

Changing the Mindset: A Look at Current Literacy Practices and How These Are Failing Boys

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### Abstract

The special education population in schools in the United States shows a significant disproportionality between male and female students. Often special education referrals are made due, in part, to student underperformance in reading and basic literacy skills. Using past studies regarding best practices for literacy instruction, gender studies, and special education, the current study looks to understand what teachers can do to eliminate the inequality in special education referrals between genders in school aged children. Results suggest that female students begin school with a head start to their male counterparts, and because of this, typically do well in the earlier grades in which literacy skills are emphasized. However, further research suggests differences in behavioral and societal ideals create this differentiation.

## Section One

### Introduction

“Boys outnumber girls by at least two to one in nearly every US disability category (Arms, et al, 2008). It has been noted that male students dominate the special education population (Piechura-Corture, et al 2011 & Arms et al 2008). This study is taking an in depth look into how current literacy practice in schools P-12 across the globe affect students in regards to gender. Male students are receiving special education services at a much more drastic rate than their female counterparts. Is this due to questionable literacy practices or does it have more to do with developmental needs, genetics, and behaviors acceptable for society?”

### Problem Statement

Although it is well known that male students contribute to the majority of the special education population, little research has been done in combining classification, gender, and current literacy practices. While many may be aware of research that looks at one or two of these topics, many are unaware of how these three topics can intertwine. Teachers need to be aware of gender stereotypes and societal roles that may be influencing their decision to classify students. In the age of the Common Core State Standards, where “college and career readiness” is at the forefront of instruction, teachers need to recognize all students who are struggling, not just those who scream out for help. Teachers need to recognize when and where students struggle and find ways to meet those students’ needs. The solution may be simply stated as changing the current literacy practices so that they fit the needs of the individual student rather than teaching what has always been taught. Unfortunately, as many will note, the implementation of this idea is not as simple. However, as DeWitt notes, many tasks that teachers currently require of their

students are “exercise in compliance rather than learning” (2016, p. 2). However, many other factors influence students and their abilities to complete tasks. Other worthy theories of why males create the bulk of the special education population include developmental differences in young children, genetics, and behavioral contrasts.

### **Significance of the Problem**

Special education is a necessary part of education and many students benefit from the services they receive. However, in a system where there are not enough resources to service every struggling child, only the neediest typically receive classifications and thus, services.

Unfortunately, students who “fly under the radar” due to internalizing behaviors rather than creating a distraction in class do not receive the services they need. Many times these students are female. As Manwaring states, “popular thought also has it that girls are quieter, more passive, and their temperaments suit the sedentary paper and pencil approach of the public schools and therefore do not get identified as having special needs” (2008, p. 61). All too often, teachers spend the vast majority of their time and effort on the students who are disrupting the learning of the class and cannot allocate enough time to help the silent strugglers. In addition, students, especially those who need support academically or behaviorally, learn a significant amount from their peers. It is unfortunate that current statistics create environments where students do not have the opportunity to grow to their full potential.

### **Purpose**

The purpose of this capstone project is to synthesize the already known research in regards to special education, gender, and literacy practices in order to create new understanding in regards to why the gender gap is so substantial in the education system. This research has helped the

researcher, a special education teacher; better understand her students and their needs as learners. Additionally, this research will help to better inform teachers and committees on special education in regards to how best to proceed with a student who has the potential for classification. What's more, there are major themes running throughout this analysis which may be beneficial for that intent on gaining knowledge about gender gaps as well as literacy practices.

### **Research Questions**

This researcher seeks to find the answers to the following questions

- Do current literacy practices create a gender bias?
  - Does this account for the larger male population in special education?
- What factors into classifying a student for special education services?
  - Can this be changed by changing instructional practices?

### **Background to the Study/ Personal Rationale for this Study**

The rationale for interest in this study is this researcher's passion for teaching as a special education teacher. When this research began, this researcher was a self-contained 8:1:1 teacher and noticed that the entire program from sixth through eighth grade (a total of 16 students) was made up of entirely male students. This sparked an interest in why the gender of the population was so skewed. As this researcher continues working in less restrictive classroom settings, it is evident that more male students than female students are placed on her case load. It became clear there was a need to examine the issue more deeply to determine why more males than females are classified and to look at common practices in the education system that may contribute to this difference.

**Definitions**

Biological Factors –Factors that affect males and females from birth. Factors can range from physical to neurological or genetic differences. These factors may or may not be able to be remediated through intervention.

Social/Cultural Factors- Generally accepted standards, customs, or values in a particular area. These factors may or may not be outwardly acknowledged by those participating in the culture.

Self- Contained- A special education classroom in which the entire student body is composed of students with special education classifications. Students in these classes often have the same classification, although this is not by any means mandatory

Classification: The process in which students obtain the label of special education; which allows them to receive special education services.

CSE- Committee for Special Education: A gathering of professionals which may include, but are not limited to, a special education teacher, a general education teacher, a psychologist, the committee chair (may also be a dual role), other service providers (speech pathologists, guidance counselors, physical therapists, etc.), the student (dependent upon the age of the student), and the student's parents whom believe that a student would be a candidate for special education services. This committee decides whether that student would be an appropriate candidate and what level of services would create the best opportunity for learning for that student.

Least Restrictive Environment: The level of service that is most similar to a general education setting in which the student can still be successful. This often means that a student with a special education classification will still be placed in a general education setting; however, they

will receive some additional supports or services that the general education students do not receive.

Literacy Practices: The teaching approaches used in order to teach students skills in reading, writing, speaking, and listening.

Institutional Sexism: “The manipulation or toleration of institutional policies that restrict the opportunities for one sex as compared with the other sex. ” (Sexism, 2002)

### **Study Approach**

This capstone project was created using a meta-analysis. A meta-analysis is “the use of correlational design procedures to gather and analyze the results from numerous completed research studies to determine the extent to which specific variables are related based on all of the completed studies” (Clark & Cresswell, 2015, p. 196). The reason a meta-analysis was used in this research project was because this researcher did not have access to a large enough population of students to conduct the research. Consequently, this researcher was able to draw from many studies and was able to make claims that would not have been able to be made if a smaller data was used.

### **Positionality**

The researcher was born and raised in western New York. She attended public schooling throughout her formative years. For her undergraduate work she attended Niagara University as a dual elementary and special education major. Once she graduated from Niagara, she began teaching. She taught in a rural school as a math teacher, followed by a residential school for students with significant emotional and learning needs, still as a math teacher. Following that, she taught as an 8:1:1 teacher in a suburban district and is now currently teaching as a teacher in

a consultant teacher (CT) and integrated co-teacher (ICT) setting in a suburban/urban district.

In the midst of teaching, the researcher has been attending The College at Brockport for her Master's Degree in Literacy. Even as a teacher who specializes in math and science, literacy has shown to be a substantial influence on the abilities of students to do well in school.

Because of this, the researcher believes that the ability to teach literacy practices, and teach them well, is essential to the learning and growth of this nation's students.

### **Methods of Data Collection**

The chief method of data collection used in this capstone project was the utilization of the Drake Library's online database collection as well as google scholar. This researcher used journals and articles taken from the data bases. In addition to journals and articles, a small selection of books was referenced. When researching articles, this researcher used key words such as gender (gap, discrepancy, difference, female, male), special education (classification, special needs, learning disabilities, and literacy practices (read aloud, readers workshop, writers workshop, literacy class, ELA, English) in order to find resources pertinent resources.

### **Procedures**

The beginning of this research commenced during the College at Brockport's spring 2014 semester. This capstone began as an in depth look at brain based research and the gender gap in education, however due to the findings, the project morphed into an in depth look at the gender gap specifically in an educational setting with a concentration on literacy practices. Major themes throughout this study include descriptions of current literacy practices and biological and societal/cultural differences between the female and male gender. In terms of literacy practices, the practices of read aloud, readers workshop, and writers workshop were described. As for

biological factors, themes are broken down further into physical differences and cognitive abilities. Finally in terms of societal/cultural differences, the themes are broken down into teacher referrals or “soft classifications” and institutional sexism. Research was gathered intermittently from April 2014 until October 2016 using the Drake Library online databases and google scholar.

### **Criteria for Trustworthiness**

The criterion for trustworthiness used in this capstone research project was the use of the research method of meta-analysis. A meta-analysis is used to “describe the extent to which variables are related as determined by many separate research studies” (Clark & Creswell, 2015 p. 196). In addition, the researcher also conferenced with her supervisor in order to sustain a succinct and credible finished capstone project. The study provided reasons for importance, as well as potential shortcomings and future ideas for research.

## **Section Two**

As the research was being done in finding answers to the posed research questions, much of the research lead itself into three major topics. These topics include literacy practices, biological factors, and societal/cultural differences, as well as their subsequent sub categories. According to Arms et.al, (2008) gender is one of the greatest predictors in whether or not a student becomes classified as having a disability. This paper seeks to tie the current literacy practices and how they help to increase the discrepancy between genders in the special education population.

## **Literacy Practices**

As every child is unique, so is the teacher. Because of this, students are taught how to read, write, speak, and listen in a variety of manners. However, research shows that particular techniques and practices are more beneficial to students than others. This research is often dependent on the (grade) level of the student; however, some practices span grade and ability levels. As most initial literacy instruction takes place in the primary grades, this paper will focus on the “best” literacy practices taught among primary school teachers. Three best practices have been identified as read alouds, readers workshops, and writers workshops

**Read Aloud.** One popular strategy that teachers use to introduce text and text features to students is the read aloud. While every teacher, school, district, etc. has their own perception of what a read aloud should look like, the definition this paper will use is “an instructional practice in which teachers or parents read texts aloud to children, incorporating pitch, tone, pace, volume changes, questions, and comments to produce a fluent and engaging delivery” (Johnston, 2016, p.40). The purpose of a read aloud is to model reading habits for students. By reading the chosen text aloud to students and modeling their thinking, the adult reading the story is showing children what an active participant in reading looks like. They are also allowing children to hear what fluent readers should sound like and the children can use this as an exemplar in what they should ultimately sound like once they become fluent readers themselves. When choosing books to use for this strategy, teachers must choose books that not only support the lesson target, but those that are engaging to the student and teacher alike. According to Braxton, “the most important issue in choosing a story to read aloud is to choose one that appeals to you and that you can hear yourself reading” (2007, p. 52). The reason this is stated is because the teacher needs to be the role model. They should be modeling fluency and engagement in the text.

Yet, if the teacher does not love the book, their voice will differ and the students will pick up on it. No matter how great the lesson, it will be much harder to foster the love of reading.

Teachers will often start a read aloud with a mini lesson in which they will highlight a particular habit or strategy for students to focus on not only during the read-aloud, but during their independent reading and writing as well (this is spoken about in more depth throughout readers and writers workshop in future sections). One noted important habit that teachers can reference is the idea of highlighting the print in a text. For obvious reasons, if a student is not directed towards the text for one reason or another (and that reason can differentiate depending on the lesson), the student will spend the vast majority of the read aloud looking at pictures (Zucker et al. 2009). Therefore, the teacher needs to be purposeful in the text they choose and what they decide to point out to the students in order to not only keep them engaged, but to encourage them to adopt good reading behaviors. However, depending on the age group and the particular book, students paying attention to the illustrations in a read aloud book may not always be a bad thing. In particular, children's books will often feature illustrations which not only draw interest from the child, but add meaning to the child's understanding of the story. "Illustrations help the children orient themselves to the setting of the story and make sense of what is happening, especially if the setting is unfamiliar to them" (Braxton, 2007). Additionally, teachers need to preview vocabulary words with the students prior to the read aloud. Unless the lesson is on vocabulary acquisition, this is a necessary step in the read aloud. The students need this step so that they do not get "stuck" on hard or unknown words and lose attentiveness to the skill the teacher is actually trying to teach. This step of previewing vocabulary is particularly important when working with English Language Learners or students with disabilities (Lacina et al., 2016, p. 20). While pictures can be helpful in comprehension, ultimately, the goal is for the

student to be able to decode the words for meaning and use those words, phrases, punctuation, etc. to become good readers of their own accord. Throughout the read aloud, it is also crucial that the teacher ask the students questions. Students need to be cognitively engaged throughout the lesson. While teachers may ask literal questions throughout to gauge comprehension of the text, open ended questions are essential. “Open-ended questions monitor comprehension, allow students to infer based on the text, and provide opportunities for critical thinking” (Johnston, 2016, p. 42). Often times, a read aloud, or part of a read aloud is the initial instruction to begin readers workshop which will be discussed in this paper next.

**Readers Workshop.** Readers workshop is a practice which is widely implemented in primary classrooms. Readers workshop is composed of four components. These components include the mini lesson, independent work, small group conferencing, and then students sharing out their findings, known as a “teaching share”(Calkins & Mermelstein, 2003). The mini lesson is the portion of the lesson where the teacher “presents the teaching point and then models it clearly. Mini-lessons are usually short, specific, and presented in a manner that is meaningful to readers’ needs” (Mounla et al., 2011, p.3). Often times, a mini-lesson will utilize the read aloud strategy; although there are other ways of introducing the topic to the students. However, while the teacher addresses the whole class with the mini lesson, the most important aspect of readers workshop is the (small group) conferencing. This is the portion of time where the teacher takes individual students or small groups of students aside and works with them to help them understand important aspects of reading, as well as their personal identity as readers. Eventually, teachers should cycle through all students. Conferencing is not just for struggling readers. Conferences with students should emulate the conversations that adults have with their peers or colleagues about their own reading. “At the end of a conference I [the teacher] want to

have some documentable data to support a reader's growing understanding. We [the teacher and the student] both have an important role in the conferring process" (Allen, 2009, p. 25). Conferences need to be planned so that they are not just the teacher critiquing the child. Conferences need to be conversations in which both the teacher and the child are active participants, learning and growing in their understanding of reading and the identity of being a reader. Often enough, teachers will come into the conferences with an agenda of what they would like to get from all students. However, this approach does not work for readers workshop. Students are at different levels, have different interests, and different areas that are in need of improvement. The teacher needs to work with the student as an individual and not push their own agenda or ideas on to the student. According to Porath (2014), teachers will frequently create understandings of the reader by using the teacher's thoughts and experiences rather than form shared understandings for the reader's purpose of choosing their book, of connecting to the character, of any countless number of choices that the reader has throughout this process. One way that teachers use the conferencing time is while most students are reading independently leveled books of their choice. Teachers will grab small groups and conduct guided instruction based upon the research of Fountas and Pinnell. Guided instruction looks a lot like the above practices mentioned in conferencing; however, specifically when teaching a guided reading lesson, the small group that is pulled aside for conferencing is reading the same book and working on the same skills. The goal of the guided reading lesson for students is not just to read a book or even to understand a single text. The goal of guided reading is to help students build their reading power—to build a network of strategic actions for processing text (Fountas & Pinnell, 2013, p. 272). Once guided reading time has come to a conclusion, there is a last piece in which students "share out." The students take this opportunity to act as the teacher in front of

their peers. Students will demonstrate skills or strategies that they were able to use in order to help them read that period.

**Writers Workshop.** Writers workshop is a practice created by Lucy Calkins that is run much the same way as readers workshop. The major difference between the two is that instead of the focus being on reading, it is on writing. In a workshop model, the teacher is only guiding the students. Much of the time spent in writers workshop is time spent with students engaged in their own learning. “The workshop model allow[s] teachers to move away from a formulaic process of writing instruction, to one where students [are] encouraged to develop their own voice through writing” (Beecher & Sweeny, 2008, p. 520). The writers workshop is again composed of various components. These components include a mini lesson, independent work time, conferencing time, and sharing (Peha, 2003). Throughout the time spent in writers workshop, students are given the opportunity to observe a mini lesson in which the teacher describes a new skill or reiterates a previously taught one. Once again, the point of the ‘mini’ lesson is to be a short burst in which the teacher concisely introduces the skill of the day. That skill is often chosen because of the writers. The mini lesson, in a good writers workshop, is based upon the feedback and needs of the writers. “The writer influences the minilesson, leads the conference, determines her purpose and audience, engages in her process, crafts a product, seeks response, and asserts her voice” (Kissel & Miller, 2015, p. 78). In writers workshop, the most important aspect of the workshop period is the independent work period with small amounts of time dedicated to conferencing with the teacher. “Writers workshop is designed to emphasize the act of writing itself—students spend most of their time putting pencil to paper, not just learning about it” (Peha, 2003). The teacher then proceeds to allow the students to begin working independently on their respective writing projects. In this independent time, students should be

self-driven and engaged in their work with minimal to no prompting from the teacher. When one observes a classroom, they will frequently see students sprawled all over the classroom. Students are given the opportunity to work where they feel the most productive, creative, on task, etc. Often times, after a teacher has conferenced with many students, she will notice a theme of an error or a technique used by students that she feels needs to be addressed. Then the teacher will stop the class for a whole group teaching point. This teaching point is quick and allows students to get back to work within a few minutes. After the teaching point the teacher continues to conference with students. With a few minutes left in the workshop block, students designated to share out, will take their work and show their classmates the skills and techniques that they used to craft their work. One of the most important ideas in Writers workshop is that students are “publishing” their work. “Publication of student writing has been considered a mainstay of the writers workshop since the early days of the ‘children as authors’ movement” (Lenters, 2012, p. 125). Because this is such an important aspect, it is often encouraged for the students to share out in order to receive feedback from their peers. They are then encouraged to use this feedback to go back and revise and edit their papers for a future share out. This way the students are learning the writing process in real time, rather than relying on their teacher to tell them how it is done.

## **Biological Factors**

**Physical Factors.** Throughout the various studies conducted, there were many differences noted between males and females. One of the more intriguing findings was the physical differences between male and female students. One might think physical differences typically mean size; however, less noticeable differences are present. These are the differences,

dependent upon the teacher that could cause male students to not learn as well as their female counterparts. One of these differences is hearing. “The difference in hearing between males and females alone can account for why many boys look like they are not paying attention or why teachers need to redirect them much of the time” (Piechura-Couture, 2011, p. 2011).

According to Piechura-Couture, girls have an innately better sense of hearing. Female students have a much easier time hearing higher pitched noises, as well as understanding verbal speech patterns. Because of this, girls fare better than boys in classrooms in which instruction is mainly given verbally, especially if the teacher does not have a loud, low pitched voice. As Senn (2012) states “boys may often be perceived as not paying attention, when in fact they simply cannot hear” (p. 215).

Additionally, male and female brains are different. It has often been stated that male and female brains are “wired differently,” showing that females fare better in English and social studies, while boys perform better in math and science. While this has been disproven, there is research that states that the brain of each of the sexes develops differently. According to Bonomo (2010), “the left side of the brain, which is responsible for the ability to use language and connected to verbal and written ability, develops sooner in girls and girls therefore tend to perform better than boys in those areas” (p. 257). Furthermore, in addition to developing differently, brains are stimulated in dissimilar ways between the genders (Senn, 2012).

Research has shown that male and female brains process and recall scenarios in different brain regions (Gabriel, 2008). Additionally, research has shown that female brains are never “turned off” meaning that when in the classroom, brains of female students are continuously stimulated and thus learning (Senn, 2012). Unfortunately, the same cannot be said for male brains. Often times, boys become disengaged and bored quicker due to lack of stimulation to their brain.

“Movement has been shown to stimulate boys’ brains” (Senn, 2012, p. 214). Because of these biological factors, females have a natural learning advantage in a classroom where they are asked to sit quietly and complete a task. In order for boys to complete that same task, due to biological factors, there has to be a larger amount of motivation and work ethic.

Another aspect that has been mentioned as a determining factor for the higher percentages of males in special education is that boys are more susceptible to disorders determined by genetics.

There is substantial evidence of higher prevalence among boys for many child psychiatric conditions. *The Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association [APA], 2000) indicates that overrepresentation of boys in child psychiatric conditions is most striking for autism, stuttering, and attention-deficit/hyperactivity disorder. Male overrepresentation also occurs for conduct and oppositional-defiant disorders, Tourette’s syndrome, encopresis and enuresis. (Coutinho & Oswald, 2005, p. 8)

In addition to the above conditions, there are disorders such as general speech delay, x-linked genetic disorders like colorblindness, and other disorders that are characteristically linked to males (Skarbrevik, 2002, Coutinho & Oswald, 2005, Bruce & Venkatesh, 2014). Any and all of these disorders contribute to the struggle that some male students face, in particular with literacy skills. While students with medical conditions are not the majority of students in classrooms, they are a significant portion of the population and should not be discounted. Additionally, if students with particular conditions, such as those with ADD/ADHD or oppositional-defiant disorders are not managed properly in the classroom, they may become a disruption or in the

very least, a distraction to the rest of the students in the classroom. Moreover, studies have shown that women pregnant with males have a higher frequency of pregnancy complications with particular types of hormonal exposure. These complications can affect the pregnancy so much as to affect the unborn child well into adulthood. Males born from these complications often show problems in cognitive abilities and maturation rates in males (Skarbrevik, 2002, p. 98)

**Multi-Sensory Learning & Learning Styles.** As mentioned previously, male student's brains function differently than female student's brains. Male brains need stimulation to be turned on and able to focus (Senn, 2012). Often times, male students are perceived by their teachers as fidgety and not able to sit still in a classroom. Rather than seeing this as a distractor or some type of misbehavior, teachers should see this as a coping mechanism. Male students need movement in their lives in order to intake all of the sensory input they are receiving. If they are fidgeting, it is one (most likely subconscious) way of getting their brains to "turn on" so that they can focus on the topic at hand. In order to keep male students stimulated while, at the same time, continuing to teach to the female students too, multi-sensory learning is beneficial. "Multi-sensory modality is a technique that uses different senses to teach ... [it can] include tactile, visual, and kinetic [styles of learning]" (Gorjian et al, 2012, p. 346). By incorporating movement (kinetic) styles of learning, one not only makes the activity more hands on and interactive for the students, but gives male students the movement break they need in order to be successful while not taking anything away from the female students either. In Howard Gardner's theory of multiple intelligences (2006), every student has a modality (or a combination of a couple of modalities) from which they learn best. The more different modalities can be implemented in a classroom or lesson on a consistent basis, the more likely a teacher will be to

reinforce the concepts she is teaching to all students. Critics will argue that multi-sensory learning is a waste of time and students will learn regardless of the format in which the information is presented. Students will learn if they choose to learn as long as the teacher is a good teacher. However, one characteristic of a good teacher is meeting the needs of all of their students. If implementing different teaching styles is helpful to the students, it is definitely not a waste of time. In fact, integrating multi-sensory lessons into the daily classroom routine has endless amounts of benefits for students academically. Truthfully, by incorporating multi-sensory learning into the classroom, teachers are preparing students for real life scenarios (outside of the classroom). “Recent research has made clear that multi-sensory information processing is part and parcel of object perception and recognition in daily life whereby the brain integrates the information from different modalities into a coherent precept” (Blomert & Froyen, 2010, p. 196). What this means is that in a student’s daily life, they are taking in information in a multitude of ways. Students are using all of their senses in order to make sense of the world. When people are living life outside of school, they learn to adapt to the environments around them and use as many senses at their disposal in order to make decisions. A real life example involving multi-sensory information processing could be something as mundane as driving a car and approaching a traffic light. In order for the person driving the car to get to their destination successfully and safely they need to be able to use sensory input to make safe decisions. They use their eyesight to analyze the color of the traffic light, determine the length of the line of cars in front of them, and evaluate any signs with important information on them. That person would use their sense of hearing to listen to the world around them. They need to be aware of emergency vehicle sirens, other cars angry horns, and/or the radio. While the radio may often be used for pleasure, some listen to the radio while driving to find out traffic reports or

important messages on an AM station. Additionally to hearing and eyesight, the sense of touch is used. The person driving needs to be physically able to move and step on the gas or break dependent on their other sensory inputs. The sense of touch is unique and truly shows multi-sensory processing, because all of these movements are based upon the other inputs. While to most adults reading this, a traffic light does not seem like a daunting task. This is due to adults having a multitude of experiences and plenty of practice putting together and applying all of their senses every day. When the person is learning to drive, each sensory input is new and exciting (or terrifying). As Willis (2008) mentions, the more senses used while a person is learning something, the more places this information is stored in the brain, which then makes it that much easier to retrieve. Think of it this way, a person has a set of car keys but they often misplace them. However, each new way of being taught (using different senses) allows the person to have another set of car keys. The more ways the person has been taught, the more sets of keys they have. Even if they continue to misplace a set, they have other sets that they can use. The more places information can be stored in the brain, the more likely a student will be able to remember the information not only for the unit test at the end of the week, but for a much longer period of time. Multi-sensory learning approaches are often how people remember songs months, years, and decades later. Frequently, people will hear a song that they have not heard in a long time and be able to sing along still. This is because people often equate songs with particular times in their lives. Obviously, music requires the sense of hearing, but pair that with particular activities they are doing and all of a sudden the other four senses are now incorporated. All in all, students benefit from multi-sensory learning and male students especially benefit when teachers are able to implement kinesthetic learning into the lesson.

**Cognitive Abilities and Maturation Rate.** Starting at the beginning of kindergarten (students aged 4-5) there is already an academic gap between male and female students. Female students enter kindergarten ready for school. Socially, girls are conditioned to follow the rules. They are expected to behave and be respectful, to the point of submission, to those in authority roles (Arms et al., 2008). Because of this, females are conditioned for school. According to Ready et al. (2005), skills essential for school success include skills such as attentiveness, organizational skills, and time on task. “As early as kindergarten and first grade, girls outperform boys on several subtests of school readiness skills that facilitate learning” (Ready, 2005, p. 22). Once students begin to progress through the primary grades, the gender achievement gap does not close. Rather, “as students enter the primary grades, studies have shown that female students “emerge as strong readers” (Zuze & Reddy, 2013, p. 100). This achievement continues throughout the grades. Researchers have been trying to figure out the gender gap. They have concluded that one possible cause is the biological maturation rate that differs between boys and girls. “Recent brain studies have discovered the development of language areas of 5 year-old boys’ brains to be on par with the language areas of 3.5 year-old girls” (Senn, 2011). With boys beginning school a year and a half cognitively behind their female counterparts, it is no wonder that males struggle with literacy instruction. “Our current educational system creates an environment that is biologically disrespectful” (Bonomo, 2006, p. 262). What Bonomo means with this statement is that students are coming to school and being asked to do tasks that are cognitively above their current brain development. This is especially true for male students in the primary school. However, while researchers claim that our current educational system does not take into account student’s cognitive abilities, teachers are still responsible for the standards given to them by their districts. Long gone is the time many

people often reminisce about, in which kindergartners played and napped all day. With the implementation of the Common Core State Standards, students are expected to produce work at a young age. “The Common Core State Standards make it clear that five-year-olds need time to learn to write. (Calkins & Hartman, 2005, p. 11)” By requiring students to read and write at such a young age, boys are at a disadvantage throughout the rest of their schooling. This is the case because unfortunately, many educators (specifically educators in the secondary schools) believe that literacy instruction begins and ends in elementary school (before boys have even matured enough to fully grasp the importance of literacy skills) (Whitmire, 2010).

### **Societal/ Cultural Differences**

**Teacher Referrals and “Soft Classifications.”** Special education is a broad encompassing part of the public education system. Special education ranges from students who are gifted and talented to students with significant emotional, cognitive, and/or physical disabilities. “Special education should provide the student with the resources, adapted instruction, and specialized assistance to mitigate the effects of his or her disability, and so allow the student to successfully benefit from the school’s general curriculum (Hibel et al. 2010, p. 312). In terms of the special education classifications discussed in this paper, there are thirteen recognized disability categories in the United States. These categories, according to NICHCY (2012), are:

- Autism,
- Intellectual Disability, formerly known as mental retardation (ID),
- Specific Learning Disability (LD),
- Emotional Disturbance (sometimes called emotional disability) (ED),

- Traumatic Brain Injury (TBI),
- Visual Impairment (VI),
- Hearing Impairment (HI),
- Deafness,
- Deaf-blindness (DB),
- Speech or Language Impairment (SI),
- Other Health Impairment (OHI),
- Orthopedic Impairment (OI)
- Multiple Disabilities (MD)

These disability categories can be broken down into “hard” and “soft” classifications. Those that are considered “hard” classification are those classifications which cannot be disputed. Categories like TBI, visual impairment, hearing impairment, deafness, deaf-blindness, and orthopedic impairment, regardless of the person recommending the student for special education, will observe the same characteristics that prevent the student from independently accessing the general education curriculum. However, in the other categories, such as learning disability, emotional disturbance, and OHI, the classification process primarily uses anecdotal data. Because of this, there is a lot of discrepancy. Even in making a classroom observation or in trying to obtain data needed to make the classification for these students, different people would notice different behaviors or student needs. In “soft” classifications, much of the special education referral is at the discretion of the person making the recommendation. The most widespread disability category is learning disabled. Looking throughout the continuum of all of the classifications, LD makes up over fifty percent of all students who are classified as needing special education services (Arms et al, 2008). Another leading category in population is

emotional disturbance. “According to the Centers for Disease Control and Prevention (CDC) approximately 8.3 million children (14.5 percent) aged four to seventeen have parents who’ve talked with a healthcare provider or school staff about the child’s emotional or behavioral difficulties” (Judd, 2012, p. 217). With the two of the leading classifications falling in the “soft” category, one has to wonder how students are being classified. Boys continue to outnumber girls in the amount of classifications in the United States and, even more so, when it comes to “soft classifications”. However, one must keep in mind that “gender equity does not mean that equal numbers of males and females should be identified for special education” (Bruce & Venkatesh, 2014, p. 909). Rather, the special education referral process needs to be neutral and fair to both genders. Currently, teachers are primarily responsible for bringing special education referrals to the attention of a CSE. Unfortunately, the teachers being the primary responsible referrers’ causes there to be differing opinions on what students become classified. As Hibel et al (2010) states

Teacher judgments of acceptable student achievement or behavior are necessarily based on the performance of the referent group, which naturally consists of the other students in the school. Thus, the student’s peers within his or her school provide the normative standard for identifying whether the student is disabled and is so eligible for special education (p. 315).

This means that dependent upon the school a student attends, he/she could potentially be classified or not. For example, a student, Elijah, attends a school in which the school is known for achieving high scores on state assessments. The school does not have significant behavior issues from the student body, and is in excellent financial shape. At

this school, Elijah shows educational distress and would benefit from special education classification. In this school, Elijah would receive a classification. Now, take Elijah (the same exact student) and move him to a school that is underperforming on state assessments. This school has a multitude of behavioral issues from the student body, and is not a financially stable school. Elijah would be much less likely to be classified due to his new surroundings. Most likely, in this second school, Elijah would be less needy than many of his peers who would receive classifications first. Special education classification should not be dependent upon the school in which the child attends. If a child has a learning disability, emotional disability, or other need designated as a “soft classification,” that child should receive the supports they need in order to be successful regardless of the school they attend. In thinking about the over representation of males, Van Bergen et.al, (2015) claims that “soft categories” are where the disproportionality soars, especially in the category of ED. When deciding whether a student needs special education services, the child’s behavior plays a large role. According to Arms et al. (2008), “the primary reason for referral is student disruption of the classroom. ” (p. 352). General education teachers may see particular students who show behaviors as students interrupting the learning environment of their classroom. Special education is a potential way to “get rid” of these problem children. However, disruptive does not always mean emotionally handicapped. On the flip side, it also does not mean that someone with emotional instability will necessarily be a loud and disruptive force in the classroom. Some students will internalize their emotional issues resulting in anxiety and depression. If these students were to receive a classification, they would still be considered ED; however, people tend to forget the “quiet” side of the emotional

disturbance spectrum. While these quiet students may be struggling and need the supports, because they are not a disruption to the general classroom, they may not receive the attention they desire. Often times the behaviors resulting from emotional disturbance fall along gender lines. Females are typically the students who show anxiety and depression while male students are typically the ones who show oppositional defiance or conduct disorders. “The low achieving girl who is not a behavior problem may not be identified because academic under-performance is often not a priority for teachers when referring special education students” (Arms et al., 2010, p. 352). Teachers want to create environments that are safe and respectful for all of their students. As they are looking holistically at their classroom, their focus typically turns to the students (literally) screaming out for help and, unfortunately, after that may they look at those silent struggling students.

**Institutional Sexism.** While no professional would readily admit to favoring one sex over another in teaching students, it is apparent in our education system that females are often favored over male students. This is especially the case in humanity type classes. In a study researched by Below et al, (2010) they found that “teachers made more academic contacts and spent more instructional time with girls during reading instruction and with boys during math instruction” (p. 241). It is well known that the more contact time students have with the teacher, the better they will do. This is why schools that can financially afford to brag about their ability to keep class sizes down. On the flip side, often times, poor performing schools typically have much larger class sizes in which the teacher can only spend a minimal amount of time with each student. If teachers are spending more time with female students during reading and writing blocks, female students are receiving more constructive feedback and positive

attention than their male counterparts, which then gives them an advantage in their reading and writing abilities.

In 2005, Cassidy, Garcia, & Boggs reintroduced a short assessment they entitled “the sexist intelligence quotient” in which they share many statements about males and females in their role of literacy. The idea behind the article is to “test” the reader’s ability to understand how gender affects literacy. One example of a question that is asked of the reader is to decide whether the following statement is true or false: “Boys are 20% more likely to repeat a grade than girls are” (p. 143). Unfortunately, that statistic is incorrect because “boys are actually 50% more likely to repeat a grade. Boys also represent two thirds of all students placed in special education and consistently have lower reading scores than girls” (p. 144). The purpose is to bring awareness to the differences between genders. This is such a strong questionnaire for educators to review relative to how they run their classroom and whether their practices are unintentionally favoring one gender over another. Even though many teachers may be favoring female students over male students, one would argue that it is not purposeful, and that that might lead to this. Teachers may not even be consciously aware of their interactions with their students.

Another factor to think about in the role of gender in education is that the vast majority of teachers, especially those in the primary grades, are female. “Female predominance in school teaching is to be found in most countries throughout the world” (Drudy, 2008, p. 309). “Roughly 80 percent of the teachers in U. S. public schools are female” (Whitmire, 2010, p. 86). Because of this, most classrooms are run with a world view of that of a female. This could potentially lead to unintentional favoritism. For example, in Jethwani (2015)’s research,

In the all-girls class, teachers waited for girls to listen and cooperate with the lesson, whereas in the all-boys class teachers were less patient and asked that boys put their heads down or stand outside when they were not listening. The different consequences for the same behaviors... left the boys with less time to learn (p. 340).

There is this perceived notion that girls want to learn, while boys want to mess around and disrupt the learning environment. Even while two students may be showing identical behaviors, if one is female, all too often that student is given lesser consequences than her male counterpart presenting the same behavior. “Teachers may hold higher expectations for females that turn into self-fulfilling prophecies (Below et al. 2010, p. 241). While this is a positive view for female students, it is detrimental for males. “Girls are taught that they can do anything, while boys’ choices are restricted to activities that are considered appropriately masculine” (Watson & Kehler, 2012, p. 45). This idea gravitates towards the classroom too. Many students perceive school to be girly; it does not help when teachers decorate their classroom with colors and objects perceived as feminine.

Additionally, often times school practices are catered towards girls without that being the intended outcome. One example of this that research has shown is that male students typically enjoy nonfiction books and comics (Watson & Kehler, 2012, Unlusoy et al. 2010); however, so often ELA blocks are spent listening to, reading, and writing fictional pieces. In recent practice, the Common Core has introduced more nonfiction into the curriculum. However, when teachers have the option, they will often pick fiction books to share with their students. Females gravitate towards fiction books more often than males because females typically enjoy

reading fiction books over nonfiction. Females usually connect emotionally with characters in fictional stories while males appreciate facts that they can regurgitate back in conversations. In a logical thought process, since most teachers are females, they choose fiction books because they wish to share what they enjoy with their students. Unfortunately, this proves to work against them when working with a population of male students. “Boys enjoy reading less than girls and girls are almost twice as likely to report reading fiction as boys” (Watson & Kehler, 2012, p. 44). When boys are discouraged from reading, writing, and other literacy activities from such a young age, it is no wonder that so many male students have problems with literacy as they progress through the grades.

### **Section Three**

This paper has explained current literacy practices presented in the classroom and included information that explains the difference between male and female students physically and emotionally, but what is the next step? What does this information mean and what should educators do next in order to help all students be more successful in the classroom?

### **Conclusion**

In the current state of education, students, specifically male students, are not presented with opportunities to grow to their full potential. The education system needs reformation so that best practices are truly best practices for all and not just a select population of students. The practices that are currently implemented in teaching literacy need to be proven effective for both genders. The way that literacy skills are presently being taught is showing to be discouraging to male students. Male students are overrepresented in special education by at least two to one in most settings and to an even more extreme in more restrictive settings. Often times, the vast

majority of identified struggling readers are male students. Reading deficiency is a leading cause of students getting referred to special education directly and indirectly. When students have reading difficulties, not only do they have trouble completing the work asked of them (especially the older they get), but these deficiencies may turn into disruptive behaviors as well. Students that cannot read at the same level as their peers become frustrated with the work and begin to lose self-confidence. Because of this, as a coping mechanism, many students will become disruptive, defiant, or show behaviors not conducive to the classroom setting. Students will often rather be seen as the class clown or student who does not care, rather than the poor reader or “dumb kid”. When this happens teachers begin to notice the student as needing extra supports and thus turn to special education as a potential solution. Reading is a lifelong skill that students need to be able to be competent in, in order to be successful in life.

If reading and writing skills can be taught effectively and throughout a student’s schooling, then students (especially those in the older grade levels) will be better prepared for college and life. This paper described current best literacy practices and then analyzed them through a biological and cultural lens. This paper also talked about the school system as a whole with practices and ideal systems that need reformatting in order to be beneficial to all students. Special education is a wonderful resource for students who truly need it; however, special education should not be mandated for students who lack proper, efficient, and/or appropriate instruction throughout their schooling. A reading deficiency caused by a lack of good teaching does not equate to a disability.

**Literacy Instructional Practices.** Literacy instructional practices need to be implemented flexibly in order for all students to be successful. As Whitehead (2011)

mentions, boys continue to fall under this stereotype that their entire gender is illiterate. However, this is not true – it is just that literacy practices as they are currently implemented in classrooms, generally speaking, cater to the needs of female students. In speaking about three of the current most popular literacy practices- read alouds, readers workshop, and writers workshop- each of these practices expects students to sit quietly and listen or to sit quietly and complete their work. Boys typically have excess energy, so to make them sit quietly or work quietly for an extended amount of time, are asking the boys to put their focus on the practice instead of the outcome (learning to read and/or write). If teachers were to introduce and then regularly implement a literacy practice such as reader’s theater or another instructional practice in which students are up and moving, it may give male students an opportunity to not only understand the content but to enjoy the opportunity and become more engaged in school, and ultimately become better readers and writers.

**Biological Factors.** “Most educators still view elementary as the place where reading instruction starts and ends...[however,] due to inadequate reading skills, nearly a third of all eighth graders are at risk for dropping out of high school” (Whitmire, 2010, p. 45). Due to the different maturation rates between the genders, only including reading instruction in elementary school seems foolish if educators wish for all students to succeed. By starting reading and writing instruction later on, or by continuing instruction throughout all of the grades (including middle and high school), it gives all students a better probability of becoming fully functional, literate adults. In some European countries such as Denmark, students are required to wait until they are at least turning six before they are able to be enrolled in school. In the United States, students are often enrolled in kindergarten when they are four and five years old. However, as Dee & Sievertsen (2015) note in their research, students starting kindergarten at a later age have

statistically significant better mental health than those who start earlier. When these researchers speak about mental health, they looked into students' ADHD type behaviors. ADHD, or attention deficit hyperactivity disorder, is a disorder in which the afflicted has an excess amount of energy and has difficulty paying attention to a task for a long period of time. The vast majority of people classified with ADHD are male. If by allowing students to start later on, the culture reduces the amount of students who struggle with ADHD during their formative years, it can only benefit students and society as a whole. However, while many children would benefit from starting later, some students continue to flourish even when starting at a younger age. Literacy instructional practices need to be flexible to the learner rather than rigid to the school system. Not a single student is exactly the same and they should not have to be taught as though they are. Students' learning abilities, effort, interests, emotional stability, and support all fall on a continuum. The instruction we give the students should meet them where they are on this continuum, not force them to partake in learning in which they are not developmentally ready. According to Vygotsky (1978) and his theory of zone of proximal development, this is "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (p. 33). Vygotsky claims that each student has their own zone of proximal development. Each student has a different ability and a different potential than his or her classmates. By standardizing all literacy practices in teaching, it is doing a major disservice to the child. While there are small groups as well as individual work that can be differentiated in the workshop models, this is not always tailored exactly to the child and leaves room for improvement.

**Socio/Cultural Differences.** It is a known fact that the vast majority of teachers are white females. With the population of school children ever diversifying, teachers need to be aware of the worldview they bring to the classroom. Not all students' thinking is going to align with how the teacher thinks. Teachers typically recognize this when they are planning day to day lessons. However, they need to be aware of the more global (literacy) practices that they present in the class. While some practices may work for some students, not everything will work for everyone. Additionally, male students act differently than female students. Teachers need to be reminded of that occasionally. Teachers, especially those tasked with creating referrals for children to receive special education services, need to keep their perspective and bias in mind. As Lee & Otaiba (2015) noted all too often, teachers consider boys (and especially those from lower socio-economic status backgrounds) to have more inattentive issues than their female counterparts. The blame should not always be put on the child. Rather, the teacher needs to reflect on his or her own personal biases and see where this bias appears in their teaching. If all teachers were to do this, it would help the teacher have lessons that are more relatable, and therefore, easier to understand and remember the concepts being taught.

### **Implications**

Implications of this paper provide evidence that male students are over classified as special education students. In order for male students to reach their full potential, their needs need to be met. In terms of a biological sense, school literacy instruction needs to start later on, or in the very least, be more flexible in the educational setting. While some students are successful kindergarteners at age four or five, more students would be successful if literacy instruction was not implemented until later on, and then not just woven in, but explicitly taught throughout the later grades. In addition, retaining male students (or not allowing them to start until later on) is a

potential benefit for some students. As boy's brains develop differently than female brains, it is not fair to expect the same results from students who have only biologically matured to a fraction of their peers. Literacy practices not only need to start later in the grades, but literacy practices need to continue on through upper elementary, middle, and high school grades. Because every student matures at their own rate, if skills and strategies were to be taught throughout the grade levels, no student would miss the opportunity to be socially, emotionally, and biologically ready to learn how to read, write, speak and listen. The repetition of skills and strategies throughout a student's schooling can only be helpful.

In addition to starting and continuing literacy instructional practices with older students, incorporating multi-sensory learning is beneficial, too. As research has shown, females fare better when taught auditorally while males perform better when taught with visuals and in short sessions. If one were to combine all of these learning styles, they would have multi-sensory learning. Multi-sensory learning is beneficial because the more senses used, the more places the information is stored in the brain and the easier it is to retrieve it (Willis, 2008, p.426). If lessons are presented multi-modal, then both genders benefit.

### **Limitations**

One reoccurring theme not focused on during this study was the effect of race and ethnicity on classification of students. In many research studies, race and ethnicity was another high predicting factor of whether or not students were classified as special education students. Those with African American backgrounds were frequently mentioned throughout the research as students who often became unnecessarily classified (or in the very least, overrepresented) in the special education classification of emotionally disturbed. While teacher discretion was

addressed in this paper, the focus here was on gender. However, race is a significant factor in many (especially urban) districts. The vast majority of teachers, especially in the younger grades, are white females. Many times in more culturally diverse districts, these teachers do not understand cultural norms different from their own. Consequently, behaviors presented by students of cultures different than the teacher's, may be misinterpreted as defiance or insubordination. Often times, this may not have been the intention of the student. However, often a tension or distrust between the student and teacher, develops which makes it difficult for a meaningful relationship to flourish between the two. This can potentially impeded a student's academic growth.

Socio-economic status is another predicting factor that was not explicitly mentioned throughout this paper, but yet the research shows that this is another predicting factor for whether or not a student will be classified with a school sanctioned disability. Socio-economic status plays a role in a multitude of ways. Nutrition, or lack of it, is often a side effect of a low socio-economic household. If students are not well fed and do not have the proper nutrients in order to be healthy and stay healthy, then they have a greater likelihood of doing poorer in school. When one is focusing on whether or not they will be able to eat later that night, learning becomes a secondary focus. When this happens, year after year, students fall behind academically. Often this affects learning and leads to special education referrals.

While both of these factors are important and beneficial in understanding the discrepancy in the special education population, this research did not explore those issues.

**Future Research**

Future research ideas include looking into various other literacy instructional practices that are beneficial to both male and female students. Literacy practices that include differentiation for students with different learning styles, different needs, and different zones of proximal developments all in the same classroom need to be researched. The areas of focus for this research were chosen due to their popularity and widespread use among elementary teachers. However, there are other literacy practices used to teach students that were not mentioned.

Another idea for future research is to look into literacy practices used in older grades. Many students do not become classified until later grades such as upper elementary, middle, or some even in high school. It would be interesting to examine the literacy instructional practices are used in the older grades and if those practices positively or negatively affect classification rates.

Additionally, research in regards to literacy instructional practices, race/ethnicity, and socio-economic status would provide more information and insight into the whole picture when trying to understand the classification of each student.

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