectations that that if children are not held accountable, then they will never learn to be responsible adults. However, studies continue to indicate that there are serious concerns about the fairness and effectiveness of enforcing zero tolerance (American Psychological Association, 2008; Skiba & Rausch, 2006).

Through its report, *Are Zero Tolerance Policies Effective in the Schools?*, the American Psychological Association (2008) offered many alternatives to the over utilization of zero tolerance practices in schools. Administrators and teachers should have regular and continuous contact with parents and guardians about discipline issues that occur in school. Regularly evaluate discipline and violence prevention strategies to ensure that interventions and strategies are effective and having the desired results. If
discipline data indicates that students’ behaviors are not changing after the application of specific interventions or strategies, school should attempt alternative interventions when possible. Schools should reserve the applying of a zero-tolerance policy for only the most severe of discipline infractions, and replace the one-size fits all strategy with an increasing discipline consequence ladder for the less severe infractions. Implement school-side programs that will improve the school’s climate and increase the students’ sense of community and belonging. Implement mental health measures that will offer students who have been disciplined an opportunity to reconnect with the school community, peers, and personnel that will serve to establish a bond with those around them. Schools and public agencies should constantly improve collaboration and communication between schools, parents, law enforcement officials, juvenile justice, and mental health professionals so that a plan may be developed to address an array of alternatives for challenging youth. Maintaining safety is schools is a paramount issue. Schools must be safe and orderly for education to occur. However, without the redefining of the beliefs and policies that shape school discipline practices, many learners will continue to experience failure, disengage from the educational process, and dropout out of school.

Gender and Single-Sex Schools

America has long struggled with how to educate its males and females. While thoughts and practices have evolved during the history of our nation, the practice of placing males and females in the same classroom is a fairly new phenomenon (Gale Group, 2008). Males and females were often confronted with different sets of educational expectations and experiences. For many generations, these experiences would be defined
by the expected gender roles of males and females of the time (Lasser, 1998). Well into the 20th century, males would often receive instruction in math, engineering, and other typical male roles. Females would often receive education in home economics, art, and literature. Many of these practices began in the early days of the nation. For generations, education was a privilege of the wealthy, upper class of colonial society. The sons of the upper class would receive instruction from a private tutor in the home and then be sent to Europe to pursue a higher education. The daughters would be provided education enough to read the Bible, keep household records, and instructions in music, art, and social etiquette (Chesapeake College, 2009). Sons and daughters of the working class were generally afforded little formal education. They took apprenticeships for a number of years to learn a skill that could be used in the colonies.

While the founding fathers and various legislative bodies promoted education in the early colonies, usually the upper class and ruling families were they only ones allowed to become educated. Females, lower class families, and minorities were not afforded similar opportunities. It would be many more years before females were allowed to be educated in a manner that was similar to boys. Oberlin College, which opened in 1833, was the first coeducational college in the nation (Thattai, 2010). Even the first public school in America, which opened in 1635, which would later become The Boston Latin School, did not accept girls until 1972 (Freedom Trail Foundation, 2010).

The 1960s and early ’70s would see a tremendous amount of change in the coeducation of males and females in the same classroom. Most of this would be a result of the civil rights movement that swept the nation. While many believed and fought for equal treatment of African American and other minorities around the country, many
women’s organizations would challenge the single-sex classroom model in favor of the coeducation of the two genders. The National Organization for Women (1968) published the National Organization for Women’s Bill of Rights that called for equal and desegregated schools by recognizing,

That the right of women to be educated to their full potential equally with men be secured by Federal and State legislation, eliminating all discrimination and segregation by sex, written and unwritten, at all levels of education including college, graduate and professional schools, loans and fellowships and Federal and State training programs, such as the Job Corps. (p. 91)

Several years later, the federal government would pass *Title IX*. The purpose of this far-reaching piece of federal legislation, signed by President Nixon on June 23, 1972, was intended to prohibit discrimination based on gender in all educational programs and athletics (U.S. Department of Justice, 2001). In 1974, Congress passed the *Women’s Educational Equity Act*. This act established educational programs to combat gender stereotypes and open scientific and technological careers and courses for females.

During the years between 1972 and 1979, female participation in technical programs nearly doubled from 9.7% to 17.5% and participation in agriculture programs changed nearly fourfold from 5.4% to 19.2% (Tyack & Hansot, 1992). Even as late as 1977, a commission of the United States reported that males and females were being kept separate at the high school level, (United States Commission on Civil Rights, 1980).

With the renewed look at the struggles of learners in the classroom, and the alarming statistics in regards to the higher representation of certain populations in special education classrooms, diagnosed with ADD/ADHD, school discipline incidents, and
dropouts percentages from around the country, schools and schools systems across the nation are, once again, exploring the option of single-sex settings. One such organization running a single-sex setting is The Young Women’s Leadership School in East Harlem, New York. The school opened in 1996 amid controversy regarding the one gender model. However, beginning in 2001, the school has established astounding successful graduation and college entrance rates. The high school graduates 99% of its students in four years and as many as 90% go on to attend a four-year college (insideschools.org, 2010). More and more across the nation, schools are moving to a single gender model of education.

At best, the results regarding single-sex educational settings have proven to be inconclusive. In several studies from Australia, the UK, Canada, and the United States seem to indicate that there are several factors to consider when looking at single-sex educational settings (Gill, 2004, Haag, 2000; Mael, Alonso, Gibson, Rogers, & Smith, 2005, Smithers & Robinson, 2006). Research conducted by Demers and Bennett (2009) indicates that there are many factors to consider when educating students of different genders. Educators should diversify teaching and learning strategies and alternatively focus on males and females. Utilize different classroom themes for the two genders. Educators should provide students with multiple opportunities to move about in class and engage in kinesthetic activities. Educators should develop activities or significant thematic areas for each of the genders in the context setting of the classroom in order to keep the learner motivated. The educator should design lessons that address cross-curricular skills by integrating, for example, reading and writing with other subject matter to provide meaningful learning for the student. Educators should develop projects that
will interest the intended gender in order to help the learner develop a sense of community at their school. Educators should comprehend that the academic success of the learner is not merely the job of the classroom teacher, but, instead, the concern of all school personnel. Therefore, all school personnel must develop partnerships with the learner. Educators should provide engaging and challenging opportunities and frequently vary the type of activities. It is time for educators, administrators and teachers, to realize that not only do males and females have different tastes and interests, they also learn differently. When educators and school personnel attempt to connect with students, especially coeducational campuses and classrooms, it must be made with an understanding that classrooms are packed with multitudes of masculine and feminine traits, beliefs, and expectations.

Response To Intervention

Beth Koltz (2006) states that as the accountability movement aimed at schools during the 1990s has forced school officials and parents to begin to explore options regarding how to better assist those students who were experiencing a lack of success in school. The major goal was to identify practices and interventions that would assist individual students. Koltz indicates that, traditionally, those learners who were experiencing academic and behavioral difficulties either failed and were continued to be moved from one grade level to the next through social promotion practices or dealt with utilizing traditional discipline. Often, these students had been referred for evaluations to a school-based assessment team to determine if special education services were warranted. In addition, parents were often encouraged to find a doctor who would give diagnoses of Attention Deficit Disorder, or its related condition, Attention Deficit Hyper-Activity
Disorder. However, with the building concerns regarding the number of students placed in a more restrictive special education environment and the increase of children on ‘medication’ for school, the *No Child Left Behind Act* of 2001 and the *Individuals With Disabilities Education Improvement Act* (IDEA) of 2004 directed schools to find alternative methods of providing assistance earlier in the process before the learner fell too far behind in school and the learning process. Many schools turned to a new approach to assist struggling students called Response to Intervention. Response to Intervention (RTI) is a method of altering instruction and behavioral expectations for the learner by both regular and special education teachers in order to reach those learners who need help (Barnes-Maguire, 2009). RTI is a program whose aim is to identify those students who are struggling, provide research-based interventions and best practices, monitor those interventions, and assess the results of the interventions.

According to the National Center for Learning Disabilities (2011), Response to Intervention (RTI) is a multi-tier program established to identify and support students with learning and behavior needs early. The RTI method begins with high-quality instruction in the classroom by the regular education teacher. An additional, critical component is the universal screening of all children in the general education classroom. Schools with struggling learners and individuals with discipline issues implement a plan to provide individualized, targeted interventions at increasing levels of intensity to increase the opportunity for academic and behavioral success. The NCLD states that these interventions should be provided by a variety of school personnel. This includes family members, general education teachers, special educators, and specialists. Progress of learners on an RTI plan is closely monitored to evaluate for both an improvement in
academic status and behaviors. The goal is to support the learner, reduce the numbers of behaviors that lead to a lack of success in school and to replace those with behaviors that will lead to success in school. Decisions about the level of intensity and period utilized for interventions are based on the learner’s response to the program. The NCLD notes that RTI is designed for use when making decisions about both general education and special education students. Its intention was to bring a well-designed, integrated program of effective instruction and research-based interventions that would be guided by learner outcome data.

Several key components comprise the RtI process. According to the American Institutes for Research (2011), the first step in implementing an RtI plan is effective classroom instruction for all learners. Next, educators must identify those students who may be at risk for poor learning outcomes or discipline issues. This is typically referred to as the screening process and is most often conducted by the regular education teacher looking at past student performance data. If a student fails to respond to generalized classroom instruction or behavioral expectations, school personnel and the student’s parents or guardians develop an individualized RtI plan. Once a plan has been implemented, the student’s progress is monitoring and data is collected to assess the student’s response to the academic and behavioral interventions. If students fail to respond to an intervention, often that intervention will be discontinued and replaced with an alternate intervention. Data analysis, referred to as progress monitoring, and decision making should occur during all stages of the RTI process. School-based RTI teams utilize screening and progress monitoring data so that decisions about instructional and behavioral interventions may be determined and adjustments put in place. Following the
collecting of data, and the level of success determined, movement within the multi-level prevention program or disability identification can take place. In one sense, all students at a school are involved in the RTI process.

Response to Intervention is a multi-tier program. Renaissance Learning (2008), CTB/McGraw-Hill LLC (2011), and the National Center on Response to Intervention (2011) identify three major tiers to the RTI model. This model is used to differentiate instruction and behavioral plans to provide interventions for all learners. It is also used to provide a method for delivering interventions of increasing intensity if needed. Tier I is the foundation of the RTI model. It begins with the delivery of high quality instruction to all students in the general education classroom by the regular education teacher. At this level, universal screeners create a baseline of achievement and behaviors that identify learners who may need additional support. According to the NCRI (2011), 85% of all students in schools are involved and are successful in Tier I in terms of instruction and behavioral expectations. At each stage of RTI, learner progress is assessed to determine the learner’s level of improvement and if further or different interventions are necessary. If the learners responds to the interventions, and internalizes the new behaviors, he may be exited from the program. Typically, the learner will be closely monitored to continued success. If students experience a lack of success in Tier I, the RTI team may move the student into Tier II.

The second level of RTI is referred to as Tier II. It begins the process of more targeted interventions for those learners who are not making adequate progress through regular instruction or who may be experiencing discipline issues. These students are considered at-risk to possibly not progress to the next grade level or more severe school-
wide discipline consequences if interventions are not put in place. While receiving Tier II interventions, the learner continues to receive Tier I instruction in the regular education classroom. Importantly, Tier II includes the careful monitoring and charting of each student’s progress by school officials. Interventions are typically in place for six to eight weeks. Following the intervention plan period, a school-based RTI team will meet to analyze and discuss the collected data. Typically, 10- to 15% of a school’s population may be identified to receive Tier II interventions. If a student continues to show a lack of progress following Tier II interventions, the student may be identified to progress to Tier III of the RTI model.

Tier III delivers the most intensive, individualized interventions to students. At Tier III, the learner will work one-on-one with a specific teacher and receive interventions targeted to his or her most instructional or behavioral needs. This will involve one to five percent of a school’s population. Those learners who do not make adequate progress at Tier III are then referred by the RTI team for a comprehensive evaluation and are considered for special education services under IDEA 2004. All data collected by the interventionists at Tiers I, II, and III are used during the evaluation process are utilized in the decision making process regarding eligibility for special education services.

It is critical that schools begin to explore the manner in which they will develop and implement their Response to Intervention plans. The goal is to increase learners’ academic and behavioral success so that they may stay in the regular education setting and avoid the special education label. Countinho and Oswald (2004) report that, for many years, the only tool at the discretion of the well-intended educator to assist the
struggling learner was a referral to a school-based assistance team that would look at possible placement in a special education setting. Educators would often guide learners into special education classrooms when they would begin to lag significantly behind other students, even when the learner did not actually have a disability.

In many communities, this would often create problems with over and under representation of certain populations in various special education settings. Fierros and Conroy (2002) report that 55% of Caucasian learners with disabilities spent 80% of their school day in the general education classroom. However, only one-third of African-American students with disabilities spent 80% of their day in general education classrooms. In addition, RTI has great potential to keep minority students in the regular education classroom. Losen and Orfield (2002) state that schools’ discipline data indicates that that African American learner is often viewed as having challenging behaviors and is more often referred to special education programs that serve children with emotional disabilities. Other data reported by Losen and Orfield indicates that the African American learner is more apt to receive special education services under the mental retardation category. In addition, the U.S. Department of Education (2006) reports that African American learners are identified as emotionally disturbed at almost twice the rate as that of the Caucasian learner and are over twice as likely to receive special education services for serious emotional disturbances. In addition, the African American learner is identified three times as much in order to receive services for mental retardation as their Caucasian peers. Asian/Pacific Islanders are more often overrepresented in gifted and talented programs than their peers (Cartledge, et al., 2008).
Data would seem to indicate that many populations are overrepresented in special education classrooms. Many factors may contribute to this phenomenon. However, the primary factor involved may be the practice of allowing individual teachers to refer students to school-based assessment teams. Harry and Klingner (2006) report that the practice of having the regular education teacher refer students is a strong forecaster of eligibility for services. Their works indicates that 73- to 90% of the students referred by regular education classroom teachers for evaluations due to academic or behavioral issues are found eligible for and receive services. However, while there is the over representation of some minority groups receiving services, there are those that are underrepresented as well. This is real concern when there may be students that are struggling with a disability that may be interfering with their ability to learn, behave appropriately, and succeed. Many groups are considered underrepresented when the proportion of learners from certain ethnic or racial groups that are receiving special services are considerably less than the number of these same learners in the overall school population (U.S. Department of Education, 2006). Data indicates that Hispanics are under identified within certain disability categories when compared to their peers (U.S. Department of Education, 2006). Another group that is actually less likely to be identified for special education services is the Asian/Pacific Islander learner (National Association for Bilingual Education, 2002). Alexinia Baldwin (2004) reports that with the exception of Asian/Pacific Islanders, many minority students, especially those from low socio-economic backgrounds, are notably under-represented in gifted and/or talented program. Her findings indicate that the majority of students populating gifted and talented classrooms across the country are Caucasian. This is true for urban, suburban,
and rural communities, even those with large minority populations. While the Response to Intervention’s model supports instructional and behavioral plans based around the needs of the learner, and that learners experience increased success rates in school, data indicates that school districts around the nation are slow in establishing plans. Through the course of their research, Hoover, Baca, Wexler-Love, and Saenz (2008) reported that 17 states indicated that less than 10% of the districts in their states are currently using an RTI model. Eleven states indicated that 10- to 25% of their districts were using an RTI model. Four states indicated that 26 to 50% of their districts were using an RTI model, and one indicated that over 75% of their districts were using an RTI model. Eleven states either did not answer or reported that such statistics were currently unknown. Improving student success should be the aim of all educators. RTI calls for modifying instruction and implementing behavioral plans designed to meet the needs of specific learners. Unfortunately, rather than providing targeted interventions for struggling learners, research indicates that students are inappropriately referred to special education classrooms which may cause long-term harmful effects (Harry & Klingner, 2006; Losen & Orfield, 2002; National Alliance of Black School Educators, 2002).

Identifying learners as disabled forces school systems to provide unwarranted services and support. These extra services increase the cost of educating children. According to Harry and Klinger (2006), there are several negative consequences when students are placed in special education environments. Identifying students as disabled creates a false notion of the child’s ability to learn and achieve. In addition, once students are moved into a special education environment, they tend to remain and placement back into the regular education classroom is rare. Often, the learner is more
likely to encounter less rigorous instruction, lack access to a rich curriculum, or instructed using best practices that students in regular education often experience. Lowered academic expectations often lead to diminished academic performance and post-secondary opportunities (Harry & Klingner, 2006; National Research Council, 2002). Students in special education classrooms often have less access to their academically abled peers (Donovan & Cross, 2002). Learners who are identified as disabled are often stigmatized socially at school, the home environment, and in the community (National Research Council, 2002). Over or under representation of the various racial and ethnic groups will often contribute to considerable racial separation at the school and less contact with other students from diverse populations (Harry & Klingner, 2006; Losen & Orfield, 2002). Simply put, school administrators, classroom teachers, and district interventionists can use RTI to provide early interventions, reduce the achievement gap, decrease behavioral problems, and proactively and effectively assist those students who are struggling (Gibbons, 2008).

Science, Technology, Engineering and Mathematics

At the request of a bipartisan, Congressional committee, the National Academies (2005) was requested to conduct an assessment of America’s competitiveness in the rapidly changing global marketplace and the connection to how technology is linked to the nation’s prosperity. To this extent, a 500 page report titled *Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future* was produced. The committee’s findings painted a deem picture of how America had become less competitive due to bureaucratic obstacles. In addition, it outlined specific steps needed to be taken by federal policymakers to ensure the nation’s position as a
prosperous member of the global economy of the 21st century. One of the recommendations in the report called for making the United States the most attractive setting in order to develop, recruit, and retain the best students, scientists, and engineers and explore options for promoting STEM endeavors around the nation.

STEM is the acronym for Science, Technology, Engineering, and Mathematics. Judith Ramaley, the former director of the National Science Foundation’s education and human-resources division, was attributed by many for being the first person to identify science, technology, engineering and mathematics curriculum as STEM in 2001 (Teaching Institute for Excellence in STEM, 2010). While the federal government has a long history of working with schools and universities, current STEM initiatives around the nation can be traced back to the launch of the Soviet satellite Sputnik in 1957 (Jolly 2009). “As a technical achievement, Sputnik caught the world’s attention and the American public off-guard,” and also garnered swift action from the U.S. federal government (NASA History Program Office, 2007, para. 4). Not long afterwards, Congress passed The National Defense and Education Act in 1958. Its goal, according to Passow (1957), was to offset the apparently more effective school system the Soviets had established and focus on establishing a system of developing young scientists and an elite generation of STEM workers. At the time, the primary use of NDEA funding was directed to those who were academically capable, especially in fields addressed by STEM, who were pursuing an undergraduate or graduate degree but lacked the finances for a higher education (Fleming, 1960). Times have not changed much since the 1960s.

Kuenzi (2008) indicates that in the educational, business, and political circles of the United States, there is still a concern that our schools are not preparing an adequate
number of potential scientists and employees in the areas of science, technology, engineering, and mathematics- STEM. Kuenzi states that a majority of high school and university students failed to reach proficiency in mathematics and the sciences. In addition, many students are taught by classroom teachers who do not have adequate knowledge of the subject matter or training. Students are not exposed to a rigorous science curriculum or hands-on experiences needed to in order to compete in a global economy or the highly competitive fields that are quickly emerging in the 21st century. When the U.S. is compared to other nations around world, the science and mathematics achievement of U.S. students and the rate of STEM level degrees attainment is not consistent with a nation considered by the world as a leader in scientific advances (Kuenzi, 2008). Recently, the Organization for Economic Cooperation and Development (2006) revealed that on an international assessment of 15-year-old students, our nation ranked 24th in science and 28th in mathematics. In addition, the OECD reported that the U.S. ranked 20th among all nations when considering the proportion of 24-year-olds who earned degrees in the natural sciences or engineering.

Atkinson (2006) states that our nation now deals with an ever-growing involvement of other countries pursuing a portion of the global market in technology-based economics and the ever increasing number of science and mathematics based degrees awarded in other countries. This data can be observed by studying the percentage of university students who earned their first degree in engineering and science (National Science Foundation Statistics, 2006). According to the NSFS, 53% of first degree university students in China were earned by those pursuing a degree in science and mathematics. Forty-one percent of first degree university students in South Korea were
earned by those pursuing a degree in science and mathematics. Thirty-five percent of first degree university students in Russia and Taiwan were earned by those pursuing a degree in science and mathematics. India, Japan, the European Union, and Canada all awarded degrees to over 20% of the first degree university students who earned a degree in science and mathematics. In the United States, only 18% of the first degree university students earned a degree in science and mathematics. The United States now lags behind much of the world when it comes to those pursuing degrees in the sciences and mathematics. To counter these disturbing statistics, one solution to the STEM shortage is to reaffirm our national commitment to STEM initiatives, increase the number of STEM programs in high schools, and expand the number of specialty math and science high schools (Atkinson, Hugo, Lundgren, Shapiro, & Thomas, 2007). In addition to addressing the problems associated with a shortage of STEM trained graduates, providing opportunities for both the male and female learner to engage in STEM instruction at the high school level may provide a reason for many students to remain in school. This begins with meaningful and relevant instruction so that the learner will understand the impact STEM will have in their daily activities and how it is already intertwined within their lives.

In order for learning to meaningful, it must be relevant (Piaget, 1969). Across the country, several programs have emerged to promote student success and STEM. To this extent, it is imperative that high school students understand the significance and relevance of STEM education and how it relates to their own future (Jones, 2008). In addition, Jones states that there are several avenues by which students can be kept interested in school and STEM. Internships, summer employment opportunities, and hands-on learning experiences in the classroom all facilitate high school students
understanding the relevance of the STEM curriculum, being a member of the 21\textsuperscript{st} century workforce, and remaining in school. Located in Maryland, the Anne Arundel County Public School System (2011) has put several interventions and programs in place to promote student success and STEM education. Students learn to compare and contrast different workplace environments so that they may discover areas of interest or skill. Students are taught to develop their academic, technical, and communication skills needed in the workplace. Students are taught that all companies have a workplace culture and about the job responsibilities of specific careers in society. Through a variety of activities, both in the classroom and a workplace environment, students come to have a thorough understanding of a specific profession.

According to Leggon and Pearson (2006), our nation’s STEM workforce has traditionally been comprised of non-Hispanic, Caucasian males. However, an important advantage of having a STEM force recruited from diverse backgrounds is that it improves and increases the value of science by bringing an array of different perspectives to bear on STEM endeavors—in terms of both research and application (Building Engineering and Science Talent 2004; Jackson 2004). One of the organizations taking the lead in this endeavor has been NASA. Of the 138 million dollars requested by NASA for STEM education programs in fiscal year 2012, 31 million dollars went to the Minority University Research Education Program (MUREP) (GovBudgets.com NASA Edition, 2011). MUREP’s aim is to support grants to advance NASA’s scientific and technological base through collaborative projects with historically African American colleges and universities and other minority universities. According to NASA’s Minority University Research and Education Program report (2010), the program supports several
initiatives. These programs include elementary and secondary grants to provide opportunities for students to prepare for studies in mathematics and science college programs. In addition, MUREP programs are used to increase the percentage of underrepresented minorities who earn degrees in STEM fields. MUREP also funds awards to universities, colleges, and school districts that strive to improve elementary and secondary STEM instruction.

STEM initiatives continue to be explored in the area of minority under representation in regards to STEM degrees earned. The data is alarming regarding minority STEM degrees completion rates. Amongst postsecondary degrees earned by minorities, the rate of earning a college or university degree for minority students lags behind that of their Caucasian peers. The U.S. Department of Education reported that only 23% of African American students and 42% of Hispanic students who began a postsecondary education in 1995 had earned a bachelor’s degree after five years, compared with 58% of Caucasian students (Cook & Cordova 2007). Unfortunately, in regards to the bachelor’s degree completion rate, the achievement gap is even greater in the STEM fields. Anderson and Kim (2008) report that almost 70% of Caucasian students earned their degree compared to only 42% of African American and 49% of Hispanics students.

Facing growing concerns regarding the gaps in postsecondary achievement by minority students in STEM fields, the Model Replication Institutions Project (MRI), a project put in place by the Institute for Higher Education Policy (IHEP), identified Minority Serving Institutions (MSIs) as key partners in order to improve the quality, accessibility, and diversity of the STEM educational system. The MRI currently works with Historically
Black Colleges and Universities (HBCUs), Hispanic-Serving Institutions (HSIs), and Tribal Colleges and Universities (TCUs) that are responsible for awarding nearly one-third of the STEM degrees earned by minority students (National Science Board, 2008). The institutions selected for the MRI projects were Alabama A&M University, Navajo Technical College, New York City College of Technology, Northwest Indian College, Paine College, Southwestern Indian Polytechnic Institute, Stillman College, Texas A&M University Corpus Christi, and Universidad del Turabo. The Institute for Higher Education Policy (2009) assessment of the project reported that the MRI teams used multiple qualitative and quantitative methodologies to evaluate the variety of STEM projects and their success rates. Many MRI teams used internally developed surveys to measure student progress and STEM career and graduate school activities. Some relied on national assessment surveys, including the National Survey of Student Engagement (NSSE), the Measure of Academic Proficiency and Progress (MAPP), and the Cooperative Institutional Research Program (CIRP). Several teams reported a need to improve data collection capabilities specific to STEM disciplines in order to determine exactly why students transferred to non-STEM majors or dropped out. The conclusion of the Institute for Higher Education Policy was

There is no single solution to the problem of underrepresentation of minority students in STEM disciplines, but the Model Institutions of Excellence (MIE) model offers numerous approaches to improve recruitment, retention, graduation, and matriculation into STEM graduate programs or careers. The ability to creatively adapt and respond to the specific needs and circumstances of an institution is essential to replicating the MIE model. (2009, p. 24)
Other such programs, specifically designed to target urban students, are offered by Morgan State University in Baltimore and Goddard Space Flight Center in Greenbelt, Maryland (Goddard Space Flight Center, 2011). The program is designed to increase student application of STEM skills and make them aware of STEM careers. In addition, a summer institute offers a two-week, residential program at Morgan State University. This program is also designed to give urban high school students the opportunity to discover and study the science and technologies of robot design, robot operation, and to encourage students to pursue STEM careers. In addition to growing the number of minority students pursuing STEM careers, many schools, universities, and government agencies have begun to increase the number of females pursuing STEM careers, as well.

While a variety of agencies explore strategies for increasing minority representation in STEM programs, there has been a growing consensus that more females are needed as well. The experience and backgrounds that females possess would undoubtedly bring new and fresh perspectives to STEM fields that have long been dominated by males. However, Hill, Corbett, and St. Rose (2010) indicate that females are still far less likely than males to pursue STEM related professions. Unfortunately, this divergence of females being less interested in science and math begins to surface at the middle school (National Science Foundation, Division of Science Resources Statistics, 2008). In addition, while encouraging numbers show that the percentage of females who take advanced science and mathematics courses in high school are now equal with males, this trend does not extend into post secondary STEM education (American Association of University Women, 2004). From possessing an enthusiasm for the sciences that surpasses that of their male counterparts in the elementary years of
school (Hanson, 2004), statistics indicate that only one-fourth of physics degrees are earned by females (National Science Foundation, 2007), interest in computer sciences is declining (Margolis & Fisher, 2002), and females earn only 14% of the degrees in electrical engineering (National Science Foundation, 2007). Coupled with what is now known about brain- and gender-based learning, many institutions and researchers are exploring ways for increasing female participation in STEM endeavors (Inter-University Consortium for Political and Social Research, 2009).

Research indicates that there are several methods that schools can use in order to reach the female learner. One component that can be effectively utilized is the after-school approach. According to the Afterschool Alliance (2009), there are over eight million students enrolled in after-school programs. One advantage of afterschool initiatives for females is that afterschool is very often not like school. The environment may allow for activities that promote inquiry based, hands-on learning experiences that allow the female learner to often identify with their instructor (Walker, Wahl, & Rivas, 2007). In addition, after school programs will offer students activities where they may exhibit greater buy-in and increased intrinsic motivation (Vandell et al., 2005).

Additional strategies and components that were identified were programs that contained supportive relationships, promoted a sense of belonging, exposure to positive models, values, and social norms, contained activities that made a real difference, promoted an active role in the program, provided leadership opportunities, and developed academic and social skills (Bouffard & Little, 2004, Gambone, Klem & Connel, 2002; National Research Council and Institute of Medicine, & Committee on Community-Level
These interventions and program components were shown to
be successful from preschool to graduate school for the female learner.

While the research may indicate the multitude of interventions that could be put in
place for the female learner in STEM vocations, there also exists a multitude of reasons
why this needs to be done. The reasons why these efforts must be undertaken involve
reversing traditional discrimination, access to post secondary occupations, access to
scientific and engineering occupations, equal salaries, and quality of life issues. Until
these trends are reversed, Valian (1999) states that the females learner will continue to
suffer from bias, stereotyping, and discrimination that results in a lack of advancement in
STEM fields. Nelson (2004) reports that in terms of academic positions, with the female
learner not pursing STEM degrees, men will continue to far outnumber women in all
STEM fields, but none more so than in research-oriented institutions. Males will
continue to outnumber females in terms of engineering professions (National Science
Foundation, 2004). In terms of closing the salary gap, female learners must have the
skills to access engineering and computer science degrees. According to the National
Science Foundation (2007) STEM degrees continue to show the greatest income potential
for graduates. Without closing that degree and income gap, salary and quality of life
disparities will continue to have lifelong implications for females’ earnings.

Summary

A thorough understanding and application of constructivism theory, brain-based
learning, and gender differences are critical if the graduation rates of male and female are
expected to increase and the dropout rate decline. Learners, through the careful design of
effective instruction, create their own learning and understanding. This learning happens
in an environment that should be designed with their needs in mind. These needs are going to be different based on the gender of the learner. If education policy makers at the federal, state and local levels, teacher preparation programs, school systems, and educators do not adjust how males and females are educated, millions of students will continue to withdraw and disengage from the nation’s public education system. Dismissal graduation rates will continue to be the norm. Millions of young males and females will continue to dropout of high school and be relegated to an almost second-class citizenship status that consists of a poor quality of life, limited access to health care and earning potential, increased incarceration rates, and little hope of improving their situation in life. Until instructional and behavioral approaches are adapted to meet the needs of the male and female learner, unusually high numbers of children will continue to be placed on medication so that they can adapt to the instructional and behavioral needs of the teacher. In addition, the practice of referring and placing male and female learners at disproportional rates, especially within certain minority or ethnic groups, within special education classrooms will continue.

Both physiological and bio-chemical processes result in males and females learning and behaving differently. These differences are repeated on a daily basis in classrooms across the nation on a daily basis. Hormones, maturity rates, and structural differences in the brains of both learners create differences that are both real and documented through both brain- and gender-based learning. These differences produce learning styles and personalities that are predictable when applied to the general population. It is critical that educators understanding their students, how they learn best, and what behavioral and classroom management practices will work best with particular
students. Educators must also understand and realize that they bring a socio-economic class based value system to their classroom. Everyone sees, interprets, understands, and reacts to the world around them based on their paradigm of the world. Payne (2005) states that educators generally have a paradigm rooted in American middle-class values. Payne identifies someone with middle class values as someone whose driving force for decision making is rooted in work, achievement, and education, prefers possessions and life’s trophies to relationships with others, possesses a world-view, is involved in politics, is driven to travel, and where conflict is resolved verbally, and physical fighting is regarded as beneath them. Until teachers embrace the reality that more and more children are coming to school with a very different world-view than theirs, these students will continued to be blamed for their own lack of success in a educational system rooted in a middle-class paradigm. Accountability, the middle class value rooted in achievement, has made the situation worse, but it has possibly provided a variety of solutions by mandating ongoing programs that distinguish how males and females learn and behave.

Never before have schools been more closely scrutinized than now. Schools earn labels and grades based on the achievement levels of their students. Accountability recognizes schools that are successful and exposes those that are not. Accountability systems established across the nation have forced states, the education industry, and educators to look for more creative and research-based solutions to the achievement problems with males and females. While many may argue that the accountability system is flawed because it most fails to take into account the connection between the learner’s achievement level and socio-economic status, never before has the nation been closer to
developing programs that may truly align gender, learning, and instructional and behavioral management techniques. Programs such as Response to Intervention offer educators an opportunity to understand and know their students like never before. Response to Intervention allows educators at gather and collect data on each individual student, make adjustments and apply interventions, and evaluate the effectiveness of those interventions. In addition to RIT, females and minorities can be guided and convinced that they can make contributions in the STEM areas. They must be convinced, using methods and conversations that will appeal to them, that their contributions are absolutely necessary in the STEM areas. In order for RTI and STEM initiatives to be effective, universities, state departments of educations, school districts, and schools must avoid practices of the past that have traditionally placed the majority of the workload on the classroom teacher. In order for the classroom teacher to be able to implement RTI and promote STEM in the classroom, teachers will need to be supported by instructional and behavioral specialists, university personnel, site-based administrators, district-level personnel, and agencies the likes of which has never been seen before. In order for no child to be left behind, professionals will need to meet the learner where he or she is and lead them to success.
CHAPTER III

MEDHODOLOGY

Introduction

Chapter III summarizes the procedures utilized by the researcher while conducting the study regarding the instructional techniques and behavioral management plans used with the male and female learner. The chapter contains information regarding the research design, research questions, and hypotheses that was used in this study. In addition, information regarding research participants, the survey instrument, procedures used regarding the gathering of data, and the analysis of the survey results are described in detail in this chapter.

Research Design

A correlational design was used for the purposes of this study. There are four major variables used in the study: the number of university or college courses teachers have taken in regards to the learning styles and behavioral patterns of males and females, the number of hours teachers have had in professional development and other informal workshops in regards to the learning styles and behavioral patterns of males and females, whether or not they felt their teacher preparation program addressed the learning styles and behavioral patterns of males and females, whether or not teachers plan instruction or adjust their classroom management plan based on what they know about how males and females learn and behave. All of the variables will be measured using a researcher designed survey instrument distributed middle school teachers in the participating school district. It will be used to scrutinize whether or not formal course work or informal training/professional development, or the lack there of, impact how teachers design their
lessons and manage their classrooms and their attitudes. Demographic data was collected regarding the participants of the study included, number of years teaching middle/junior high, participants’ gender, highest level of education, and area of certification— that includes whether or not the participant holds an elementary, secondary, or alternate certification or certification in a specific academic content area.

Participants

The participants of this study were selected from a public school system in southeast Louisiana. All participants were from middle schools that contain a sixth, seventh, or eighth grade. With the permission of the district superintendent and school principals, teachers in eleven schools containing sixth, seventh, or eighth grade participated in this study. All schools were public schools with no identified enrollment requirements. These teachers included regular and special education, gifted, physical education, and elective teachers. Regular, special, and gifted education teachers included math, reading, English, science and social studies. Elective teachers included family and consumer science, art, foreign languages, band, industrial technology, and agriscience teachers. The total number of teachers surveyed was 365.

Survey Instrument

For the purposes of this study, a researcher created survey instrument was used. The title of the instrument is Implementing Learning and Behavior Plans for Male and Female Learners. A copy of the survey instrument is included as Appendix A. It contains a total of 36 questions. The purpose of first four questions, questions 1, 2, 3, and 4, was to gather demographic information. This is followed by questions 5, 6, 7, and 8, that assessed both formal and informal levels of training teachers may have participated
in that involve the learning and behavioral patterns of male students. Questions 9, 10, 11, and 12 will assess both formal and informal levels of training teachers may have participated in that involve the learning and behavioral patterns of female students. The final 23 questions utilize a Likert Scale to determine teachers’ attitudes and beliefs towards the male and female learner in regards to learning and behavior. Questions about teachers’ attitudes involving the male’s learning pattern are questions 15, 16, 17, 21, 22, and 23. Questions about teachers’ attitudes involving the male’s behavioral patterns are questions 13, 14, 18, 19, 20, and 24. Questions about teachers’ attitudes involving the female’s learning pattern are questions 27, 28, 29, 33, 34, and 36. Questions about teachers’ attitudes involving the female’s behavioral patterns are questions 25, 26, 30, 31, 32, and 35. Validity of the instrument was determined by using a panel of experts who reviewed the survey instrument and offered the researcher feedback. The panel consisted of two school district principals, a Central Office instructional supervisor, and Central Office data coordinator. Each expert on the panel holds a PhD. degree and offered a variety of useful feedback to the researcher. The researcher conducted a reliability check using Cronbach's alpha for the questions pertaining to male learning patterns which obtained a Cronbach’s alpha of .775, the questions pertaining to male behavioral patterns obtained a Cronbach’s alpha of .780. The questions pertaining to female learning patterns obtained a Cronbach’s alpha of .724, and the questions pertaining to female behavioral patterns received a Cronbach’s alpha of .762. The pilot test was conducted utilizing middle school teachers at a school within the district. Following checks for validity and reliability, the researcher made the modifications needed.
Procedures

A request for a meeting with the district Assistant Superintendent was scheduled. A copy of this letter is included as Appendix B. During the meeting, an explanation of the research project and a copy of the survey instrument was provided to the Assistant Superintendent for approval. A copy of the Assistant Superintendent’s approval letter is included as Appendix C. Request to conduct research was submitted to The University of Southern Mississippi Institutional Review Board. A copy of the Board’s approval letter is included as Appendix D.

At a monthly principals’ meeting, an introduction to the research study, instructions, and survey packets were delivered to the principals. The packets for each school contained a sufficient number of surveys for all sixth-, seventh-, and eighth-grade regular, special, gifted, elective, or physical education teacher at each school. A letter was provided to each principal detailing the directions for distributing the questionnaire, estimated time the survey should take, and collection and returning procedures. A copy of this letter is included as Appendix E. Surveys were returned to the researcher utilizing the district’s internal courier system, picked-up at participating schools by the researcher, mailed, or collected at the next principals’ meeting.

To promote participation in the research project, the principals were offered a $100.00 Visa gift card. Those who participated had their names entered in a drawing. The $100.00 gift card was awarded to the principal whose name was randomly drawn. In addition, the teachers were also offered a $100.00 Visa gift card for their participation in completing the questionnaire. Those who participated had their names put in a drawing. The $100.00 gift card was given to the teacher whose name was randomly drawn.
A paper copy of a letter of introduction was provided for each participant of the research study. The letter explained to the teacher that they are a part of a research project intended to collect information concerning teachers’ attitudes regarding the male learner as part of a doctoral research project. A copy of this letter is included as Appendix F.

Research Questions

This study will be guided by the following research questions:

1. Are the gender specific learning styles and differences in behavior of males being addressed in teacher preparation programs and/or district-based professional development?

2. Are the gender specific learning styles and differences in behavior of females being addressed in teacher preparation programs and/or district-based professional development?

3. Do middle school teachers modify or initiate instructional strategies to increase males’ success rate in the classroom?

4. Do middle school teachers modify or initiate instructional strategies to increase females’ success rate in the classroom?

5. Do middle school teachers understand the behavioral patterns of the male learner and do they modify or initiate a classroom management program to best suite those differences?

6. Do middle school teachers understand the behavioral patterns of the female learner and do they modify or initiate a classroom management program to best suite those differences?
The hypotheses tested in this study are:

1. There will be no statistically significant relationship between the amounts of formal training addressing gender differences middle school educators receive and how they instruct the male learner.

2. There will be no statistically significant relationship between the amounts of formal training addressing gender differences middle school educators receive and how they instruct the female learner.

3. There will be no statistically significant relationship between the amount of formal training middle school educators receive and how they set-up their classroom management plans and discipline males.

4. There will be no statistically significant relationship between the amount of formal training middle school educators receive and how they set-up their classroom management plans and discipline females.

5. There will be no statistically significant relationship between the amount of informal training middle school educators receive and how they instruct males.

6. There will be no statistically significant relationship between the amount of informal training middle school educators receive and how they instruct females.

7. There will be no statistically significant relationship between the amount of informal training middle educators receive and how they set-up their classroom management plans and discipline males.
8. There will be no statistically significant relationship between the amount of informal training middle educators receive and how they set-up their classroom management plans and discipline females.

Descriptive reporting was used to describe the demographic information contained in the first four questions. This would include information regarding years of experience teaching, teacher gender, highest level of education, and area(s) of certification. A correlational test will be used to test all eight hypotheses. Questions 13 through 36 will utilize a Likert Scale. A Pearson’s $r$ with alpha set at .05 will be reported for questions 13 through 36 using SPSS computer analysis. A Pearson’s $r$ with alpha set at .05 will be utilized to determine if there is a correlation between a teacher’s formal/informal training level and the instructional techniques utilized in the classroom in regards to the male and female learner. In addition, a Pearson’s $r$ with alpha set at .05 will be utilized to determine if there is correlation between a teacher’s formal/informal training level and the classroom management plan that is implemented in the classroom in regards to the male and female learner. The researcher reviewed the data to determine if teachers with formal and/or informal training modify instruction and/or their classroom management plans. In addition, the researcher reviewed the data to determine if the teachers with no formal and/or informal training do not modify instruction and/or their classroom management plans. Information gathered regarding questions 13 through 36 was analyzed looking at means, medians, and modes regarding the responses from the teachers and how this may impact what is utilized in the classroom.
Summary

This was a correlational study to determine if there is a relationship between teachers’ level of university training and professional development regarding the learning and behavioral differences in males and females and the instructional and behavioral management techniques used in the classroom. Middle and junior high teachers in a school district in southeast Louisiana completed the researcher-constructed survey *Implementing Instructional and Behavior Plans for Male and Female Learners*. The survey asked questions about the amount of training teachers received both at the university and district level regarding the learning and behavioral differences of the male and female learner. The survey also asked questions related to the teachers’ instructional and behavioral strategies in regards to the learner’s gender. Information regarding years of teaching experience, teacher gender, education level, and area of certification were also gathered.
CHAPTER IV

RESULTS

Introduction

The purpose of this study was to determine whether or not educators receive sufficient preparation at the university level or training and professional development at the district and school level regarding the learning and behavioral differences between the male and female learner. Do educators recognize these gender-specific differences? In addition, do educators make adjustments in their instructional techniques in regards to the male and female learner? Furthermore, do educators make adjustments to their classroom behavioral management programs to take into account the maturity and behavioral differences in males and females? This study is intended to gather information in regards to whether or not formal course work, professional development, or training has a significant impact on gender specific instructional techniques educators use, and to what extent, while teaching male and female students. In addition, to what extent do educators modify or adjust their classroom management practices based on what they know about male and female learners?

Participants in the study completed the researcher created instrument titled *Implementing Instructional and Behavior Plans for Male and Female Learners* (Appendix A). Participants were asked to give information regarding their gender, years of teaching experience at the junior high level, level of highest degree earned, and area of certification. Participants also indicated the number of courses they had taken at the university or college level that pertained to the learning styles and behavioral patterns of males and females. They also indicated the number of professional development or
training hours they had received at the district or school level in regards to the learning styles and behavioral patterns of males and females. The 12 items of the survey instrument gathered this information. Questions 13 through 36 assessed the teachers’ beliefs and attitudes towards the degree to which they consider the gender of students when implementing classroom instructional and management plans, males and females lack of success in the areas of academics and discipline, the majority of conferences with the parents of male or female students, and they gender of most students who populate the special education classroom.

Descriptive Statistics

Questionnaires were sent to 365 public school teachers in 11 schools in a suburban school district located in southeast Louisiana. Sixth-, seventh-, and eighth-grade teachers were surveyed. Two hundred surveys (54.8%) from all eleven schools (100%) were returned in a timely manner and included in the analysis.

Of the two hundred questionnaires returned, two hundred teachers provided their gender, education level, and certification level.

Table 1

*Teacher Gender, Education, and Certification Level*

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>175</td>
<td>87.5%</td>
</tr>
<tr>
<td>Male</td>
<td>25</td>
<td>12.5%</td>
</tr>
</tbody>
</table>
Table 1 (continued).

<table>
<thead>
<tr>
<th>Education</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA/BS</td>
<td>126</td>
<td>63%</td>
</tr>
<tr>
<td>Masters</td>
<td>47</td>
<td>23.5%</td>
</tr>
<tr>
<td>Masters +30</td>
<td>22</td>
<td>11%</td>
</tr>
<tr>
<td>Specialists</td>
<td>3</td>
<td>1.5%</td>
</tr>
<tr>
<td>Ed.D.</td>
<td>2</td>
<td>1%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Area of Certification</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary</td>
<td>95</td>
<td>47.5%</td>
</tr>
<tr>
<td>Secondary</td>
<td>71</td>
<td>35.5%</td>
</tr>
<tr>
<td>Alternate</td>
<td>6</td>
<td>3%</td>
</tr>
<tr>
<td>Other (PE, Electives, etc)</td>
<td>28</td>
<td>14%</td>
</tr>
</tbody>
</table>

The table shows that the largest proportion of the teachers surveyed were female. A majority of teachers possessed either a bachelor’s or master’s degree with an elementary or secondary certification.

Of the 200 surveys that were returned, one hundred ninety nine reported years of experience. Years of experience ranged from one to 41 years. The mean number of years of experience was 14.98 years.
Table 2

*Years of Experience*

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 10</td>
<td>82</td>
<td>41%</td>
</tr>
<tr>
<td>11 - 20</td>
<td>68</td>
<td>34%</td>
</tr>
<tr>
<td>21 - 30</td>
<td>34</td>
<td>17%</td>
</tr>
<tr>
<td>31 - 41</td>
<td>15</td>
<td>7.5%</td>
</tr>
<tr>
<td>Missing</td>
<td>1</td>
<td>.5%</td>
</tr>
</tbody>
</table>

The table shows that nearly half (41%) of the teachers had between one and 10 years of experience, and that 150 (75%) teachers had between one and 20 years of experience.

Teachers were asked about the number of courses they had at the university or college level in regards to the learning styles of males or females, and the number of courses they had at the university or college level in regards to managing the behavior patterns of males or females. These included both instructional methods and differentiated instruction courses. The teachers also indicated the number of informal training or professional development hours they had received at the school or district level in regards to the learning styles of males or females and managing the behavioral patterns of males or females.
Table 3

*University or College Courses: Learning Styles of Males*

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 Courses</td>
<td>124</td>
</tr>
<tr>
<td>1 Course</td>
<td>44</td>
</tr>
<tr>
<td>2 – 3 Courses</td>
<td>24</td>
</tr>
<tr>
<td>4+ Courses</td>
<td>8</td>
</tr>
</tbody>
</table>

The table indicates that 168 (84%) teachers have had only a maximum of one course in the learning styles of males, and 32 (16%) teachers had two or more courses.

Teachers were surveyed about the number of hours of professional development they had received in regards to the learning styles of males. This would have included both school and district level training.

Table 4

*School or District Level Training: Learning Styles of Males*

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 Hours</td>
<td>109</td>
</tr>
<tr>
<td>1 – 3 Hours</td>
<td>59</td>
</tr>
<tr>
<td>4 – 6 Hours</td>
<td>20</td>
</tr>
<tr>
<td>7+</td>
<td>12</td>
</tr>
</tbody>
</table>
The table indicates that 168 teachers (84%) have had either no training or professional development or one to three hours at the school or district level in the learning styles of males, and that only 32 (16%) teachers have had four or more hours.

Teachers indicated the number of courses they had received at the university or college level in regards to the managing the behavioral patterns of males. This would have included both instructional methods and differentiated instruction courses.

Table 5

*University or College Courses: Managing the Behavioral Patterns of Males*

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 Courses</td>
<td>135</td>
</tr>
<tr>
<td>1 Course</td>
<td>45</td>
</tr>
<tr>
<td>2 – 3 Courses</td>
<td>16</td>
</tr>
<tr>
<td>4+ Courses</td>
<td>4</td>
</tr>
</tbody>
</table>

The table indicates that 180 (90%) teachers have had only a maximum of one course in the management of the behavioral patterns of males, and 20 (10%) teachers had two or more courses.

Teachers were surveyed about the number of hours of professional development they had received in regards to managing the behavioral patterns of males. This would have included both school and district level training.
Table 6

*School or District Level Training: Managing the Behavioral Patterns of Males*

<table>
<thead>
<tr>
<th>Hours</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 Hours</td>
<td>133</td>
<td>66.5%</td>
</tr>
<tr>
<td>1 – 3 Hours</td>
<td>44</td>
<td>22%</td>
</tr>
<tr>
<td>4 – 6 Hours</td>
<td>13</td>
<td>6.5%</td>
</tr>
<tr>
<td>7+ Hours</td>
<td>10</td>
<td>5%</td>
</tr>
</tbody>
</table>

The table indicates that 177 teachers (88.5%) have had either no training or professional development or one to three hours at the school or district level in managing the behavioral patterns of males, and that only 22 (11.5%) teachers have had four or more hours.

Along with indicating the number of courses they had taken and hours of professional development they had received in regards to the learning styles and managing the behavioral patterns of males, teachers were also asked to indicate the number of courses they had taken and hours of professional development they had received in regards to the learning styles and managing the behavioral patterns of females.
Table 7

*University or College Courses: Learning Styles of Females*

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 Course</td>
<td>128</td>
<td>64%</td>
</tr>
<tr>
<td>1 Course</td>
<td>45</td>
<td>22.5%</td>
</tr>
<tr>
<td>2 – 3 Courses</td>
<td>18</td>
<td>9%</td>
</tr>
<tr>
<td>4+ Courses</td>
<td>9</td>
<td>4.5%</td>
</tr>
</tbody>
</table>

The table indicates that 173 (86.5%) teachers have had only a maximum of one course in the management of the behavioral patterns of females, and 27 (13.5%) teachers had two or more courses.

Teachers were surveyed about the number of hours of professional development they had received in regards to the learning styles of females. This would have included both school and district level training.

Table 8

*School or District Level Training: Learning Styles of Females*

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 Hours</td>
<td>108</td>
<td>54%</td>
</tr>
<tr>
<td>1 – 3 Hours</td>
<td>65</td>
<td>32.5%</td>
</tr>
<tr>
<td>4 – 6 Hours</td>
<td>17</td>
<td>8.5%</td>
</tr>
<tr>
<td>7+</td>
<td>10</td>
<td>5%</td>
</tr>
</tbody>
</table>
The table indicates that 173 teachers (86.5%) have had either no training or professional development or one to three hours at the school or district level in managing the behavioral patterns of males, and 27 (13.5%) teachers have had four or more hours.

Along with the number university of college level courses teachers had taken in regards to learning styles of females, teachers also indicated the number of courses they had taken in regards to managing the behavior patterns of females.

Table 9

*University or College Courses: Managing the Behavioral Patterns of Females*

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 Courses</td>
<td>131</td>
</tr>
<tr>
<td>1 Course</td>
<td>46</td>
</tr>
<tr>
<td>2 – 3 Courses</td>
<td>18</td>
</tr>
<tr>
<td>4+ Courses</td>
<td>5</td>
</tr>
</tbody>
</table>

The table indicates that 177 (88.5%) teachers have had only a maximum of one course in the management of the behavioral patterns of females, and 23 (11.5%) teachers had two or more courses.

Teachers were also surveyed about the number of hours of professional development they had received in regards to managing the behavioral patterns of females. This would have included both school and district level training.
Table 10

School or District Level Training: Managing the Behavioral Patterns of Females

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 Hours</td>
<td>126</td>
</tr>
<tr>
<td>1 – 3 Hours</td>
<td>51</td>
</tr>
<tr>
<td>4 – 6 Hours</td>
<td>15</td>
</tr>
<tr>
<td>7+ Hours</td>
<td>8</td>
</tr>
</tbody>
</table>

The table indicates that 177 teachers (88.5%) have had either no training or one to three hours of professional development at the school or district level in managing the behavioral patterns of males, and that only 23 (11.5%) teachers have had four or more hours.

Table 11

Means and Standard Deviation for Formal Training

<table>
<thead>
<tr>
<th></th>
<th>Means</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formal Training that applies to the Learning Styles of Males</td>
<td>1.58</td>
<td>.85</td>
</tr>
<tr>
<td>Formal Training that applies Managing the Behavior Patterns of Males</td>
<td>1.45</td>
<td>.73</td>
</tr>
<tr>
<td>Formal Training that applies to the Learning Styles of Females</td>
<td>1.58</td>
<td>.85</td>
</tr>
<tr>
<td>Formal Training that applies Managing the Behavior Patterns of Females</td>
<td>1.58</td>
<td>.85</td>
</tr>
</tbody>
</table>

Note 1 (0 courses), 2 (1 course), 3 (2 – 3 courses), 4 (4+ courses)
The table indicates that most teachers have received the least amount of training in regards to the managing the behavioral patterns of males. Training that pertains to the learning styles of males and females and managing the behavior patterns of females were all equal.

Table 12

*Means and Standard Deviation for Informal Training*

<table>
<thead>
<tr>
<th>Means</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informal Training that applies to the Learning Styles of Males</td>
<td>1.68</td>
</tr>
<tr>
<td>Informal Training that applies Managing the Behavior Patterns of Males</td>
<td>1.50</td>
</tr>
<tr>
<td>Informal Training that applies to the Learning Styles of Females</td>
<td>1.64</td>
</tr>
<tr>
<td>Informal Training that applies Managing the Behavior Patterns of Females</td>
<td>1.52</td>
</tr>
</tbody>
</table>

Note 1 (0 Hours), 2 (1 – 3 Hours), 3 (4 – 6 Hours), 4 (7+ Hours)

The table indicates that most teachers have the most informal training and professional development at the school or district level in the learning styles of males. Respondents indicated that they have had the least amount of training in managing the behavior patterns of males.

After indicating the number of courses at the university of college level and hours of professional development regarding the learning styles and managing the behavioral patterns of males and females, teachers were asked to agree or disagree with twenty-three
questions about males and females academic performance, classroom and school yard
discipline, and populations in special education classrooms.

Table 13

*Teachers’ Perceptions Regarding Males and Females*

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>When planning my management plan for the classroom, I take into account the behavioral patterns of males.</td>
<td>3.83</td>
<td>1.43</td>
</tr>
<tr>
<td>I utilize a classroom behavioral management plan to address the specific needs and differences of males.</td>
<td>3.80</td>
<td>1.43</td>
</tr>
<tr>
<td>The male learner in my classroom represents the majority of those who struggle academically.</td>
<td>3.39</td>
<td>1.52</td>
</tr>
<tr>
<td>I believe male middle/junior high school students learn best when taught utilizing a variety of teaching methods.</td>
<td>5.36</td>
<td>.92</td>
</tr>
<tr>
<td>I believe male middle school/junior high students learn at their maximum potential when the teacher utilizes whole group instruction while delivering core instruction.</td>
<td>3.51</td>
<td>1.13</td>
</tr>
<tr>
<td>The male learner in my room represents the majority of daily discipline issues.</td>
<td>4.10</td>
<td>1.40</td>
</tr>
<tr>
<td>The male learner in my classroom represents the majority of students referred to the office due to disciplinary incidents.</td>
<td>4.20</td>
<td>1.42</td>
</tr>
<tr>
<td>The male learner experiences more negative discipline than females discipline issues while on the schoolyard.</td>
<td>4.11</td>
<td>1.22</td>
</tr>
<tr>
<td>The male learner experiences academic success less often than females in the classroom.</td>
<td>3.09</td>
<td>1.27</td>
</tr>
</tbody>
</table>
Table 13 (continued).

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A majority of special education classrooms are comprised of male students.</td>
<td>3.96</td>
<td>1.36</td>
</tr>
<tr>
<td>Most parent conferences regarding academic matters involve male students.</td>
<td>3.61</td>
<td>1.26</td>
</tr>
<tr>
<td>I meet with the parents of male learners more often than parents of female learners in regards to behavioral and disciplinary matters.</td>
<td>3.77</td>
<td>1.41</td>
</tr>
<tr>
<td>When planning my management plan for the classroom, I take into account the behavioral patterns of females.</td>
<td>3.61</td>
<td>1.38</td>
</tr>
<tr>
<td>I utilize a classroom behavioral management plan to address the specific needs and differences of females.</td>
<td>3.67</td>
<td>1.34</td>
</tr>
<tr>
<td>The female learner in my classroom represents the majority of those who struggle academically.</td>
<td>2.64</td>
<td>1.10</td>
</tr>
<tr>
<td>I believe the female middle/junior high students learn best when taught utilizing a variety of teaching methods.</td>
<td>5.28</td>
<td>.86</td>
</tr>
<tr>
<td>I believe female middle school/junior high students learn at their maximum potential when the teacher utilizes whole group instruction while delivering core instruction.</td>
<td>3.71</td>
<td>1.18</td>
</tr>
<tr>
<td>The female learner in my room represents the majority of the daily discipline issues.</td>
<td>2.42</td>
<td>1.02</td>
</tr>
<tr>
<td>The female learner in my classroom represents the majority of students referred to the office due to disciplinary incidents.</td>
<td>2.33</td>
<td>1.04</td>
</tr>
</tbody>
</table>
Table 13 (continued).

<table>
<thead>
<tr>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.46</td>
<td>1.00</td>
</tr>
</tbody>
</table>

The female learner experiences more negative discipline issues than the male learner while on the schoolyard.

The female learner experiences academic success less often than the male learner in the classroom.

Note 6 (strongly agree) – 1 (strongly disagree)

The table indicates that most teachers strongly agreed that both male and female middle/junior high students learn best when taught utilizing a variety of teaching methods. There was also moderate agreement amongst teachers that the male learner in their classroom represents the majority of daily discipline issues. There was also moderate agreement that the male learner represents the majority of students referred to the office due to disciplinary issues. Teachers most strongly disagreed that the female learner in their room represents the majority of daily discipline issues. Teachers also strongly disagreed that the female learner is their classroom represents the majority of students referred to the office due to disciplinary incidents. The table indicates that most teachers agreed that the male learner creates the majority of discipline problems in the classroom and is more often referred to the office due to disciplinary incidents. Teachers also agreed that the female learner is not the majority of discipline problems in the classroom and is not the most often referred to the office due to disciplinary incidents.

Analysis of Hypotheses

The first research question was stated as follows: Are their gender specific learning styles and differences in behavior of males being addressed in teachers
preparation programs and/or district-based professional development? It was addressed by the first and third hypotheses conducting a Pearson’s $r$ correlation for both hypotheses. The first hypothesis proposed that there is no statistically significant relationship between the amounts of formal training addressing gender differences middle school educators receive and how they instruct the male learner. The first null hypothesis was accepted, $r(199) = .101, p = .157$. There is no relationship. The third hypothesis proposed that there is no statistically significant relationship between the amount of formal training middle school educators receive and how they set-up their classroom management plans and discipline males. The third null hypothesis was accepted, $r = (199), = .077, p = .281$. There is no relationship.

The second research question was stated as follows: Are the gender specific learning styles and differences in behavior of females being addressed in teacher preparation programs and/or district-based professional development? It was addressed by the second and fourth hypotheses conducting a Pearson’s $r$ correlation for both hypotheses. The second hypothesis proposed that there is no statistically significant relationship between the amounts of formal training addressing gender differences middle school educators receive and how they instruct the female learner. The second null hypothesis was rejected, $r (199) = .170, p = .016$. This relationship is low and positive. The fourth hypothesis proposed that there would be no statically significant relationship between the amount of formal training middle school educators receive and how they set-up their classroom management plans and discipline females. The fourth null hypothesis was rejected, $r (199) = .287, p <= .001$. This relationship is moderate and positive. The
more formal training teachers received regarding the gender specific learning styles and differences in behavior of females, the more they utilized this training.

The third research question was stated as follows: Do middle school teachers modify or initiate instructional strategies to increase males’ success rate in the classroom? It was address by the first and fifth hypotheses conducting a Pearson’s $r$ correlation for both hypotheses. The first hypothesis proposed that there is no statistically significant relationship between the amounts of formal training addressing gender differences middle school educators receive and how they instruct the male learner. The first null hypothesis was accepted, $r (199) = .101, p = .157$. There is no relationship. The fifth hypothesis proposed that there is no statistically significant relationship between the amount of informal training middle school educators receive and how they instruct males. The fifth null hypotheses was accepted, $r (199) = -.003, p = .964$. There is no relationship.

The fourth research question was stated as follows: Do middle school teachers modify or initiate instructional strategies to increase females’ success rate in the classroom? The question was address by the second and sixth hypotheses conducting a Pearson’s $r$ correlation for both hypotheses. The second hypothesis proposed that there is no statistically significant relationship between the amounts of formal training addressing gender differences middle school educators receive and how they instruct the female learner. The second null hypothesis was rejected, $r (199) = .170, p = .016$. This relationship is low and positive. The sixth hypothesis proposed that there is no statistically significant relationship between the amount of informal training middle school educators receive and how they instruct females. The sixth null hypothesis was accepted, $r (199) = .131, p = .065$. There was no relationship.
The fifth research question was stated as follows: Do middle school teachers understand the behavioral patterns of the male learner and do they modify or initiate a classroom management program to best suite those differences? The question was addressed by the third and seventh hypotheses conducting a Pearson’s $r$ correlation for both hypotheses. The third hypothesis proposed that there is no statistically significant relationship between the amount of formal training middle school educators receive and how they set-up their classroom management plans and discipline males. The third null hypothesis was accepted, $r = (199)$, $= .077$, $p = .281$. There is no relationship. The seventh hypotheses proposed that there is no statistically significant relationship between the amount of informal training middle school educators receive and how they set-up their classroom management plans and discipline males. The seventh null hypothesis was accepted, $r = (199)$, $p = .664$. There is no relationship.

The sixth research question was stated as follows: Do middle school teachers understand the behavioral patterns of the female learner and do they modify or initiate a classroom management program to best suite those differences? The question was addressed by the fourth and eighth hypotheses conducting a Pearson’s $r$ correlation for both hypotheses. The fourth null hypothesis was rejected, $r (199) = .287$, $p <= .001$. This relationship is moderate. The eighth null hypothesis was rejected, $r (199) = .266$, $p <= .001$. This relationship is moderate. The teachers’ formal and informal training teachers receive regarding the behavioral patterns of the female learner indicates initiate classroom management programs that best suite those differences.
Summary

This study tested six research questions. The first research question asked if there was a relationship between gender specific learning styles and differences in behavior of the male learner and teacher preparation programs and professional development. This research question was tested through hypotheses one and three. Both stated there was no relationship between formal training that addressed gender differences in the male learner and how they instruct, set-up their classroom management plans, and discipline male students. Both hypotheses were accepted.

The second research question asked if there was a relationship between gender specific learning styles and differences in behavior of the female learner and teacher preparation programs and professional development. This research question was tested through hypotheses two and four. Both stated there was no relationship between formal training that addressed gender differences in the female learner and how they instruct, set-up their classroom management plans, and discipline female students. Both hypotheses were rejected.

The third research question asked if middle school teachers modify or initiate instructional strategies to increase males’ success rate in the classroom. This research question was tested hypotheses one and five. The first hypotheses stated there was no relationship in formal training in the learning styles of males and how they instruct their students. The fifth hypotheses stated that there was no relationship in informal training in the learning styles of males and how they instruct their students. Both hypotheses were accepted.
The fourth research question asked if middle school teachers modify or initiate instructional strategies to increase females’ success rate in the classroom. This research question was tested through hypotheses two and six. The second hypotheses stated there was no relationship in formal training in the learning styles of females and how they instruct their students. The sixth hypotheses stated that there was no relationship in informal training in the learning styles of females and how they instruct their students. Hypotheses two was rejected, and hypotheses six was accepted.

The fifth research question asked if middle school teachers understand the behavioral patterns of males and modify or initiate classroom management programs to suite those differences. This research question was tested through the third and seventh hypotheses. Both hypotheses stated that there was no relationship between the formal and informal training receive and how the set-up their classroom management plans and discipline males. Both hypotheses three and seven were accepted.

The sixth research question asked if middle school teachers understand the behavioral patterns of females and modify or initiate classroom management programs to suite those differences. This research question was tested through the fourth and eighth hypotheses. Both hypotheses stated that there was no relationship between the formal and informal training receive and how the set-up their classroom management plans and discipline females. Both hypotheses four and eight were rejected.
CHAPTER V
DISCUSSION

Introduction

Chapter V discusses the results of this research study. It provides the conclusions of the research, the implications regarding recommendations for policy and practice, and the limitations of the study. The chapter concludes with recommendations for future research.

Conclusions and Discussion

The purpose of this study was to determine whether or not educators receive sufficient preparation at the university level or training and professional development at the district and school level regarding the learning and behavioral differences between the male and female learner. Do educators recognize these gender-specific differences? In addition, do educators make adjustments in their instructional techniques in regards to the male and female learner? Furthermore, do educators make adjustments to their classroom behavioral management programs to take into account the maturity and behavioral differences in males and females? This study is intended to gather information in regards to whether or not formal course work, professional development, or training has a significant impact on gender specific instructional techniques educators use, and to what extent, while teaching male and female students. In addition, to what extent do educators modify or adjust their classroom management practices based on what they know about male and female learners?

The first research question was stated as follows: Are their gender specific learning styles and differences in behavior of males being addressed in teacher
preparation programs and/or district-based professional development? It was addressed by the first and third hypotheses that stated:

1. There will be no statistically significant relationship between the amounts of formal training addressing gender differences middle school educators receive and how they instruct the male learner.

3. There will be no statistically significant relationship between the amount of formal training middle school educators receive and how they set-up their classroom management plans and discipline males.

The first and third hypothesis tested whether there was a relationship between the amounts of formal training addressing gender differences middle school educators receive and how they instruct or set-up their classroom management plans and discipline the male learner. For the purposes of this study, formal training was identified as courses taken at the university or college level. Both null hypotheses was accepted. No relationship was found between the amounts of formal training addressing gender difference middle school educators receive and how they instruct or set-up their classroom management plans and discipline the male learner.

No related research previously conducted could be found to indicate whether a relationship might be expected. The theoretical framework supports the finding that teachers do not adjust learning or management to meet the needs of the male learner.

Dewey’s recurrent themes of Constructivism found in *My Pedagogic Creed* (Dewey & Small, 1897) and *Experience and Education* (Dewey, 1938) purposed that education and learning are dynamic, social, and interactive experiences. The school is a social institution through which students’ views of the world are created. Dewey believed that
students succeed in a classroom environment when they are allowed to experience and interact with the curriculum. In addition, students would be more successful when teachers design learning experiences and establish behavioral expectations based upon the needs of the learner. More successful school experiences can be achieved for students when the foundations of the classroom environments are built upon the requirements of the student. Unfortunately, many teachers today do not have a thorough understanding of Constructivism and its implications for the classroom and success of their students. It is incorrectly considered a method of teaching and learning instead of a philosophy of how individuals create their own experiences and understandings of the world around them. This has critical implications on what occurs in the classroom.

The second research question was stated as follows: Are the gender specific learning styles and differences in behavior of females being addressed in teacher preparation programs and/or district-based professional development? It was address by the second and fourth hypotheses.

2. There will be no statistically significant relationship between the amounts of formal training addressing gender differences middle school educators receive and how they instruct the female learner.

4. There will be no statistically significant relationship between the amount of formal training middle school educators receive and how they set-up their classroom management plans and discipline females.

The second and fourth hypothesis tested whether there was a relationship between the amounts of formal training addressing gender differences middle school educators receive and how they instruct the female learner and set-up their classroom management
plans and discipline females. Both null hypotheses were rejected. The relationship between the amounts of formal training addressing gender differences middle school educators receive and how they instruct the female learner is low and positive. The relationship between the amount of formal training middle school educators receive and how they set-up their classroom management plans and discipline females is moderate and positive. The results seem to indicate that the more formal training teachers received regarding the gender specific learning styles and differences in behavior of females, the more they utilized this training.

This presence of the relationships may be due to several unrelated factors. Male and female brains have physically different structures. The brains of males and females also utilize many different chemicals. As a result, Kovalik (2008) states that males and females learn, behave, process information, and view the world differently. Sax (2001) states that even as early as kindergarten, males’ brains are already one to two years less mature than females’ brains of the same age. This often translates into females that excel in the reading, writing, and mathematics processes found in the traditional classroom. The teacher must be cautious of assuming that males may be less interested in reading, writing, or mathematics than females. Instead, Sax points out that brain-based learning suggests that delays in males may simply be a matter of the natural growth and maturity process that takes place in young male’s brain. When females are instructed utilizing strategies that take advantage of their more mature brain development, it has the potential to create schools where less females struggle academically, labeled discipline problems, recommended for medication, or referred to the special education classroom.
In addition, the presence of the relationship may be due to the number of females in the field of education. During the 2007 – 2008 school year, 76% of public school educators were females (National Center for Education Statistics, 2010). Female educators bring their own cultural beliefs and paradigm of the world into the classroom. Gandara and Bial (2001) state that through the lens of their beliefs, educators assess students’ abilities, judge their potential for achievement, and develop a theory regarding the type of discipline needed for the student. Female educators obviously have more in common with their female students, and rooted in their paradigm, will often design learning experiences and classroom environments that may have elements that favor the female learner.

The third research question was stated as follows: Do middle school teachers modify or initiate instructional strategies to increase males’ success rate in the classroom? It was addressed by the first and fifth hypotheses.

1. There will be no statistically significant relationship between the amounts of formal training addressing gender differences middle school educators receive and how they instruct the male learner.

5. There will be no statistically significant relationship between the amount of informal training middle school educators receive and how they instruct males.

The first and fifth hypotheses tested whether there was a relationship between the amounts of formal and informal training addressing gender differences middle school educators receive and how they instruct males. For the purposes of this study, formal training indicated the number of courses taken at the university or college level, and
informal training was indicated by the number of hours of professional development taken at the district or school level. Both null hypotheses were accepted. No relationship was found between the amounts of formal and informal training addressing gender difference middle school educators receive and how they instruct males.

No related research previously conducted could be found to indicate whether a relationship might be expected. However, the data collected through this study did indicate that teachers do not receive a great deal of formal or informal training regarding the gender differences of learning and behavior in males. The results of the study indicate that 84% of the teachers surveyed had a maximum of one course and 88.5% of the teachers surveyed had a maximum of three hours of professional development in the learning styles of males. In addition, teachers may not be translating the formal course work learner at the university and college level and the time spent in professional development at the district or school level regarding instructional methods and best practices regarding the learning styles of males into classroom practices.

The fourth research question was stated as follows: Do middle school teachers modify or initiate instructional strategies to increase females’ success rate in the classroom? The question was addressed by the second and sixth hypotheses.

2. There will be no statistically significant relationship between the amounts of formal training addressing gender differences middle school educators receive and how they instruct the female learner.

6. There will be no statistically significant relationship between the amount of informal training middle school educators receive and how they instruct females.
The second and sixth hypotheses tested whether there was a relationship between the amounts of formal and informal training addressing gender differences middle school educators receive and how they instruct females. For the purposes of this study, formal training indicated the number of courses taken at the university or college level, and informal training was indicated by the number of hours taken at the district or school level. The second null hypothesis was rejected. The relationship between the amounts of formal training addressing gender differences middle school educators receive and how they instruct the female learner is low and positive. The sixth null hypothesis was accepted. There was no relationship.

The presence of a relationship with the second hypothesis may be due to the fact that teachers' formal training experience may provide them with university learning experiences that reinforce how they are more likely to teach. In a profession that is overwhelmingly comprised of females, especially during the first beginning years of school, the female learner is surrounded and guided by adult individuals with belief systems and gender expectations they are familiar and comfortable with (Kantrowitz, 2010). The female learner is placed in an environment and taught by an individual that has more in common with the learner’s own belief system. As a result, it can be expected that they will excel academically and exhibit more behaviors deemed beneficial in the school environment (Medina et al., 2008).

The lack of a relationship with the sixth hypotheses may indicate that teachers are not receiving enough professional development regarding the learning styles of females. Research study respondents indicated that 86.5% only had as much as three hours of professional development or training regarding the learning styles of females. While
teachers indicate the training they receive in formal settings does translate into how they instruct the female learner, there is no indication that the training continues at the district or school level following their formal training. The results surrounding research question four could provide a starting point for future research to further examine the relationship.

The fifth research question was stated as follows: Do middle school teachers understand the behavioral patterns of the male learner and do they modify or initiate a classroom management program to best suite those differences? The question was addressed by the third and seventh hypotheses.

3. There will be no statistically significant relationship between the amount of formal training middle school educators receive and how they set-up their classroom management plans and discipline males.

7. There will be no statistically significant relationship between the amount of informal training middle educators receive and how they set-up their classroom management plans and discipline males.

The third and seventh hypothesis tested whether there was a relationship between the amounts of formal and informal training educators receive and how they set-up their classroom management plans and discipline males. For the purposes of this study, formal training was identified as courses taken at the university or college level. Both null hypotheses were accepted. No relationship was found between the amounts of formal and informal training addressing educators receive and how they set-up their classroom management plans and discipline males. However, data collected indicates that educators are not adjusting their classroom management plans and how they discipline males. This has significant consequences for many of the learners found in classrooms across the
nation. Synder and Dillow (2010) indicate that this would mainly include learners that are male, from a minority population, a special education student, or learners who live in poverty. In addition, in terms of discipline, Sax (2005) states that males and minority populations are at much greater risk when it comes to suffering the consequences to what is considered bad behavior within the walls of the classroom—behavior that is often natural for the male learner. Sax identifies noise, gross motor movement, attention seeking, and talking/conversation as natural male learner behavior identified most often as negative school behavior. Pollack (1998) states that the male learner around the nation is disciplined, on average, five to ten times more often than girls. Gandara and Bial (2001) indicate that these practices of behavioral accountability and discipline are rooted in the many educators’ belief and cultural expectations that that if children are not held responsible, then they will never learn to be dependable adults.

The sixth research question was stated as follows: Do middle school teachers understand the behavioral patterns of the female learner and do they modify or initiate a classroom management program to best suite those differences? The question was addressed by the fourth and eighth hypotheses.

4. There will be no statistically significant relationship between the amount of formal training middle school educators receive and how they set-up their classroom management plans and discipline females.

8. There will be no statistically significant relationship between the amount of informal training middle educators receive and how they set-up their classroom management plans and discipline females.
The fourth and eighth hypotheses tested whether there was a relationship between the amounts of formal and informal training educators receive and how they set-up their classroom management plans and discipline females. Both null hypotheses were rejected. Both relationships were moderate.

The relationship indicates that the formal and informal training they receive and how they set-up their classroom management plans and discipline females does have an impact on their classroom practices. Again, this may be an indication of the value system of educators and the behavior that is deemed more favorable in the school setting. Most learning experiences throughout the school day involve extensive reading, sustained attention to tasks, and students who typically accomplish their work as an individual with little to no cooperative effort with others. However, Smith and Wilhelm (2002) state that it is through physical movement that many learners accomplish most of their learning. Primary school and early grades are more busy and active than later elementary, middle or junior high grades. Rumberger and Lim (2008) state that it is during these latter years of schooling, when there is less movement and less variety of instruction, that female learners begin to experience more success and less discipline and are set on a path that often leads to less dropping out and higher graduation rates.

Recommendations for Policy and Practice

The researcher created survey instrument, *Implementing Instructional and Behavioral Plans for Male and Female Learners*, found statistically significant relationships in three of the hypotheses. Hypotheses 2 and 4 pertained to the formal training teachers receive at the university or college level and implementing instructional and behavioral management plans related to the gender specific needs of the female
Hypothesis eight pertained to the informal training middle educators receive and how they set-up their classroom management plans and discipline females.

Hypothesis two had a low correlation, and hypothesis four and eight had moderate correlations. This research seems to indicate that classroom instructional techniques and student behavioral management plans should take into account how both genders learn and behave differently. This is relevant and important data for school district superintendents, school administrators, and classroom teachers. Differences between males and females should be expected and accounted for in both instructional and behavioral policy and practice. School boards and systems across the nations should ensure that school administrators and teachers have instructional and behavioral management plans that take into account these differences. Researchers have found that during the past thirty years, in the field of brain-based development, the reason why males and females learn and behave differently is largely due to the growing, development, and maturing processes of the brain (Kovalik, 2008). Training at the university or college level seems to have an impact on teacher practices in the classroom. Yet, as indicated by the results of the study, 84% of teachers replied that they had at least one course in the learning styles of males, and 86.5% of teachers indicated that they had at least one course on the learning styles of females. In addition, 90% of respondents indicated that they had only one course in managing the behavioral patterns of males, and the 88.5% of respondents had indicated that they had only one course in managing the behavioral patterns of females.

Additional findings in the research indicated a great deal of agreement that both male and female students learn best when taught utilizing a variety of teaching methods.
This may be due to appealing to the variety of learning processes when taught using a variety of methods. However, in classrooms across the country, males and females are overwhelming taught using similar instructional practices without regard to gender differences. Mechanisms for job-embedded professional development regarding instructional techniques should occur at both the school and district level. Felder (1996) states that by keeping gender learning differences in mind, educators can increase achievement for both males and females. Medina (2008) states that learners from across a diverse spectrum of populations populate today’s classrooms and are expected to excel academically in environments that are often created that may stand in opposition to how they operate or the value system brought from the home environment. Educators must realize that their view the world, schoolyard, and classroom are limited to their experiences and world paradigm. By expanding their understanding of the value and culture systems of the diverse populations in their classrooms, educators may better understand how males and females learn differently than those from similar social, economic, and cultural backgrounds, and why males and females behave differently who are from different social, economic, and cultural backgrounds.

Additionally, the findings of the research indicated a great deal of agreement that the male learner represents the majority of daily discipline issues and the majority of students referred to the office due to disciplinary incidents. Not surprisingly, another finding of the research indicated a great deal of agreement that the female learner does not represent the majority of daily discipline issues and is not the majority of students referred to the office due to discipline incidents. Based on previous research, these results were not unexpected. The findings seem to support research that indicates more
than an estimated one million high school students will fail to graduate this coming school year from across the nation and the District of Columbia, and a large percentage of these high school dropouts will consist of males and minorities (EPE Research Center, 2010). Additional research indicates that as many as 35% of dropouts reported that they had dropped out of high school because they were struggling and needed more assistance (Bridgeland et al., 2006). Unfortunately, the Alliance for Excellent Education (2009) reported that during the course of their lifetime, high school dropouts are three times more likely to enter the legal system, and ultimately become imprisoned, than high school graduates. Synder and Dillow (2010) state that data continues to grow and many educators and policy makers are beginning to realize that the some learners may be at a behavioral disadvantage based on how normal and acceptable behavior is defined in the classroom. Research conducted by Synder and Dillow indicate this would mainly include learners that are male, from minority populations, special education students, or learners who live in poverty.

This research seems to encourage that universities and colleges should begin to narrow the focus of their traditional instructional and behavior management methods courses. Future teachers and administrators should complete coursework that specifically addresses male and female brain development, gender specific learning styles, and learning preferences. In addition, future teachers and administrators should also complete coursework that will allow them to best recognize and manage the differences in behaviors between the two genders, gain a deeper understanding of the natural behaviors of both genders, and design school and classroom experiences and environments with these differences in mind. This will create school environments that
recognize, encourage, and embrace the differences between the two genders. These differences will be seen as strengths and opportunities for both, greater prospects of exploring the unique nature of our students, and increase the graduation rate, decrease the dropout rate, and radically change the lives of an entire generation of students. These courses should be in required at all degree levels so that professional educators may stay knowledgeable of current research and improve their working understanding of the male and female learner. Universities, local school systems, school administrators, and teachers must redefine how instruction is delivered and behavioral expectations established for both genders.

In addition, school superintendents and administrators must continue the professional development and school level training regarding the learning and behavioral differences in males and females. When educators are able to move beyond seeing a student’s behavior as being mostly a sheer act of choice, but behavior that is largely guided by gender-embedded processes, bio-chemical reactions, and actions that may have served that individual well in other locations unlike the artificial environment that is now called the classroom. The area of study related to brain-based learning has provided sufficient evidence that males and females learn and behave differently, largely, based on functions the these differences that should be seen as strengths for both genders, and classrooms must take into account these differences. Otherwise, patterns of failure, dropping out, and the over medication of our children so that they can be successful in a place that was built for them will continue to repeat themselves. Enough is known now about the differences in males and females, enough in known now about the tragic cost of failure, for those who can make a difference to make a difference.
Limitations

The generalizability of the findings from this research was limited by the following components of the study:

1. The size of the population used was limited. There were three hundred sixty-five possible participants with two hundred actual participants. Increasing the number of participants may provide different results.

2. It should not be assumed that the results of this study could be generalized to other school districts. This study was conducted in a single school district located in southeast Louisiana.

3. This study examined middle and junior high school teachers. It should not be assumed that the results could be generalized to other teacher populations.

4. This study did not distinguish the different sub-populations within both genders when teachers were asked to complete survey items. This would include race, ethnicity, or social-economic status. Caution should be taken when attempting to generalize to specific populations of students.

Recommendations for Future Research

There are a few recommendations for future research. The first recommendation concerns the survey instrument. Data collected indicated that very few teachers had taken much formal course work regarding the learning styles and behavioral patterns of males and females. In addition, data collected indicated that very few teachers had received more than one to three hours of informal training or professional development regarding the learning styles and behavioral patterns of males and females. These were questions five through twelve. These questions may represent the actual experiences of
the survey respondents. However, it may also indicate that the wording of the questions may have confused participants or caused a lack of understanding regarding the information the questions were seeking. The researcher utilized the panel of experts, feedback from the Proposal Defense, and results from the pilot study to modify the wording of the questions to gather more information that would more accurately reflect the experiences of the participants. Rewording of the questions following the pilot study did increase the number of higher responses recorded. More useful data could be collected regarding the impact of formal and informal training had more teachers indicated more formal courses or informal training.

Future research could involve exploring in more detail the impact of formal and informal training teachers receive on one gender. There were several correlations found in this research study. This would seem to indicate that there is a connection between formal coursework and actions teachers take in the classroom. Further exploring the connection between formal coursework and teachers’ behaviors in the classroom may bring to light how to best prepare future teachers and administrators and the importance of designing effective preparation programs that would benefit future educators.

Future research could involve the agreement that was found by the survey instrument regarding males representing the majority of daily discipline issues and the majority of students referred to the office due to disciplinary incidents. In addition, future research could involve the agreement that was found by the survey instrument regarding females not representing the majority of daily discipline issues and the majority of students referred to the office due to disciplinary incidents. Do these agreements exist in other school districts across the nation? If so, how will school boards, educators, and
policymakers best design schools so that instructional practices, behavioral management plans, and district discipline policies recognizes the differences in males and females.

Lastly, validation studies and generalizability studies should be conducted. Additional research is needed to validate the results of this study. If validation is confirmed, additional research could be conducted to examine the benefits of increasing university coursework and professional development opportunities regarding the learning and behavioral needs of the male and female learner. Additional research should also be conducted in other states or nationally to validate the results of this research study outside of Louisiana.

Summary

This study produced several statistically significant findings. There was a low correlation discovered between the number of formal courses teachers took regarding the learning styles of females and teachers’ attitudes towards the female learner as measured by the research instrument. There was a moderate correlation between number of formal courses teachers took regarding managing the behavior patterns of females and teachers’ attitudes towards the female learner as measured by the research instrument. There was a moderate correlation between the amount of informal training middle educators receive and how they set-up their classroom management plans and discipline females. This would seem to indicate a relationship between formal course work and professional development and learning styles and managing behaviors.

In addition, there was strong agreement between teachers that both male and female learners learn best when taught utilizing a variety of teaching methods. This would seem to indicate that teacher and administrator preparation programs and ongoing
professional development should focus a great deal on, not only on strategies of effective
teaching, but the differences in how males and females learn and methods to best meet
the needs of both genders. There was also strong agreement between teachers that the
male learner represents the majority of daily discipline issues and that the male learner
represents the majority of students referred to the office due to disciplinary incidents.
University coursework and ongoing professional development should begin to reevaluate
the behavioral patterns of males, train teachers and administrators regarding this issue,
and provide opportunities throughout the male’s learning experience for greater success
in terms of discipline. Schools are operated and embrace a value system that puts the
male learner at a disadvantage, leads to higher incidents of being labeled ADD and
placed on medication, classified as special education and moved to a non-traditional
classroom, labeled as a discipline problem, resulting in higher dropout rates.
Interestingly enough, there was also strong agreement between teachers that the female
learner does not represent the majority of daily discipline issues and that the female
learner does not represent the majority of students referred to the office due to
disciplinary incidents. Thus, females are generally more successful at school, less often
labeled as ADD and placed on medication, less likely to be classified as a special
education student and kept in the regular education class, less likely to be labeled as a
discipline problem, and more likely to graduate.

It is hoped that these findings will have an impact. This research study could
influence policymakers to examine additional teacher and administrator preparation
elements that would be useful in preparing future teachers and school leaders to be more
effective and increase the achievement of all students, regardless of gender. Educators
know that learning is a dynamic process that is constantly taking place. If this research can be validated, teachers and administrators may recognize that males and females learn and behave differently across all grade and developmental levels. If this research is found to be generalizable and valid, it could have a positive impact in the practice of school leadership.
APPENDIX A

IMPLEMENTING INSTRUCTIONAL AND BEHAVIOR PLANS FOR MALE AND FEMALE LEARNERS

Survey Instrument

1. Please indicate your gender ______ Female ______ Male

2. How many years of teaching experience (middle/junior high) do you have? ______

3. What is your highest level of education? (circle one)
   BA/BS    Masters    Masters +30    Specialist    Ed.D.    Ph.D

4. I am currently certified in the following areas. Check all that apply.
   ______ Elementary Education ______ Secondary Certified
   ______ Alternate Certification ______ Other (PE, Health, Electives, etc)

*Research indicates that most professional educators have little training in the area of how differently the male and female learner learn and behave. In light of this information, please answer the following questions truthfully and to the best of your knowledge.*

5. I have had formal training in the learning styles of males within the past three years at the university or college level.
   ______ 0 courses ______ 1 course ______ 2 – 3 courses ______ 4+ courses

6. I have had informal training/professional development in the learning styles of males within the past three years. (Examples would include district or school-based sessions.)
   ______ 0 Hours ______ 1 – 3 Hours ______ 4 – 6 Hours ______ 7+ Hours

7. I have had formal training in managing the behavior patterns of males within the past three years at the university or college level.
   ______ 0 courses ______ 1 course ______ 2 – 3 courses ______ 4+ courses

8. I have had informal training/professional development in managing the behavior patterns of males within the past three years at the university or college level.
   ______ 0 Hours ______ 1 - 3 Hours ______ 4 – 6 Hours ______ 7+ courses

9. I have had formal training in the learning styles of females within the past three years at the university or college level.
10. I have had informal training/professional development in the learning styles of females within the past three years. (Examples would include district or school-based sessions.)

   _____ 0 courses   _____ 1 course   _____ 2 – 3 courses   _____ 4+ courses

   _____ 0 Hours   _____ 1 – 3 Hours   _____ 4 – 6 Hours   _____ 7+ Hours

11. I have had formal training in managing the behavior patterns of females within the past three years at the university or college level.

   _____ 0 courses   _____ 1 course   _____ 2 – 3 courses   _____ 4+ courses

12. I have had informal training/professional development in managing the behavior patterns of females within the past three years at the university or college level.

   _____ 0 Hours   _____ 1 - 3 Hours   _____ 4 – 6 Hours   _____ 7+ courses

Please use the following Likert Scale to answer the following statements.

   6 = Strongly Agree    4 = Somewhat Agree    2 = Disagree
   5 = Agree             3 = Somewhat Disagree   1 = Strongly Disagree

13. As a teacher, when planning my management plan for the classroom, I take into account the behavioral patterns of males. (Examples: This would include behavioral steps and consequences that specifically address the male learner.)

   6  5  4  3  2  1

14. I utilize a classroom behavioral management plan to address the specific needs and differences of males. (Evidence would suggest that an equal number of males and females experience discipline consequences in the class or school.)

   6  5  4  3  2  1

15. The male learner in my classroom represents the majority of those who struggle academically.

   6  5  4  3  2  1

16. I believe male middle/junior high students learning best when taught utilizing a variety of teaching methods.

   6  5  4  3  2  1
17. I believe male middle school/junior high students learn at their maximum potential when the teacher utilizes whole group instruction while delivering core instruction.

17. The male learner in my room represents the majority of daily discipline issues.

19. The male learner in my classroom represents the majority of students referred to the office due to disciplinary incidents.

20. The male learner experiences more negative discipline issues while on the school yard.

21. The male learner experiences academic success less often in the classroom.

22. A majority of special education classrooms are comprised of male learners.

23. Most parent conferences regarding academic matter involve male students.

24. I meet with the parents of male learners more often in regards to behavioral and disciplinary matters.

25. When planning my management plan for the classroom, I take into account the behavioral patterns of females (Examples: This would include behavioral steps and consequences that specifically address the female learner.)

26. I utilize a classroom behavioral management plan to address the specific needs and differences of females. (Evidence would suggest that an equal number of males and females experience discipline consequences in the class or school.)
27. The female learner in my classroom represents the majority of those who struggle academically.

28. I believe female middle/junior high students learn best when taught utilizing a variety of teaching methods.

29. I believe female middle school/junior high students learn at their maximum potential when the teacher utilizes whole group instruction while delivering core instruction.

30. The female learner in my room represents the majority of daily discipline issues.

31. The female learner in my classroom represents the majority of students referred to the office due to disciplinary incidents.

32. The female learner experiences more negative discipline issues while on the schoolyard.

33. The female learner experiences academic success less often in the classroom.

34. Most parent conferences regarding academic matter involve female students.

35. I meet with the parents of female learners more often in regards to behavioral and disciplinary matters.

36. A majority of special education classrooms are comprised of female learners.
APPENDIX B

LETTER REQUESTING PERMISSION TO CONDUCT SURVEY TO ASSISTANT SUPERINTENDENT OF INSTRUCTION

Mitch Stubbs
420 Parlane Drive
Pearl River, LA 70452

October 11, 2011

Dear Mrs. Arabie,

I am currently a student at the University of Southern Mississippi enrolled in the Educational Leadership Ph. D. program. I am writing my dissertation on whether or not teachers adjust their instructional or behavioral management plans in regards to student gender. I am requesting permission to survey sixth to eighth grade teachers in the district.

I would like to speak with you at your convenience to explain the process and procedures of my study and any concerns you may have.

As a part of this Leadership Cohort through the University of Southern Mississippi, I have had an opportunity to work with other school officials from the Gulf coast area and further develop my own leadership abilities.

Thank you for considering my request, and I look forward to hearing from you.

Sincerely,

Mitch Stubbs, Principal
October 25, 2011

Instructional Review Board
University of Southern Mississippi
118 College Drive #5147
Hattiesburg, MS 39406-0001

Dear Human Subjects Protection Review Committee,

Mitch Stubbs has my permission to conduct research in the [redacted] Public School System regarding teachers’ formal education and professional development experiences as they relate to instructional and behavioral practices for both male and female learners. He has my permission to administer a survey called *Implementing Instructional and Behavior Plans for Male and Female Learners* to sixth, seventh, and eighth grade teachers within the school district.

Sincerely,

Assistant Superintendent
of Curriculum and Instruction
APPENDIX D

INSTITUTIONAL REVIEW BOARD APPROVAL LETTER

THE UNIVERSITY OF

SOUTHERN MISSISSIPPI

INSTITUTIONAL REVIEW BOARD
118 College Drive 88147 Hattiesburg, MS 39406-8814
Phone: 601.266.4820 Fax 601.266.4177 www.sou.edu/irb

NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 21, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 30 days following the event.
- This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months.
- Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 11118203
PROJECT TITLE: Implementing Instructional & Behavioral Plans for Male & Female Learners
PROJECT TYPE: Dissertation
RESEARCHER(S): Mitch Stubbs
COLLEGE/DIVISION: College of Education & Psychology
DEPARTMENT: Educational Leadership & School Counseling
FUNDING AGENCY: N/A
IRB COMMITTEE ACTION: Expedited Review Approval
PERIOD OF PROJECT APPROVAL: 11/14/2011 to 11/13/2012

Lawrence A. Hosman, Ph.D.
Institutional Review Board Chair
APPENDIX E

PRINCIPAL INFORMATION LETTER

Mitch Stubbs
420 Parlanage Drive
Pearl River, LA 70452
H- 985-863-1846
C- 985-960-3452

November 21, 2011

Dear Principal,

I am currently a student at the University of Southern Mississippi enrolled in the Educational Leadership Ph. D. program. I am writing my dissertation on whether or not teachers adjust their instructional or behavioral management plans in regards to student gender. I am requesting permission to survey sixth to eighth grade teachers in your school. The survey should take no longer than ten minutes.

Thank you for considering my request, and I look forward to working with you and your school.

Once completed, I will collect the surveys from each of you. Please call me with any questions.

Sincerely,

Mitch Stubbs, Principal
APPENDIX F

TEACHER INFORMATION LETTER

Mitch Stubbs
420 Parlange Drive
Pearl River, LA 70452
H- 985-863-1846
C- 985-960-3452

November 21, 2011

Dear Survey Team Participant,

I am currently a student at the University of Southern Mississippi enrolled in the Educational Leadership Ph. D. program. I am writing my dissertation on whether or not teachers adjust their instructional or behavioral management plans in regards to student gender. I have been granted permission to survey sixth to eighth grade teachers in your school. The survey should take no longer than ten minutes. The surveys are anonymous.

Please answer the questions honestly. There are no right or wrong answers. Please do not indicate your name on the survey. There will be a random drawing a teacher who participates in the survey to receive a $100.00 VISA gift card as a thank you. Once you complete the survey, please return it to your survey coordinator.

Thank you for assisting me with this project, and I look forward to working with you and your school.

Sincerely,

Mitch Stubbs, Principal
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