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Male Gender Disparity Gap: Does Gender Impact Education

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Abstract

This case study focuses on male gender disparity in education and the large numbers of males referred and receiving special education services. The data indicates that females outperform males academically, and that the males behaviors impacts their academic success. The connection to males at a young age being placed in low ability reading groups based upon behaviors, and their motivation and academic achievement is affected negatively. The eighth grade students at a PK - 8th grade rural Connecticut school participated in this researcher's case study. The case study looked at, how students perceived their education, and what role their education plays in their future goals and plans. The students found education to be an important part of their future plans, and also perceived their education as a positive experience. The females consistently outperformed the males academically. The special education students were predominately males, as were all of the office referrals for behavioral issues. The females indicated a positive attitude toward languages arts, as also seen in their academic achievement, which is contrary to the lower scoring males, who share a negative attitude toward language arts . The results indicate that gender differences impact academic achievement, referrals to special education, and behavioral office referrals. The male's positive opinion of their education, and their view on its importance for future goals allows for a solid foundation to explore more engaging learning environments for males. Males referrals rate to special education and behavioral office referrals create gender inequities in education and require further study to understand the effects of gender-stereotyping on male academic achievement.

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Chapter 1 - Introduction

The disproportionate representation of males receiving special education services, and the different theories behind those referrals continues to be a widely researched topic in the United States, and around the world (McIntyre, 1988; Piechura-Couture, Heins, & Tichenor, 2011; Tschantz & Markowitz, 2003; Wehmeyer & Schwartz, 2001). A great deal of books and research articles have been written discussing the academic underperformance and under motivation of males, especially in reading compared to the high achievement of females (Fortin, Oreopoulos, & Phipps, 2013). Much of the research that has emerged to explain the gender differences for special education identification and male under achievement in reading included, behavioral and biological difference between males and females, and bias in referrals to special education (Tschantz & Markowitz, 2003). The goal of this case study was to investigate the impact of gender on education, and if the male's academic achievement, referrals to special education, and school success are effected negatively due to their gender.

Statement of the Problem

Male gender disparity in education, the underachievement of males, and the negative school outcomes have been recognized by many in the field of education (Catsambis, Buttaro, Mulkey, Carr Steelmaan, & Koch, 2012; Eder, 1981; Gurian & Stevens, 2004; Watson, Kehler, & Martino, 2010), but the possible reasons for this gender disparity are varied. Authors analyzed the Early Childhood Longitudinal Study-Kindergarten (ECLS-K) data, identified male gender disparities as early as kindergarten (Catsambis et al., 2012; Cornwell et at., 2013). The findings indicated that the grades that the teacher's awarded to male learners were not aligned with the test scores. The

teacher's role in assessing males learners, was impacted by how the student's non-cognitive skills, such as behaviors, attitudes, and strategies were perceived by the teacher. Catsambis et al. (2012) also indicated concerns as to how male learners were placed into ability groupings for reading instruction. The teacher's evaluation of placement in a reading group was impacted by the males behavior, and the distributive males were placed in the lower ability reading groupings.

A disproportionate representation of males is indicated in referrals that teachers make for special education services (McIntyre, 1988; Wehmeyer & Schwartz, 2001). This large disparity of males receiving special education services brings into question weather it is connected to biology, behavior, or teacher bias. Males outnumber females two to one in receiving special education services, and the primary explanation has been the male's behavior (Wehmeyer & Schwartz, 2001). Another possible reason is the biological differences between males and females, and weather males and females are hardwired differently, though not all researchers agree with these findings (Eliot, 2010; Sax, 2006). Females who may benefit by being referred for special education services may not be referred by teachers, thus the over representation of males referred for services, and the possibility of gender bias in the representation of males receiving special education services (Wehmeyer & Schwartz, 2001).

Throughout the research there are suggested ideas to improve males gender disparity in education, and increase males academic achievement (Catsambis et al., 2012; Eder, 1981; Piechura-Couture, Heins, & Tichenor, 2011; Sullivan, 2004). The manner in which males are placed in ability groupings for reading, and a focus on responding to males student's reading preferences would be important to connecting

boys with books (Eder, 1981; Sullivan, 2004). The research suggested that single-gender classrooms may reduce the over-representation of males being referred for special education services, and improve the learning environment for males learners (Piechura et al., 2011; Sax, 2006). More awareness needs to be directed to teacher's gender-stereotyped expectations that could effect the placement of male students into low reading ability groupings, and referrals to special education services (Catsambis et al., 2012). Adult decisions impact male's educational success, and academic achievement.

Thesis Study

The purpose of this study was to examine male gender disparity in education. Specifically, this study looked at how gender impacted special education referrals. My overall goal of this research was to investigate the impact of gender on education, and to determine if male's academic achievement and school outcomes were effected negatively due to their gender, and if so what were the contributing factors. The state and federal data indicated that male students were more highly represented in receiving special education services, more likely to be unable to complete their high school education in a four year time frame, were in jeopardy of dropping out of high school, and that learning disabled students attend college at half the rate as regular education students (Connecticut State Department of Education, 2011; National Center for Learning Disabled, 2014). This study's general purpose supported the following research questions:

1. How do students perceive their education?

2. What role do students perceive education plays in their future goals/plans?

As such, I chose a case study methodology as an appropriate research design for this study (Stake, 1994; Yazan, 2015; Yin, 2003).

My research questions supported a deeper understanding of the male student's experience in education and how their gender impacted their academic outcomes. From Merriam's (1998) view, the epistemology that should orient case study was constructivism, "the key philosophical assumption upon which all types of qualitative research are based is the view that reality is constructed by individuals interacting with their social worlds" (Yazan, 2015, p. 137). Case study supports a flexible and open format, and allows for an in-depth exploration of the case through collecting multiple forms of data and analysis (Creswell, 2012). The strengths and advantages of using a case study may be the flexibility in determining research design and data collection techniques, and ease of modifying them once the data collection has begun (Royse, 2004). The goal of this case study was to understand the complexity of gender as it affected educational outcomes for males in the most complete way possible (Cohen & Crabtree, 2006).

Summary

Male gender disparity, male referral to special education services, and the impact of gender on educational success was the goal of this case study. The underperformance of males was noted in their reading skills and might be reinforced by teachers placing males in low ability grouping due to their behavior. The biological and behavioral differences between males and females were indicated in the male referrals to special education services. The higher rate of males referred to special education based upon behavior can impact females who need services but were not referred

resulting gender bias. The decisions made about male learners at a young age, impact

male learners throughout there educational history

In chapter two, I will provide an understanding of the issues associated with

gender and males educational outcomes. My case study will be developed from the

literature that questions how males perceive their education and the role education

plays in their future goals and plans. My research questions will support a deeper

understanding of the male student's experience in education and how their gender

impacts their academic outcomes. The literature will provide an understanding of

possible contributing factors of how gender impacts a males educational success.

In chapter three, I will provide information about the methodology that will be

applied to this researcher's case study. The research design will be discussed and will

provide insight into the impact that gender has on how male students perceive their

education. The research questions will examine male gender disparity in education. The

contributing factors that may affect educational outcomes of male students will be

highlighted. The case study setting will be explained, and the data collection and

analysis methods will be offered.

In chapter four, I will provide the results of this researcher's case study. The

research questions will be discussed and related to the collected data. I will also share

the themes and the evidence from the student surveys and the student's comments

form their interviews. The data from the artifacts and documents will be shared and will

serve to tie together the themes. The themes will be discussed in relation to the existing

literature. The discussions will include all of the data that has been triangulated and

analyzed. The evidence will be discussed and compared for a deeper understanding of

male gender disparity in education, and the impact to their future success and future plans.

In chapter five, I will provide the conclusions of this researcher's case study, and implications for future research and practice. The themes that include the student's attitudes and opinions will be discussed, and suggestions for future research to increase male academic achievement, and lessen gender stereotyping will be shared.

Definition of Terms

Gender Disparity. Essays, UK (2013) defined gender disparity as inequality, and a "lack of evenness or social disparity" (¶ 4), and also advise that gender disparity can also be defined as "treating individuals unequally on the basis of their gender" (¶ 4).

Special Education Referral. The Illinois State Board of Education (2009) defined a special education "referral", as a process of asking the school district to evaluate a student to decide if the student qualifies to receive special education services. A referral can be made either by the school district, or by a parent or guardian. The referral is a required first step before an evaluation can take place.

Likert Scale. Bertram (2007) defined the Likert Scale, as a psychometric response scale primarily used in questionnaires to obtain participant's preferences or degree of agreement with a statement or set of statements.

No Child Left Behind Act. Paige and Gibbons (2004) in the Guide to Education and No Child Left Behind defined the No Child Left Behind Act of 2001 (NCLB) as an act of Congress that reauthorized the Elementary and Secondary Education Act. It included Title I provisions applying to disadvantaged students.

School Wide Information Systems. A web-based information system that is used to

collect student behavior data for decision making, and is included in the positive

behavioral interventions and supports applications.

Chapter 2 - Literature Review

Does male gender equate to different educational opportunities and impact academic achievement? This is a long standing and contentious discussion in the educational system, political arena, and the fields of social science (Eder, 1981; Eliot, 2010; Watson, Kehler, & Martino, 2010; Whitmore, 2010). Their are several different contributing factors that mark substantial differences in male academic achievement underperformance. When considering what may be causing the male gender disparity gap and lack of engagement in the academic process, the following issues may contribute; teaching practices and teacher behavior, social-emotional behavior, and motivational factors, reading ability groupings, lack of reading and writing skills at the elementary level, gender and special education, and structural and functional differences that affect male and female learning (Bhana, 2009; Bonomo, 2010; Eder, 1981; Jennings & DiPrete, 2010; Mills, 2000; Piechura-Couture, Heins, & Tichenor, 2011; Sax, 2006) Also presented in the literature is the view that the male gender disparity gap in achievement is politically motivated and does not consider the connections between race, gender, social class, and achievement (Titus, 2004).

According to the National Center for Education Statistics (NCES) (2005) females were outperforming males in elementary, secondary, and high school. In NCES's Trends in Educational Equity for Girls and Women conclusion section, the authors noted the following: Males and females begin school with similar preschool experiences, although females may have an advantage in early literacy participation experiences. Females out perform males on reading and writing assessments at fourth-, eighth-, and twelfth-

grades. Throughout their elementary and secondary education, females are less likely than males to repeat grades and seem to have fewer problems that put them at risk.

NCES also indicated that over the past 15 years the gender score gaps had not been significantly different, which continued to show females outperforming males. Finally, NCES noted that males had a higher dropout rate than females. Gurian and Stevens (2004) discussed the need to improve the learning pattern of males who represent a significant number of the behavioral referrals and receive the majority of the D's and F's assigned for grades. There is also a disproportionate number of male students referred to, and receiving special education services (Wehmeyer, & Schwartz, 2001).

As a part of my review of the literature, I located my research studies, peer reviewed articles, and books for my subject area by using *Google Scholar*, the *Education Resources Information Center* database, and further investigating articles or authors that were listed in the references section of literature that was identified. My search included, but was not limited to the following terms: male gender gap, gender differences in education, male gender and behavior in elementary education, males and special education,teacher behavior and male students, male behavior and academic success, teacher instruction and male student behavior, the education system and male gender disparity, reading interests of male students, and boys and academic underachievement.

Male Gender Disparity and the Achievement Gap

The focus of this review will examine the contributing factors to the education gender gap and the resulting male academic underachievement. Research will support

the overrepresentation of male students referred to special education and the possible

rationale for that data. Teacher behavior and student outcomes focuses on possible

clues to the complex reasons that male students are significantly behind female

students in academic achievement. The research related to literacy and gender

provides insight into the impact of the male student's lack of literacy skills, engagement,

motivation, and the progress made outside of the United States improving male

academic achievement.

Males and Special Education

The U.S. Department of Education (1998) data indicated that males represent

nearly two-thirds of the population receiving special education services under the

Individuals with Disabilities Education Act (IDEA). Piechura-Couture et al.'s (2011)

study had also noted the over-representation of males being referred to special

education, with a two:one ratio of males to females. Male disabilities are the greatest in

two categories, emotionally disturbed, and learning disabled. Females disabilities are

the highest in hearing impairment, and deafness/blindness. Some of the characteristics

that they noted for the disparity included; physiological or maturation differences

between male and females, behavior differences that may have teachers single out

males for special education referrals, and lastly, the methods that are used to determine

a special education referral may be biased (U.S. Department of Education, 1998).

There is data that is available from state education agencies (SEAs) that Project

FORUM collected specifically on gender in special education (Tschantz & Markowitz,

2003). Project FORUM developed a survey and administered it through SEA's which

included forty-two states and three non-state jurisdictions for a total of 45 responses.

Project FORUM's survey in collaboration with Project Progress, investigated the

connection between gender and educational outcomes for students with disabilities. The

Center on Education Policy noted that the No Child Left Behind Act's (NCLB)

requirement that state and school districts report to the public the test results by gender,

have kept the gender gap in our country on the radar (Center on Education Policy,

2010). The conclusion of the Project FORUM and Project Progress survey indicated

that many states collect data on gender, though they are not required. Project FORUM

and Project Progress suggested that all states be required to report data by gender

given the disparity in special education, male versus female, and that the causes of the

gender disparity is unclear.

Some of the research indicated that the teacher's gender may be a predictor for a

male student to be referred to special education, and it is the female teachers who are

more likely to refer than the male teacher (McIntyre, 1988; Tschantz & Markowitz, 2003;

Wehmeyer & Schwartz, 2001). The field study by McIntyre (1998) included 92

elementary teachers that completed a child behavior checklist, referred 60 students to

special education, and 88% of those students were males. A high number of the female

teachers referred when there was problem behavior, and relation to male teachers not

referring when there were problem behaviors. McIntyre suggested that the results

indicated that the teacher gender plays a part in errors in identification, males with high

levels of behavior problems being identified and females not being identified that should

be based upon their compliant behavior.

A larger study done by Wehmeyer and Schwartz (2001) did a comprehensive

records review of all students admitted to special education while enrolled during one of

three school years in one of three school districts that included a rural district, a medium sized city school, and a suburban school district. The study looked at three years of data that included the gender differences in the referral, admission, and placement while taking in consideration the known biological and behavioral information of the students. The findings suggested that females were underrepresented in special education due to the bias based on males behavior and thus the referral of the male gender to special education. This overrepresentation of males in special education was also discussed in Piechura-Couture et al.'s (2011) research, who suggested a different educational format to address the biological needs of males and females and reduce the male referral rate to special education.

In review of the contributing factors to the high representation of males being referred to special education, a single-gender class format may reduce that number of male gender special education referrals (Piechura-Couture et al., 2011). The authors suggested that if you took the behavior differences between males and females out of the equation, academic achievement would improve. In a single-gender male classroom, the instruction could include increased physical activities, a louder noise level, and direct talk to the teacher, all of which have been seen as successful elements for male achievement. Single-gender classrooms need further investigation to see if they would support increased male academic achievement and reduce the high number of male referrals to special education. The State of Connecticut Resource Center has examined the legality of single-gender classrooms, and noted that in 2006 the U.S. Department of Education changed its Title XI regulations to allow more leeway in experimenting with single-sex education (State Education Resource Center, 2013). The

school district could offer single-sex classes as long as they offered a comparable single-sex class for the students of the other sex. The relaxing of this regulation as brought about challenges in court, so the positives and negatives regarding this option may require further research to determine if the increases in academic achievement outweigh the possibility that it may be considered discriminatory.

Teaching Practices and Student Outcomes

Jennings and DiPrete (2010) studied teacher's affect on a students social-emotional functioning, and behavioral skills at a early elementary level. Similarly, Rockoff 's (2004) examined the quality of the teacher and determined that if you want to improve student achievement, policies should be considered to provide teachers with individually-based incentives to raise test scores. Further, Jennings and Diprete (2010) used data from the Early Childhood Longitudinal Study-Kindergarten Cohort (ECLS-K) to calculate the teacher effects on social and behavioral skills, and suggested that having good social and behavioral skills in the early elementary years, help promote academic skills. The best possible long term results a student could have, is a teacher who is good at both enhancing social and behavior skills and academic skills. Though the authors noted limitation to the ECLS-K data, observational rather than experimental, they did point out the long term outcome gains for the students acquiring positive academic, social and behavioral skills, and how in the future, these skills would impact the student's future and the students socioeconomic environment. Their study suggested that more information would be needed to identify the characteristics that teachers need that would predict their ability to increase student's behavioral and social skills. If these characteristics could be isolated, these teaching practices could help

support student engagement in learning, improve work habits, and self-discipline.

Rockoff (2004) indicated after a long term twelve year study, that continued work would

need to be done to identify personal characteristics of high quality teachers, and then

schools should recruit and retain these high quality teachers to increase student

achievement.

Researchers are interested in what portion the teacher's behavior plays in the

perceived male gender gap. For example, Cornwell, Mustard, and Van Parys (2012)

looked at teacher affect and their response to student behaviors, the gender gap, and

the possible changes teachers could make to improve the education achievement of

male learners. In this research they discussed gender disparity in connection with

teacher practices and teacher behaviors and used data from the 1998-99 ECLS-K

cohort. The authors' findings suggested that the grades awarded by teachers were not

aligned with test scores, and boys were essentially graded less favorably by their

teachers than girls, with the exception of boys that exhibit behaviors like their girl

counterparts. They examined the gender differences in reading and math test scores

that were objective and the more subjective teacher assessments for both the males

and females in the kindergarten cohort and connected the differences between the

males and females to their non-cognitive development. Their findings also suggested

that it was the teacher's role in assessing the student's academic achievement, and it

was the female's behavior toward learning that appeared to make the difference in the

females being awarded higher marks on their test scores. This study pairs with the

Jennings and DiPrete (2010) study, and its findings to support teachers in discovering

new ways to effectively communicate with male learners through different methods of instruction to improve male engagement, and achievement.

In a study done by Catsambis et al. (2012), the authors analyzed gender differences and ability group placements for reading instruction groups in the kindergarten setting for females and males using data from the ECLS-K cohort national data set to complete the study. The teacher's evaluations of placement in a group was impacted by males behavior. The study focused on in-class ability reading groups and found that males were underrepresented in the high-achieving reading groups, and over-represented in the low-achieving groups. Males were placed in these low reading ability groups based upon test scores, but for females that had the same low test scores with the same social background, it did not equate them to being placed in the lower reading groups. Overall, boys had a much higher chance of being placed in the lower reading ability reading groups than females. Eder's (1981) stated that students placed in high ability groups had a much less disruptive learning environments than the low ability groupings. The low ability groupings that needed the support, without intention, ended up having less support due to the social context which was much less conducive to learning. The findings of Catsambis et al.'s (2012) pointed to gender-stereotyped expectations that could affect placement, but were inconclusive. The authors noted that further research would be needed. This study supported the concern that gender differences were impacting adult decisions and that in turn impacted male underachievement in reading. The authors noted that "using national data from the ECLS-K, we found that the academic future of many boys is compromised from the moment they enter school, due to placement in low-ability reading groups" (p. 17).

Throughout the world, researchers are studying the impact that early childhood teachers have on their young students. There is an abundant amount research in the United Kingdom, Australia, South Africa, and the United States, regarding male learners, and gender in education (Bhana, 2009; Eder, 1981; Mills, 2000). In reviewing a study that was done in South Africa, Bhana (2009) presented data that focused on the ways that teachers in specific social contexts gave meaning to gender particularly in which boys were constructed. The study focused on gender discussions used by teachers to uphold hegemonic masculinities. The term "boys will be boys" was used to describe the problematic male behavior, and represented male behaviors that included: aggressive, fearless, rough, and mischievous. The girl's calm and gentle behavior was the model that the boy's behavior was constructed upon, and it is the boys demanding behavior that required more attention from the teacher thus reducing attention to the female students. This construct provides power for the males and connects boys, discipline problems, and masculinity. Eder (1981) also discussed issues that impact male learners in her research study. Eder studied one academic year of a first grade class and focused on ability groupings, and the differences in the learning contexts of these groups. The data was gathered through observation, interviewing, and analyzing video-taped lessons to identify behavioral differences and group process. The ability groups that were less inattentive and had more behavior issues, and teacher management problems, were found to be less conducive to learning. The study questions the use of ability groupings and the teacher's behavior with different level groupings, and impact to low ability students. Eder explored the social behavior of male and female learners, and the adult behavior as it related to gender equality. The size of

the study was small, but discussion on the self-fulfilling prophecy shone a light on

teacher expectations and student performance.

Both Bhana (2009) and Eder (1981) suggested that because of the biological

makeup of males, all males share some portion of these types of disruptive and

demanding behavior at their core, and it is connected to their masculinity. These beliefs

by teachers function to stop teachers from ensuring a balanced classroom for both

males and females and serve to sanction male power (Bhana, 2009). Bhana's study

further suggested "that it is important to work with early childhood teachers to explore

the discursive practices around gender and masculinities" (p. 337). Working with

teachers of young children to change their assumptions about males, and balance the

gender inequality, will hopefully change the teacher's "boys will be boys" construct. In

South Africa gender inequality in education is both a political and financial issue. Bhana

stated that the Human Rights Watch was involved in South Africa's failure to address

gender equality in education. "By promoting critical awareness of gender in early

childhood, teachers can work with children in ways that challenge restrictive masculine

norms and begin to help both boys and girls develop alternate forms of social relations

and new patterns of power" (p. 338). The construct of masculinity effects how teachers

address male students and increases the gender disparity in the classroom.

A counter argument was made by Mills (2000) concerning failing boys and the

discourse in Australia. Mills presented the argument that the underachievement is not

necessarily all the boys, but particular boys. Anti-feminist made the case that due to all

the careful planning to balance the gender inequality that females were experiencing in

the 1970's and 1980's, the girls have benefited at the boys expense. Mills did not claim

that boys were not being disadvantaged or underachieving, but that in the discourse they failed to mention race and class as an issue to the boys academic achievement. Mills pointed out that there were a couple of the important developmental differences of males versus females, and it was that males mature slower than girls, and males were more active and slower to develop impulse control. Mills disagreed with the argument that the schools were overly feminized and too girl-friendly, and needed to be made more masculine. Mills argued that when you look at the data, there were boys and girls that were failing in school systems in Australia, the United Kingdom, and the United States, and it was the students that came from the working class, and the students our were further marginalized by their backgrounds that were failing.

        Abraham (2008) also discussed educational issues related to social-economic and class issues in the United Kingdom. Abraham disagreed with claims that the working class culture was anti-school, failing, and supported by some teachers further contributing to male underperformance. Abraham's argued that the spotlight was being pulled away from learning and being refocused on gender and male counter-school issues. Mills (2000) did not discount gender, but questioned why we would only look at one differences and ignore both class, and race in the discussion. "When seen through the lenses of class and ethnicity, the recent discovery that not all boys are doing well at school is hardly news at all, yet many advocates of boys' education strategies act as if no one had ever realized it before" (p. 240). It was pointed out that the global economy was changing, and with it the job market. Males will need to gain some of the skills that girls are perceived to be good at such as; having good interpersonal skills, being a good communicators, and being able to work cooperatively. Males will have to compete for

jobs that there is growth in, and they happen to be occupations that are dominated by females. Mills noted that "unfortunately, the backlash against feminism promoted an adherence to dominant performance of masculinities, and hence worked against improving the employment prospects of some boys within these types on industries" (p. 243). The author's conclusion included the overarching concern regarding the attempts that were being made to have boys constructed as the victims of an inappropriate school system, race and class being swept under the rug, and girls taking a back seat to the boys as the victims in the education system. The upside of this argument is that it can provide a platform to deal with gender inequalities, race, and class in schools.

The feminist view of the boy crisis ideology, is that there is not a boy crisis in education and author Okopny (2008) argued that this boy crisis cry was causing a contentious classroom climate and making it difficult for both teacher and student. The author discussed boys and girls biological differences, the different ways boys and girls learn, and the mention of single-sex classroom as a possible remedy. Okopny believed the over-reliance on biological determinism and "proposes a more nuanced view of the relationship between gender, biology, and socialization" (p. 218). The author's discussion was focused on the socio-economic backgrounds of the students and their individual academic abilities. The claim that schools have feminized education assumes that educators have to find reading material that will appeal to males, and that they will not be interested if the readings include a female protagonist. The author pointed to the possibility that the boys struggles may be due to socialized ideas of masculinity, and that boys and girls should be reading about each other for a better understanding of each other. Okopny stated that "the implementation of learning strategies based upon

narrowly focused notions of gender will hinder our ability to create effective learning

strategies beneficial to both genders" (p. 224). Okopny's findings concluded that we

should acknowledge the overlap of gender, sex, and individual abilities of both boys and

girls. Bonomo (2010) also focused on gender, but indicated that gender needs to be

understood in order to teach to gender differences and that teacher should use effective

gender-based teaching strategies. Bonomo looked at how gender influences how males

and females learn including a combination of developmental differences affecting the

brain, sensory motor, and physical development. Bonomo concluded that there are

significant differences in how males and females learn.

Sax (2006) focused his research on what teachers need to know about sex

differences, and how these differences impact cognition function and language skills.

Sax discussed sex differences in the organization of the retina, the cochlea, and the

autonomic nervous system. Females gain binocular vision earlier than males, and its

reported that the visual cortex is organized differently in females than males. Females

sense of smell and hearing is much more sensitive than males, and Sax stated that

"some boys labeled as slow learners may actually just need teachers to speak

louder" (p. 191). The sex differences are demonstrated in relation to the autonomic

nervous system, and are split between the sympathetic nervous system "fight or flight,"

and the parasympathetic nervous system "rest and digest." The female autonomic

system is shaped by the parasympathetic nervous system, and males are shaped by

the sympathetic nervous system. When females experience a stressful situation and the

parasympathetic part of the autonomic nervous system kicks in, it often results in

females feeling frozen in place, while males are experiencing the sympathetic response

and their senses are aroused and heightened. Sax stated that being aware of these differences will support best practices for teaching male learners.

    In the research article by Eliot (2010), she disagreed with the premises that male and female brains are hardwired differently. As a neuroscientist, Eliot stated that very few reliable differences between male and female brains have been identified. Eliot suggested that it is environmental factors that shape the gender gap, and that no mental ability or ability differences are hardwired, but instead abilities are developed in social contexts. As males and females start out in life there are small differences that are then changed and developed by the environment and culture, and through that development emerges extremely different individuals. Eliot's suggested that teachers should pay attention to gender carefully, stating that, just as we would never try to guess a student's math skills on the basis of skin or eye color, we must avoid prejudging any student's verbal, athletic, scientific, artistic, leadership, analytical or social ability on the basis of chromosomes. As with all types of diversity, the challenge is to respect and honor differences without turning them into self-fulfilling prophecies. Eliot (2010) made several suggestions to increase the opportunities for males and females in the educational setting including; avoid stereotyping by blending activities that provide competition and cooperation, widen the range of abilities that we teach to recognize arts and kinesthetic abilities, improve spatial awareness, and in turn, the student's understanding of fractions, calculus, physics, and science, engage males in a wide variety of reading materials that appeal to their interest in action and adventure, increase time on task for the youngest male pre-schooler by the use of vivid makers, and as they develop, allow them to dictate or type their thoughts, engage males in

extracurricular activities that seem to be filled with females, such as chorus, and

yearbook, increase male teachers in elementary school, and address teacher who

consider male students as problems rather than learners.

Literacy and Gender

Male underachievement related to their literacy deficits has been cause for

concern (NCES, 2004). The U.S. Department of Education's review of the standardized

tests that students take when they are in fourth, eighth, and twelfth grade indicated that

males lag behind females in literacy achievement. In Tyre's (2008) discussion of literacy

and males, she used the NCES data over a thirty year period to demonstrate the

growing literacy gap between the males and females. When she examined the data

during the 1990-2004 timeframe, Tyre looked at fourth-graders when the push was on to

improve literacy skills across both genders. It was evident that in fourth grade both the

males and females improved, but the males were still five points behind the females, the

gap increased to 10 points by middle school, and then by high school was at 14 points

behind the females. The concern about male literacy skills is also discussed by

Whitmire (2010), and he noted that male literacy issues were at the top of the list of

what may be contributing to the gender gap in education. Whitmire provided the

following U.S. Department of Education 2007 statement related to the roadblocks to

improving middle schooler literacy skills:

> Researcher have found that some teachers circumvent the need for students to
>
> read texts by adjusting their assignments or methods of presenting content….
>
> Another researcher found that content-area teachers expressed resistance to
>
> the work of the high school reading specialists, whose job is to provide students

with additional help outside their regular class structure. And still others have

suggested that teachers who strive primarily to cover the content of their

disciplines are unaware that by increasing students' ability to read their

assignments they could actually increase the depth and breadth of content that

could be covered efficiently. A final barrier is that when schools actually institute

programs to help struggling adolescent readers, they are housed within special-

education programs and thus serve only a small proportion of the students

whom they could benefit. (p. 46)

Tyre discussed the dividing of the students into ability groupings in elementary school

as, the "good readers" and the "not-so-good readers" and equated it to the "Matthew

effect," after the New Testament parable about the rich getting richer and the poor

getting poorer. Review of the first grader that is a not-so-good reader averaging 16

words in week and the good reader reading 1,933 word per week, this works out to the

poor reading middle schooler reading 100,000 words per year, and the average reader

reading one million words, and the top readers reading up to 10 million words. This

connected with what both Eder (1981) and Catsambis et al. (2012) found in their

research about ability groupings, and males being underrepresented in high reading

groupings. Their findings questioned the continued use of the ability groupings and

noted that they are the least effective way to support the students in the most need.

Whitmore (2010) offered the following as contributing factors for the gender gap

in achievement; lack of phonics, inadequate teacher education, lack of reading

instruction in the upper grades, inattention to role models in male reading materials,

pushing reading skills on boys before their brains are ready in pre-school, and failure to

teach reading properly. Tyre (2008) discussed a small Scottish study about reading

instruction that was conducted by Joyce Watson, a retired teacher that was completing

her Ph.D.. The study followed three groups of students from kindergarten through fifth

grade using three different means of teaching reading skills. The first group was taught

reading with limited use of phonics and used the whole-language approach, the second

group used equal parts of whole-language and phonics , and the third group used an

amped-up phonics program created by Watson called "Synthetic Phonics." The

Synthetic Phonics program was very successful teaching all children to read, but more

specifically the male students taught using the Synthetic Phonics program significantly

outperformed the girls. Tyre stated that this program was validated by the Scottish

government in 2005 and is being used in the United Kingdom. When Watson was asked

why she thought the males were so successful, she talked about parts of the program

that included the use of magnetic letters which they could visually associate with the

sounds, and they could touch the letters to build the words. The final thought from this

study was that in fact it was only one study, but it did show that the male literacy deficit

is not a fixed conclusion that is without answers.

        Authors from outside the United States have done research related to the

concerns about gender differences in reading ability and male underachievement

(Logan & Johnston, 2010; Watson, Kehler, & Martino, 2010). Logan and Johnston's

(2010) research examined behavioral and motivational factors as they relate to the

differences in cognitive abilities, brain activation during reading, differences in reading

strategies and what type of learning environment works best for males. Within the

classroom learning environment the students are presented with literacy instruction and

depending on likes and dislikes male and female students may spend unequal amounts of time engaged in reading activities. Logan and Johnston discussed the males attitude and motivation for reading and that it may predict why males have lower reading comprehension scores. Watson et al. (2010) also pressed for the need to engage both males and females in literacy, and disagreed that males are disadvantaged in being able to keep up with females. Watson and colleagues noted that the size of the gender gap is different from country to country, and there are countries that have considerably improved male literacy skills. According to both Watson et al. (2010) and Mills (2000), gender was only one piece to the male literacy underachievement puzzle, they added social and cultural backgrounds, curriculum and instruction, assessments, and male attitude toward school. They suggested that the focus needs to be very complex to address all the integral pieces to produce male literacy achievement. Logan and Johnson (2010) concluded, to improve male motivation and engagement in literacy, though not conclusive, the use of systematic synthetic phonics instruction should be used with male learners.

A small research study was done by a library media specialist examining why boys underperform in comparison to girls on reading comprehension standardized tests (Blotz, 2007). The author found that data indicated that as a country, we are not able to engage our male students in reading. Both Boltz's (2007) study and Sullivan's (2004) indicated that it was important to ask the student what they wanted to read rather than making the assumption that they will enjoy a book that the adult has chosen for them. Teachers, and library media specialist decide, based upon promising practice, what the students should read. The studies also indicated that what the male students were

reading was not relevant to them, and they were only reading the materials because it was assigned and they were going to be graded. It was found that the males in the studies wanted to select their reading materials and subject of interest. Conducting student preference inventories would be a step in the right direction in determining what the male readers want to read and making these materials available, and engaging male readers.

Summary

The gender gap in education is impacting to male academic achievement and their future personal success. National statistics over a long period of time have indicated that females outperform males in elementary, secondary, and high school. The research has also indicated that male students represent a large portion of the population referred to special education services, and their noncompliant behavior at a young age and the teachers gender may be determining factors in the referral to special education. Placing young readers in low performing ability groupings has a negative effect on increasing literacy skills, as does the male behavior construct. Many of the researchers suggested that the gender gap, and male underachievement is very complex and includes; their biological makeup, social-economic class, teacher's behavior, feminized instruction, male maturity, racial class and ethnicity, individual academic abilities, lack of engaging and interesting reading materials for male readers, and lack of motivation for male learners.

Further research is needed to determine why male students are uninterested in literacy, and what motivates male students to increase their interest in literacy and education. In my research I found a considerable amount of research and discussion on

the gender gap, and male underachievement in other counties. These countries have started to use newly researched instruction to improve the male disparity in education. It would be important to know if the United States education system has started to use these interventions to increase male achievement. Further investigation is needed to understand why there is a great imbalance of male students being referred to special education. What new changes have happened in the field of education to better prepare our educators to increase academic achievement, and address the disparity of the male learner. More research is needed to determine what qualities and attributes are needed to be considered a high quality teacher, and if providing incentive pay for teachers that produce good test results is a viable solution in the education field. More information is needed to determine the role that race and socioeconomics plays in student achievement, and if single-sex classrooms would produce positive student achievement.

Chapter 3 - Methodology

The purpose of this study was to examine male gender disparity in education. Specifically, this study looked at how gender impacted special education referrals. This study's general purpose supported the following research questions:

1. How do students perceive their education?

2. What role do students perceive education plays in their future goals/plans? My overall goal of this research was to investigate the impact of gender on education, and to determine if male's academic achievement and school outcomes were effected negatively due to their gender, and if so what were the contributing factors. The state and federal data indicated that male students were more highly represented in receiving special education services, more likely to be unable to complete their high school education in a four year time frame, were in jeopardy of dropping out of high school, and that learning disabled students attend college at half the rate as regular education students (Connecticut State Department of Education, 2011; National Center for Learning Disabled, 2014). As such, I chose a case study methodology as an appropriate research design for this study.

My research questions supported a deeper understanding of the male student's experience in education and how their gender impacted their academic outcomes. From Merriam's (1998) view, the epistemology that should orient case study is constructivism, "the key philosophical assumption upon which all types of qualitative research are based is the view that reality is constructed by individuals interacting with their social worlds" (Yazan, 2015, p. 137). Case study supports a flexible and open format, and allows for an in-depth exploration of the case through collecting multiple forms of data

and analysis (Creswell, 2012). The strengths and advantages of using a case study

may be the flexibility in determining research design and data collection techniques, and

ease of modifying them once the data collection has begun (Royse, 2004). The goal of

this case study was to understand the complexity of gender as it affected educational

outcomes for males in the most complete way possible (Cohen & Crabtree, 2006).

Research Design

Creswell (2012) indicated that case study involves the use of multiple methods

for collecting data. This will allow for the researcher to obtain amble amounts of data to

support the best possible understanding of gender's affect on male educational

outcomes. Stake (1994) identified three types of case study, instrumental, intrinsic, and

collective. Instrumental case study provides insight and understanding into a particular

issue. This researcher's case study provided insight into the impact that gender had on

how male students perceived their education, and what part education might play in

their future life goals. The researcher wanted to explore how males make sense of their

world, and their experiences in this world, as it related to their education (Merriam,

1998).

The researcher used the case study methodology because it allowed for the

ability to use the constructivist theoretical framework. The constructivist framework

supports understanding how males learn, how they construct their own understanding

and knowledge of the world through their schooling experiences, and how they reflect

on those personal experiences (Merriam, 1998). Merriam (1998) defined synthesizing

characteristics for case study to include the following, "Particularistic, which focuses on

particular situation, events, program, or phenomenon. Descriptive, which yields a rich,

thick description of the phenomenon under study, and heuristic, which illuminates the

reader's understanding of the phenomenon under study" (p. 148). All of these

characteristics have helped support this researcher's quest to understand the male

gender's educational experiences. In this researcher's case study I focused on the

particular phenomenon of how gender impacts education and if male's academic

achievement and school outcomes were effected negatively due to their gender.

The Setting

This case study was conducted in Sterling, a rural town located in the

northeastern corner of Connecticut. Sterling Community School was a one district

PK-8th grade school, and included a population of approximately 480 students. The

participants in this case study included two eighth grade classes of approximately 24

students. Also included in this case study were four seventh grade students, two

students identified as regular education, two students identified as special education,

two females, and two male students. The seventh grade students participated in a pilot

survey to test questions and protocol prior to the eighth grade data collection.

The 45-50 eighth grade male and female students included in this study were

approximately 13 to 14 years old, and included regular and special education students.

Our district did not have a high school, so each fall the eighth grade teachers spent time

with the students exploring their three possible high school choices located in other

districts. The students could apply to a technical high school, agricultural high school, or

a large regional high school based upon their learning preferences.

Data Collection Methods

The completed literature review supported a deeper look into male gender disparity in education. Specifically, how gender has impacted special education referrals, and why male students may not feel that school is relevant to their life goals. Using the constructivist framework the researcher analyzed multiple pieces of data. The researcher utilized different forms of data collection that included, surveys, interviews, grades, and artifacts. These multiple pieces of data allowed the researcher to make sense out of the data, by consolidating, reducing, and interpreting what individuals have said, and what the researcher has seen, and read (Merriam, 1998).

For the purpose of this case study, the researcher collected multiple measures of qualitative and quantitative data to analyze the impact of male gender disparity in education. The data collection methods that were unitized are outlined in Table 1.

Table 1.

Data Collection Methods

Research Question	Primary Methods	Secondary Methods
1. How do students perceive their education?	Surveys	Interviews Artifacts & Documents
2. What role do students perceive education plays in their future goals/plans?	Surveys	Interviews Artifacts & Documents

Each of the following sub-sections will describe each of the methods of data collection.

Surveys

This researcher used surveys, a quantitative method of research which was administered to a small group of students to identify trends in attitudes, opinions, behaviors, and characteristics (Creswell, 2012). Royse (2004) indicated that surveys have been called the single most important information gathering invention of the social sciences, and in this researchers case study, was an efficient means of gathering data about student's attitudes related to how they perceive their education, and the role education impacts their future goals and plans. Creswell (2012) stated that survey research is a popular design in education.

Upon completion of the pilot survey, I changed the survey by adding one word to a question, asking if the students "regularly" received help in the resource room. After the one addition to the survey (see Appendix A for a copy of this instrument), it was administered to two eighth grade classes of approximately 45-50 eighth grade male and female students, and they took the survey during their computer class. Both the seventh and eighth grade students take computer take computer class together, so the survey was administered over a five day period. At the completion of the survey taking, the seventh grade participants were filtered from the eighth grade survey results. The questions on the survey provided an effective method for collection of both behavioral and preceptorial information using two primary survey categories, scaled and unscaled (Lipton & Wellman, 2012). The scaled questions on the survey asked the respondent to quantify their answer and provide information that is readily organized graphically. Lipton and Wellman noted that these responses are often limited in scope. For example, a response of 4 to the question, "On a scale of 1-5 how would you rate the effectiveness

of the program?," does not offer information on what constitutes a 4 for this respondent, or what might have made it a 5. With this thought in mind the students were also asked to answer unscaled questions. Lipton and Wellman (2012) also noted that unscaled surveys usually require responses to open-ended questions. Compared to scaled surveys, these instruments yield more potential information, but are more complex to organize for analysis. For example, a question might read, "In what ways did this program meet your expectations?" These qualitative data are most often organized into tables or charts based on emerging categories.

At the end of the survey the student were asked if they would be willing to participate in a follow-up interview. If the student responded in the positive, they were asked to provide their name and this researcher planned the individual student interview. The collection of the survey data, both scaled and unscaled, supported the understanding of how the students perceived their education, and what role they perceived education plays in their future goals and plans.

Interviews

This researcher included the opportunity for eighth grade students surveyed, to participate in an follow-up one-on-one interview (see Appendix B for a copy of the interview protocol). The student provided their name on the survey, and this researcher set up the one-on-one interview data collection opportunity. The students participated in an qualitative survey interview. Creswell (2012) noted that in qualitative survey interviews, an interviewer asks open-ended, questions without response options and listens to and records the comments of the interviewee.

Lipton and Wellman (2012) indicated that interviews are a source of qualitative, perceptual data, and the intention is to record as fully and fairly as possible each respondent's particular perspective. Interviewing adolescents, the interview style this researcher used was informal conversational. This is the most informal interview and it is conversational and responsive, with the questions emerging from the interactions. This interview style relies on spontaneously generating questions in the natural flow of the interaction. This allowed this researcher to explore beliefs, attitudes, values, and perceptions of the interviewees. Eder and Fingerson (2002) noted that an important reason for interviewing adolescents is to allow them to give voice to their own interpretations and thoughts rather then rely solely on adult interpretation of their lives.

Artifacts and Documents

This researcher gathered artifacts and documents from the district's student information base for the eighth grade students participating in the case study. Lipton and Wellman (2012) noted that archival data can include student performance data, such as test results, grades, referrals, suspension, and retentions and demographic data. Also included could be day-to-day life in the district data, such as memos, meeting minutes, descriptions of course offerings, and extracurricular activities. This,because of this data's longitudinal quality, it can be accessed and analyzed for trends. Creswell (2012) stated that the researcher should be able to identify the types of documents that will assist in answering the qualitative research questions. Stake (1995) indicated the importance of recognizing good sources of data, which will help support the researcher's significant understanding of the case study.

The student artifacts and documents that this researcher collected to address the research questions included, test scores, student grades, student high school course selection forms, office discipline reports from the School Wide Information System (SWIS) data reports, and demographic data. The artifacts and documents collected assisted in a more complete understanding of the student's past educational experiences, and the documentation of the high school course selections form, the student's future goals and plans.

Data Analysis Methods

For the purpose of this case study this researcher used two methods of data analysis. For the quantitative data (i.e., surveys), descriptive statistics was used. When analyzing the qualitative data (i.e., interviews and artifacts and documents), the constant comparative data analysis method was used. The two methods of analysis used supported this researcher's ability to answer both research questions and provide conclusions related to the case study.

Descriptive Statistics

Raw data may be difficult to interpret because of their variability. According to Bloom, Fischer, and Orme (1995), "descriptive statistics can aid you in visual analysis by summarizing patterns of observations within phases in order to examine changes across phases" (p. 549). Descriptive statistics can describes trends in the data to a single variable, or support answering the questions on the survey that the students have answered (Creswell, 2012). Measures of central tendency like mean, mode, and median are indicated through descriptive statistics (Royse, 2004).

Descriptive statistics was the process that was used to look at the quantitative survey data. The survey instrument had the students use a Likert scale, allowing the students to express how much they agreed or disagreed with a particular statement. This researcher used descriptive statistics to look at the survey data and summarize the overall trends in the data. Descriptive statistics provides an understanding of how varied the students scores may be, and provides awareness into where one score stands in comparison with others (Creswell, 2012). The measures of central tendency is used to break the student data into, and express it through the average student score, (i.e., the mean), the middle set of scores (i.e., the median), and the the most frequently occurring score (i.e., the mode).

Constant Comparative Analysis

The constant comparative method was used allowing this researcher to generate themes from the qualitative data collected. Creswell (2012) indicated that the constant comparative method allows for the researcher to develop categories of information from specific to broad allowing the researcher to generate themes and draw conclusions. Creswell discussed grounded theory research as the researcher engaging in a process of gathering data, sorting it into categories, collecting additional information, and comparing the new information which will allow for new categories to emerge. This allowed for this researcher to slowly develop categories of information during the constant comparative procedure. Charmaz (2003) noted that grounded theory is a comparative method that allows you to construct your analysis by comparing bits of data to each other, and the comparison involves you in the analysis, as you interact with the data and observe the emerging ideas from the data.

This researcher used the data from student tests and grades to look for themes and sort the data into categories. Data was gathered from our school's SWIS data tracker that provided information on behavioral data and demographics. Another piece of data that was compared and analyzed was the student's high school course selections forms to see trends and themes. The interview data available, was coded, compared, and organized and sorted by categories to determine trends and themes. The data revealed trends and themes that this researcher was able to derive theories that were generated.

Reliability and Validity

To confirm the reliability and validity of the data collection methods, this researcher took the necessary steps to ensure that the data collected measured what it has been predicted to do, and the results provided consistency and are dependable. Merriam (1998) mentioned techniques to ensure reliability, that included an explanation of investigator's position with regard to the study, and triangulation. Strategies to enhance internal validity include; member checks, long-term observations, peer examination, participatory research, triangulation, and disclosure of researcher bias. Stake (1995) stated that "there are multiple perspectives or views of the case that need to be represented, but there is no way to establish, beyond contention, the best view" (p. 108). This researcher worked to provide accuracy and discipline through the use of protocols, so that the results of the case study were explained and made sense. Kubiszyn and Borich (2013) discussed how statistical tools are applied to test results to determine the degree of confidence we can place in the results. Related to evaluating tests, Kubiszyn and Borich defined validity by asking the question, does the test

measure what it is supposed to measure, and defined reliability by asking, does the test

yield the same or similar score rankings, all other factors being equal, consistently?

Creswell (2012) noted that reliability and validity are bound together in complex ways.

Validity a larger more encompassing term when you assess the choice of instrument,

and reliability as a measure of consistency.

Validating the results of this researcher's study included pilot testing and

triangulation. Good questions were developed for the survey that the students took. This

researcher conducted a pilot survey that included four seventh grade students, two

students identified as regular education, two students identified as special education,

two females, and two male students. The seventh grade students participated in a pilot

survey to test questions and protocol. Yin (2003) noted that in preparation of data

collection, he highlights the importance of the pilot survey, and its help in refining your

data collection plans with respect to both the content of the data and the procedures to

be followed. Creswell (2012) identified pilot testing of a survey as, a procedure in which

a researcher makes changes in an instrument based on feedback from a small number

of individuals who complete and evaluate the instrument. Royce (2004) indicated that it

would be valuable to administer the survey instrument to a group of people as similar as

possible to the population that you will be surveying. The major purpose of the pilot test

is to determine if the type of information you want is supplied by the respondents. Yin

(2003) noted that in preparation of data collection, he highlights the importance of the

pilot survey, and its help in refining your data collection plans with respect to both the

content of the data and the procedures to be followed.

Finally, triangulation was used to support reliability and validity of the data points collected related to the students involved in the case study. Creswell (2012) noted that triangulation among different data sources will enhance the accuracy of a study, and that it is the process of corroborating evidence from different types of data. Creswell explained that the researcher will examine each information source and finds evidence to support a theme. This will ensure that the study will be accurate because the information draws on multiple sources of information, individuals, or processes. Lipton and Wellman (2012) stated that triangulation is an effective method for increasing credibility and dependability when in data exploration.

> No individual assessment or measurement instrument is a perfect fit for providing what we want to know about whom and in what ways. Using multiple data sources compensates for the deficits in individual tool and provides a comprehensive picture of the topic under study. (p. 58)

This researcher used triangulation to increase credibility, dependability, and provide a more complete assessment of the case study.

Summary

The purpose of this study was to examine male gender disparity in education. Specifically, this study looked at how gender impacts special education referrals, and the impact of gender on education, to determine if male's academic achievement and school outcomes are effected negatively due to gender, and if so, what were the contributing factors. This researcher used case study methodology to obtain amble amounts of data to support the best possible understanding of gender's affect on male educational outcomes. For the purpose of this case study, this researcher collected

multiple measures of quantitative and qualitative data in order to further analyzes male

gender disparity in education. The methods of data collection included surveys,

interviews, artifacts and documents. This researcher used constant comparative

method, and descriptive statistics as two types of data analysis. This researcher

ensured the reliability and validity of the data collection methods through the use of pilot

testing and triangulation. This researcher examined the data to reveal trends and

themes that generated how gender impacts education and male academic achievement

and educational outcome.

Chapter 4 - Results and Discussion

In my case study, that examined male gender disparity in education, I used

multiple methods of data collection to provide insight on two research questions. The

case study provided insight into the following research questions:

1. How male students perceive their education?

2. What role do male students perceive education plays in their future life goals

    and plans?

Merriam's (1998) discussion on the constructivist framework supported an

understanding of how males learned, how they constructed their own understanding

and knowledge of the world through their schooling experiences, and how they reflected

on those personal experiences. The data collected supported a better understanding of

gender's effect on the male educational outcomes and, upon reflection, provided three

themes related to male gender disparity within the educational setting.

Research Question 1: How Do Students Perceive Their Education?

The Sterling Community School eighth grade students completed the *Quality*

Education survey, and four students volunteered to participate in answering interview

questions. I have used the following pseudonym names to identify the students that

were interviewed: Jane, Debra, Thomas, and Jake (all pseudonyms). The interviews, as

well as the surveys, explored their attitudes and opinions about their personal

educational experiences. A review of the completed student surveys, interview data, and

artifacts and documents, provided two themes to answer research question 1 regarding

how they perceive their education.

Positive Attitudes and Opinions

The student survey used a Likert Scale to determine the degree of agreement with questions asked of the students. The students were asked if they believed that they were high achievers. The student's responses were positive, 30% of the males and 70% of the females "agreed very much" that they were high achievers. Another positive result from the same question, indicated that 60% of the males and 40% of the females, "sort of agreed" that they were high achievers. Another survey question that measured the student's positive attitudes and opinions was, a question that discussed setting high goals and applying the effort to try harder. This question revealed that 75% of the females, and 25% of the males "agreed very much" with the statement, "I find that I try harder if I set high goals for myself." Students "sort of agreeing" with the same statement regarding setting high goals, included 70% of the males and 30% of the females.

During the interviews, when the students were asked if they felt that they were graded equally or fairly, Jane commented that "…the boys get good grades even though they are always fooling around." The follow-up question, about whether she had shared her grades with males classmates, her response was no, and that she just thought they got good grades and also fooled around in class. Jane, Debra, Thomas, and Jake all agreed that girls and boys were graded equally and fairly. Debra commented, "I am on National Junior Honor Society (NJHS), I have to keep my grades up or I won't be." The female students did not express any concerns about inequality in the grading, but were focused on their personal academic success.

When the interviewees were asked about single-gender classrooms, and if they thought it would increase their personal achievement, all of the students interviewed did not feel that being in that type of setting would increase their academic achievement. The desire to have a male teacher was met with approval of all of the male interviewees. For example, Thomas indicated, "I like Mr. H, he is fun, I think a man teacher would be good." Debra and Jane were neutral about a male teacher, but did not want to have just female classmates in the classroom without male classmates. Reflecting on the interview and survey data shared by the students, the opinions and attitudes of the females students were more positive than the males.

The female students were more positive than the male students regarding their status as high achievers and high goal setters as demonstrated in the survey data. In the interview data, the females demonstrated more attention to their grades and the connection to being associated with the NJHS. Catsambis, Buttaro, Mulkey, Carr Steelmaan, and Koch, (2012) noted that, "girls tend to show more positive approaches to learning such as attentiveness and task persistence than boys" (p. 9). Debra Indicated during her interview, the same persistence to achieve when she connected her grades to the NJHS criteria. Similarly, Jennings and DiPrete (2010) noted that gender differences in the early academic outcomes stem from gender bias when the teacher's evaluate the students that result from better conformity of the girls than the boys to the student role. Sax (2006) questioned what was happening with our boys. He noted that they were directionless, and the girls were setting high goals, and moving forward with their future plans. The survey results indicated that 70% of the females believed that they were high achiever, as compared with 30% of the male students.

Male Academic Underachievement, and Disproportionate Representation in

Special Education

The student survey data and the data shared by the interviewees indicated a positive outlook associated with being high achievers, and setting high goals. In looking at the same student's *Smarter Summative* literacy results, behavioral data, special education standing, and recommendation for high school honor courses, lower achievement on literacy and math was apparent. The data also showed the low achievement of male special education students in literacy, and no male special education student proficient in math. The behavioral data was overwhelmingly associated with male student behavior, and impacted the amount of educational instruction that they received, due to being sent to the principal's office. Jennings and DiPrete (2010) discussed the connection between gender differences in behavior, and the teacher's effects on social and behavioral skills in early elementary school, with outcomes contributing to the lower academic achievement of males over their first five grades. Piechura-Couture et al. (2011) noted male behavior as a significant contributing factor for the overrepresentation of males referred for special education services. Male misbehavior in the classroom, because they are more active, may have an impact on their early social learning. The National Center for Education Statistics (NCES) (2005) indicted the same trends that this researcher observed, females outperformed males in both literacy and math. NCES's *Trends in Educational Equity for Girls and Women* conclusion section, noted, throughout their elementary and secondary education experience, females were less likely than males to repeat grades and have had fewer problems that put them at risk.

The Connecticut Department of Education's *Smarter Summative* literacy results

for seventh graders, who are now our eighth graders participating in this case study,

showed the females out scored the males by 51% across all seventh grade classrooms.

In review of the same data for the male special education students, only 20% of the

students were proficient in literacy. The math results indicated that 50% of the male

students were proficient, and 55% of the female students were proficient. In review of

the same data for the male special education students, none of the students were

proficient in math. The behavioral data obtained from our school wide information

system (SWIS) drill down reports for the same group of students, indicated that all of the

major and minor behavior offense by special education students, were committed by

male students. The behavioral SWIS data for all students including both major and

minor behavior offenses were overwhelmingly (i.e., 97%) committed by male students.

In review of the third trimester grades at the end of seventh grade for the students

included in this researcher case study, the data indicated that 75% of the students

receiving a grade lower than an C in language arts and math, were males. Of those

male students, 48% are special education students. The eighth grade students filled out

high school course selections forms for their upcoming 2016 freshman year. Students

recommended for honors courses included 55% of the male students, and only two of

those students were special education students.

Wehmeyer and Schwartz (2001) noted the disproportionate representation of

males referred to special education, and the data from the students in my case study

indicated the same large representations of males. The authors also discussed the

negative consequences of being labeled with a disability, and that males may

disproportionately experience negative educational outcomes. Our school had been made aware by the attending local technical and agricultural high schools, that they did not have the support or resources available for the special education students to be successful. The technical high school referred to the split of the 180 school days, between 91 days for academics, and 90 days for shop classes as an issue for special education students to be successful in their academics. They did not feel that the special education students would be academically successful, and denied them admission to the high school. In my interview with Jake, a special education student, he commented that, "…I hope I get into Ellis, I don't want to go to Plainfield [i.e., local feeding high school that they don't have to apply], and besides I want to be a mason, and they don't have that at Plainfield." Students labeled as special education students are not being accepted into the local technical high school, thus eliminating the possibility that they would be able to be trained to have a career in a trade.

The data results in the surveys, interviews, behavioral, and acceptance into technical or agricultural high schools were affected by male academic underachievement. Our special education students were not proficient in math, and were not accepted into the technical or agricultural high school. This reduced the opportunities for many of our males students that had hoped to learn a trade. Male underachievement related to their literacy deficits continues to be concerning NCES (2004). This case study data reflected what was indicated in the U.S. Department of Education's review of the standardized tests that students take when they are in fourth, eighth, and twelfth grade, males lagged behind females in literacy achievement. Tschantz and Markowitz (2003) noted that two-thirds of students receiving special

education services under the Individuals with Disabilities Education Act (IDEA) were

males. The authors advised that the disproportional representation of males to females

is most notable in the areas of emotional disturbance and specific learning disability.

This researcher's case study data reflected the same high percentage of males

receiving special education services, and all students with emotional disturbance

disability are males.

Research Question 2: What Role Do Students Perceive Education Plays In Their Future Goals/Plans?

This researchers case study examined what role education played in the

student's future plans and goals. When designing the case study, the literature review

helped contribute and mold my research questions (Merriam, 1998). Based upon my

findings, it helped support my understanding of the student's attitudes and opinions of

their education goals and plans for the future. I was particularly interested in knowing if

male students and, in particular, the male special education student found education

relevant to their future plans.

This research question also provided positive feedback from the student surveys

and student interviews about what role the students perceived education played in their

future goals and plans. Reflecting on whether students perceived education plays a role

in their future, the data indicated two themes, one theme that was mentioned in the first

research question, positive attitudes and opinions, and a second theme related to lack

of engagement in literacy.

Positive Attitudes and Opinions

The student survey, using a Likert Scale, asked if a good education was important for their future, and a very positive 90% of the students agreed very much or sort of agreed. Included in that 90% were all the male students except one male student whose opinion was neutral. Of the remaining 10%, the students responded that they don't disagree or agree that education played a role in their future. In another question that casts a light toward the future, the students were asked if they planned to attend college after high school? Again the data showed that 90% of the students agreed very much or sort of agreed. The remaining 10% stayed neutral, and 60% of those students were males. During our interview when we discussed if you would like to have the opportunity to learn in a classroom with just male classmates and a male teacher, Jake, with excitement in his voice, commented, "…I only know guys in masonry [at the local technical high school], remember Bob [i.e., a pseudonym] he's in masonry, and it's a guy teacher, I don't think there are girls in that class, but I don't know, maybe." Jake also commented, "…I should be able to get a job when I'm at Ellis [i.e., a technical school] doing masonry, they will pay you, that's what Bob said." Jake, a special education student, plans to apply to the local technical school, but being designated special education, will not be accepted into that school.

The documents and artifacts provided positive data regarding the students that have been approved, and wanted to take high school honors courses in preparation for college. The student's then could be recommended to take advanced placement courses and would receive college credits for successful completion of the course and the final test. Upon the review of the student's high school course selections forms, 60%

of the female students were recommended for honors courses in comparisons to 55%

of the male students. Of the 55% of the male students recommended for honors

courses, two of the students are special education students. During the interview

process and during our discussions regarding motivation, Debra commented, "…Mrs. H.

and Mrs. M. signed so I can sign up for the honors courses, I might get credit for

college… that would be great!" The positive academic outlook of females in particular,

was evident in the high percentage that indicated that education played a big role in

their future plans, and are interested in going on to college.

Mills (2000) noted that schools are measured and compared to each other on

their pupils' level of academic achievement, and when students don't do well, they may

be considered a liability. The current moment in gender politics in school, causes

females to be perceived as being more desirable to schools, and colleges, than males.

Tyre (2008) indicated that there is a steep cost for male underachievement, and that is

apparent in high achieving females dominating entrance into engineering schools that

had been predominately males in pervious years. Tyre also pointed out that the number

of females attending college was rising much faster than males.

Lack of Literacy Engagement

The second theme indicated for the second research question was the lack of

literacy engagement. When the students were asked if they read for pleasure, 50% of

the students disagreed or disagreed very much. Of this 50%, males comprised 80% of

those opinions. The survey question was asked if the student received help in the

resource room, which in our school is an indiction that the student receives special

education services. The student's that responded to that question designated that 90%

of the students who answered yes, were males. Of this population 90% disagreed very much that they read for pleasure. The Connecticut Department of Education's *Smarter Summative* literacy results for seventh grade, who are now our 8th graders participating in this case study, indicated that females out scored the males by 51% across all seventh grade classrooms. In review of the same data for the males special education students, only 20% of the students were proficient in literacy.

Based upon the survey results related to reading/literacy, the interviewee were asked about what would motivate them to increase their reading, all of the students responded "nothing would." The follow up question about, if you don't like to read, why? Both Thomas and Jake said "they never liked to read," while Debra and Jane read, but didn't want to increase their reading. We had further discussions about reading, and what they watched and read on their electronic equipment and computers. Thomas commented, "…I do read stuff on my computer, like hacks for my games, and stuff about games that I want to buy." Jake, Debra, and Jane all responded that they read things and stuff on their computer, but didn't think about that as reading.

In review of my survey and interview results, and referring back to the literature related to males underachievement in literacy, Logan and Johnston's (2010) research examined behavioral and motivational factors as they related to the differences in cognitive abilities, brain activation during reading, differences in reading strategies, and what type of learning environment worked best for males. Within the classroom learning environment the students were presented with literacy instruction, and depending on likes and dislikes, male and female students spent unequal amounts of time engaged in reading activities. The authors also discussed the males attitudes and motivation for

reading, and that it may have predicted why males have lower reading comprehension scores. According to both Watson, Kehler, and Martino (2010) and Mills (2000), gender was only one piece of the male literacy underachievement puzzle, they added social and cultural backgrounds, curriculum and instruction, assessments, and male attitude toward school. They suggested that the focus needed to be very complex to address all the integral pieces to produce male literacy achievement.

Summary

Multiple methods of collected data were used to provide insight into two research questions related to the affect gender has on male educational outcomes. Three themes were reflected in the collected data that examined male gender disparity in education. The first two themes that were evident in the data answered "how male students perceived their education?" The first theme was, the student's positive attitudes and opinions about their education, and the second theme was male student's underachievement and disproportionate representation in special education. The third theme was apparent in the data collected to answer, "what role education plays in the male's future life goals and plans?" That data collected showed a lack of literacy engagement of male students. Male students indicated positive attitudes and opinions about the role education played in their future goals and plans.

Chapter 5 - Conclusions and Implications

In chapter four, this researcher discussed the three themes that the data supported that answered the two research questions. The research questions "how do students perceive their education?" and "what role does education plays in their future life goals and plans?" were asked of the eighth grade students in my case study. The three themes that emerged from the research data were, positive attitudes and opinions, male academic underachievement, and disproportionate representation in special education, and lack of literacy engagement.

This researcher used the case study methodology to support an understanding of the effects gender has had on academic achievement. The case study focused on male gender disparity in education, and the large numbers of males referred and receiving special education services, its impact on their academic success, and future plans and goals. The literature provided an understanding of the issues associated with gender and males educational outcomes. My case study questions were developed from the literature and were used to support a better understanding of the effects that gender may have on academic achievement. My research questions supported a deeper understanding of the male student's experience in education and how their gender impacted their academic outcomes. The research case study was conducted in a small rural town in the northeastern corner of Connecticut, and included the students of the eighth grade class.

The themes that were developed from the data to support the first research question, "how do students perceive their education?", were positive attitudes and opinions, and male academic underachievement, and disproportionate representation in

special education. The student's positive attitudes and opinions were evident in the high

percentages of students, female exceeding males, that responded to survey questions

about their beliefs has high achievers and setting high goals and applying the effort to

try harder. Both the females and males did not see any gains by being in single-

gendered classrooms, but the males were very positive about having male teachers.

The second theme, male academic underachievement, and disproportionate

representation in special education were evident in the artifacts, documents, survey

results, and interview results. The male student's *Smarter Summative* lower literacy

achievement results, high office referral behavioral data, disproportionate male special

education population, and lower recommendations for high school honor courses, were

evident in the data. The female's data indicated higher literacy achievement, minimal

office referral behavioral data, and minimal referrals to special education. The female

students were also recommended at a much higher rate for high school honor courses

The themes that were developed from the data supported the second research

question, "what role does education plays in their future life goals and plans?", were

positive attitudes and opinions, and lack of literacy engagement. The student's positive

attitudes and opinions were evident in the high percentages of students, female

exceeding males, that responded to survey questions about their beliefs surrounding

weather a good education was important for their future, and if they planned to attend

college after high school? The students expressed positively about their future, and

discussed their upcoming high school career possibilities. The interview responses

indicated that the male students expressed more positively than the females regarding

having a male teacher versus a female teacher. The second theme supported by the

data from the second research question, was the lack of literacy engagement. The survey data indicated that half of the eighth grade students disagreed that they read for pleasure. The interview data were met with negative comments about increasing their reading for pleasure. The lack of achievement in the literacy data, particularly as it relates to male students, and male special education students, were other indicators of the lack of literacy engagement.

Implications for Practice

Based upon this researcher case study, the data indicated that our female students were achieving academically, but the male students, and particularly our male special education student's, were not achieving academic success, and change is needed for improvement. The student's overall positively about how they perceive their education, and the important role that education plays in their future goals and plans, provides a good foundation for educators to create improvement. Framing the issues that need improvement are evident in the data. Male academic underachievement, particularly as it relates to the deficits in male literacy are extremely important to address. The better our male students read, the greater the probability that they will be successful in school and in their plans for their future.

In review of the literature, and the data from this researcher's case study, the following implications for practice to address male literacy deficits would support increased male literacy skills. The suggestions would include, finding multiple ways to build literacy skills at the start of the student's schooling in pre-kindergarten throughout their school careers. Include literacy centered curriculum in areas of interest such as gym, art, music, computer, shop classes, and recess. The Finnish educational system

gives additional time during the day for school children to participate in unstructured outdoor play, such as recess (Rhea, 2014). The United States educational systems has schools that do not include outdoor recess, and some schools, that there is no recess at all. The Finnish educators find that allowing the students to participate in the unstructured outdoor activity had resulted in increased in focus during instruction time.

Discontinuing the practice of dividing the "good readers" and the "not-so-good readers" during the early elementary years would decrease the reading gap for the younger readers. Catsambis, Buttaro, Mulkey, Carr Steelmaan, and Koch, (2012) noted that reading ability grouping in the lower grades increases the academic success of the students placed in the high-ability groups, and decreases the academic success of those placed in the low ability groups. Sullivan (2004) pointed out that providing ideal reading environments for males, and tailoring reading programs to the things males like to do would support increased desire of reading for males. Regarding the desire or motivation of males readers, Logan and Johnston (2010) noted that there are attitude and motivational differences between male and female students. The male students were more successful when taught to read using the phonics method, and it improved their reading comprehension.

High rates of office behavioral referrals, and the disproportionate male representation in special education referrals are issues that require attention. In review of the literature, and the data from this researcher's case study, implications for improved practice would include changes in classroom instruction and teacher self-awareness related to gender bias. It would be important to establish guidelines for teachers and special educators to reduce gender biases as it relates to referrals to

special education, and office behavioral referrals. Increasing educators awareness of

gender bias in their classroom practices, and its affect on the male student's success

would increase the possibility of gender equitable educations for all students. Additional

supports for educators in acquiring positive behavioral classroom management skills,

would work to reduce the missed instructional time male students experiences due

being sent out of the classroom and to the office for behavioral issues. Jennings and

DiPrete (2010) discussed the sizable effect teachers have on early elementary students,

and the results related to the student's social and behavioral skills, which in turn has a

large impact on the student's academic success. Wehmeyer and Schwartz (2001) noted

the impact of gender bias by educator related to referrals and admission to special

education services. Attention by the educators to positive classroom strategies to

address problem behaviors, and self-awareness of gender bias would decrease

referrals for special education services.

Suggestions for Future Research

Future research is needed to understand what is actually working in schools that

have been successful in engaging male learners, and have shown improvement in male

academic achievement. The research should include global data from schools that have

successfully implemented programs, curriculum, and instruction that has increased

male literacy skills.The United Kingdom's reading reform programs have shown

increased academic success for male students, and further research could be valuable

for our male student's academic underachievement. Engaging male learners and finding

the right combination of interest and activity in their learning day would be key to male

academic success.

Further research is needed to better understand the differences in male and

female learners, and what programming, instruction, and curriculum could achieve the

best educational outcomes for the individual genders. Understanding if the reasons why

male students lag behind females in reading has to do with what parts of the brain

males and females use could be very important in determining literacy instruction.

Continued brain science research could support further understanding of the cognitive

differences between males and females. Providing research data to educators on the

front lines with male students, could help support male based instruction, and

curriculum that may be engaging to the male brain. The more brain research is

explored, the more it will help support educators knowledge about gender differences,

and the connection to male gender disparity in education.

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Appendix A

Student Survey- Quality Education Survey
* Required

      Gender *

          Male
          Female

      Grade *

          7th
          8th

      I believe I am a high achiever. *

          I agree very much
          I sort of agree
          I don't agree or disagree
          I sort of disagree
          I disagree very much

      I find that I try harder if I set high goals for myself. *

          I agree very much
          I sort of agree
          I don't agree or disagree
          I sort of disagree
          I disagree very much

      Many times, I lose interest in attaining the goals I set. *

          I agree very much
          I sort of agree
          I don't agree or disagree
          I sort of disagree
          I disagree very much

When I am learning something new, it is okay if I make errors. *

> I agree very much
> I sort of agree
> I don't agree or disagree
> I sort of disagree
> I disagree very much

> I believe I am a high achiever. *

- ○ I agree very much
- ○ I sort of agree
- ○ I don't agree or disagree
- ○ I sort of disagree
- ○ I disagree very much

I find that I try harder if I set high goals for myself. *

- ○ I agree very much
- ○ I sort of agree
- ○ I don't agree or disagree
- ○ I sort of disagree
- ○ I disagree very much

Many times, I lose interest in attaining the goals I set. *

- ○ I agree very much
- ○ I sort of agree
- ○ I don't agree or disagree
- ○ I sort of disagree
- ○ I disagree very much

When I am learning something new, it is okay if I make errors. *

- ○ I agree very much
- ○ I sort of agree
- ○ I don't agree or disagree
- ○ I sort of disagree
- ○ I disagree very much

I feel that a good education is very important for my future success. *

- ○   I agree very much
- ○   I sort of agree
- ○   I don't agree or disagree
- ○   I sort of disagree
- ○   I disagree very much

   I like to read for pleasure. *

- ○   I agree very much
- ○   I sort of agree
- ○   I don't agree or disagree
- ○   I sort of disagree
- ○   I disagree very much

I plan to attend college after high school. *

- ○   I agree very much
- ○   I sort of agree
- ○   I don't agree or disagree
- ○   I sort of disagree
- ○   I disagree very much

Do you regularly receive help in the Resource Room? *

- ○   Yes
- ○   No

   Are you willing to participate in a follow-up interview? *
   This means Mrs. Smith would ask you a few more questions. If yes, type
   your name in the box below.

Appendix B

Interview Questions and Sub-Questions

1.Do you feel that girls and boys are graded equally/fairly?
a.   Do you think your school work is graded as fairly as your female/male classmates?
b.   Do you ever compare your grades to a female/male classmate, and do you feel that you are graded as fairly as your female/male classmate?

2. Do you think that your academic achievement would increase if your classroom was single-gender, all boys, or all girls?
a.   If boys/girls were in a class with just boys/girls, no girls/boys, do you think you would do better academically?
b.   Would you be more likely to participate in class discussions if you were in a class with just males/females?
c.   Would you like to have the opportunity to learn in a classroom with just male/ female classmates, and a male/female teacher?

3. What would motivate you to increase your desire to read?
a.   Would you read more if you got to choose your reading materials?
b.   If you don't like to read, why?
c.   What kind of reading materials do you like?