

Academic Effectiveness in Single Sex Educational Settings for Boys

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Introduction

Historically, schools have been on the front lines of the battlefield for equality in our nation. In 1954 *Brown v. Board of Education of Topeka* saw racial desegregation of schools and its opponents fighting, sometimes literally, over the equal rights to education. More recent battles have been the rights of the learning and physically challenged as exemplified by *Public Law 94-142*. In many ways, the current educational system has been forged in the furnace of social equality by demanding the best possible environment for students, but there continue to be inequalities. For decades, data has shown that girls have been outperforming boys in language courses while boys do better in math courses. Both groups have proved to have similar, if not equal, overall intelligence and ability, (Scheiber, Reynolds, Hajovsky, & Kaufman, 2015) but standardized test scores for the subjects of math and reading demonstrate differently. A meta-analysis (Marks, 2008) of thirty-two countries showed girls in all thirty-two countries scored better in reading, and boys in thirty of the countries scored better in math (Iceland and New Zealand being the other two).

Because of the lessons educators have learned through their studies and experience, there is an understanding that children learn differently. Our educational system focuses standardizing the material taught in schools but establishes accommodations, with great success, for identified groups such as students with learning differences, low socioeconomic status, and even ethnicity. The same holds true that when a learning environment is developed around the gender of the student, their academic performance will increase. This statement is supported by the results of successful programs specifically designed to incorporate gender-specific teaching methods in the classroom (Marks, 2008). Single-sex schools provide opportunities for gender-specific teaching strategies and an environment that leads to a higher optimization of academic potential for students

compared to co-educational schools. Developing a better understanding of how academically effective single-sex schools are will enable schools and teachers to become more efficient and give boys and girls better opportunities for academic success.

Reading and Writing Scores

According to Scheiber (2015), current research says that males are more vulnerable to writing failures than are females. Possible causes of this range from perceived processing ability of boys to suggestions of a lack of “boy friendly” teaching strategies being used in the classroom. The data displayed that “A steady developmental trend was detected; the female advantage increases with age. The National Commission on Writing in America’s Schools and Colleges (2003) has recognized writing as the “Neglected R. In the process of this neglect, a significant finding has emerged: Males, who comprise half of the student population, are at a relatively large disadvantage in one of the most important skills required for success in society.” (Scheiber, 2015, p. 346). The consequences of this information go far beyond just the grammar school subject of writing. Since many college entrance exams (SAT and ACT) include writing samples as a way to assess knowledge, boys are held to a distinct disadvantage.

Three studies in Great Britain (Hartley, 2013) showed boys were not achieving as well as girls and wanted to identify a relationship to gender-based stereotypes. Each of the three studies was designed to build upon the other with the first investigating at what age do children develop the stereotype that boys do not do as well as girls in school. Results of study one found “as children progress through school, they increasingly endorse the stereotype that girls are academically superior to boys” (Hartley, 2013, p. 1721) with two-hundred thirty-eight British schoolchildren participating. The researchers presented each child with a scenario and then asked to identify which gender

was associated with the story. The second study set out to determine if stereotypes could influence children's academic performance. Each participant of the study was given a booklet with the same standardized questions and asked to answer them. The experimental group was told "we have found that girls do better than boys. Boys don't do as well." (Hartley, 2013, p. 1723) It was found that girls performed "significantly better" than boys in both groups, but that boys in the experimental group did "significantly worse in the experimental stereotype threat condition ($M = -.13$, $SD = .70$) than in the control group ($M = .14$, $SD = .64$)" (Hartley, 2013, p. 1724) The third study was designed to see if boy's performance could be improved by providing positive messages to counteract the stereotype threat. The results suggest that girls are not hurt by academic stereotypes, but boys are, causing a misrepresentation of their academic potential. The studies demonstrate similar trends in the effectiveness of stereotype threat where the performance of boys is hindered by perceptions, but also show promise that interventions can be made to reverse the effects.

Gender Gap in Academic Setting

Studies have shown that gender gaps do exist by subject in the classroom, but can be corrected. Marks (2008) conducted research in thirty-two countries that state "The gender gaps in reading in some countries are large considering that a one hundred score point difference is equivalent to a one standard deviation difference. These differences tend to be larger than the gender differences in reading reported in previous cross-national studies of reading." (p. 91). In addition to data regarding gender gaps, the study recorded progress where implementations were made for gender gaps with success. Policies designed to decrease gender disparity for girls reported: "These results probably reflect the success of policies in individual countries promoting the educational outcomes of girls." (p. 106). These actions demonstrate that each gender does have the capacity to develop skills for subjects where they are traditionally delinquent. The material covered in the accommodation programs was the same

intensity and overall material, but how it was delivered was designed gender specific.

Childs (2001, p. 313) states "Many teachers do appear to be stigmatizing these boys, albeit unwittingly." With the standardization of instruction that most students are exposed little is given for how the brains of different genders work. A study done by the National Institute of Mental Health (NIMH) in 2006 revealed trends in both the male and female brains. The research was conducted by having the same children take a brain scan once a year over consecutive years. Scientists concluded in 2006 that there were large differences in the sequence and tempo at which each genders brains developed (Sax, 2007). In time the brains balanced but during maturation, they progressed at different paces in various regions. The author is clear to state that this is not a reflection of intelligence, only showing a difference and that "Differences do not imply an order of rank." (Sax, 2007) The data from the NIMH study suggests that girls are approximately two years ahead of boys with integrating information and boys are ahead with spatial perception and object recognition. Understanding this trend in brain development and applying it to the typical classroom setting, where a crucial skill is to combine information, gives compelling rationale on why girls are perceived to be more interested in schools by their teachers. Additionally, the common forms of assessment mirror the areas where girls are more prolific providing opportunities for them to perform better in school.

The research shown in an evaluation of teacher assigned marks demonstrated that "these gender differences favored females in all fields" and "the female advantage in school marks has remained stable across the years of data retrieved (from 1914-2011)." (Voyer, 2014, p. 1194) These data reflects the overall classroom with social implications on how the teacher perceives boys and girls. Voyer links the data to why boys feel negative about school and do not perform as well. James (2007) states "boys report that the teacher is a major factor in how they view the class and their participation in it." (p. 165) The information learned in Voyer, and James' research demonstrates

that teachers' perceptions of the student play a significant role in the development of a student. The studies suggest that if a teacher has a negative perception of a student, then the student will participate less and be less enthusiastic about school leading to poor performance causing a downward spiral for the student, in this case, male students.

To demonstrate a pattern of males continuing education, Ewert, (2012) analyzes a study from the National Center for Education Statistics (NCES) and found in 1967 fifty-seven percent of bachelor's degrees were earned by men. In 2006, bachelor's degrees earned by men was forty-two percent. The statistics reflect not only a decrease in the percentage of men that attend college but also those that finish concluding that "Therefore, it is primarily educational experiences during college rather than concurrent life course events related to family formation and work that account for the gender gap in degree completion." (Ewert, 2012, p. 842). Added to the conclusion is "Gender segregation in college majors does not contribute to the gender gap in graduation." (Ewert, 2012, p. 842)

Another study that assessed college attendance and dropout rates found:

"It is troubling that persistence rates among men dropped by about ten percentage points in the bottom two income quartiles while rising by more than ten percentage points among women in those same quartiles. Even if rates of college entry were miraculously equalized across income groups, existing differences in persistence would still produce large gaps in college completion."

(Bailey, 2011, p. 16-17).

With fewer men entering college and fewer graduating, gender disparity in education widens. Studies have shown that more post-secondary education has a direct relationship to the quality of life and salary of an individual. If the opportunity to enter and finish postsecondary education for men is reduced, so are their future paths. The ripple effect of fewer men entering and finishing post-secondary education could have lasting effects on our global economy where there is an increasing amount of professions that require an advanced degree for entry-level positions.

Politics in Single-Sex Education

Debates that cover the subject single-sex education are often clouded by research that combines issues that are related to academics, but not unique to it. Instead of a focus on academic benefits, there is a deflection to possible implications of single-sex educational settings that encompass budgetary problems, social norms, and other issues. Salomone (2013) communicates the issues of politics by stating:

"The debate over single-sex schooling, as vigorously played out in the American press, blogosphere, and scholarly journals are not merely myopic on the domestic front. More specifically, it fails to address how cultural, religious, and political differences color overall attitudes and underlying justifications for separate schooling, and consequently, affect policies as well as education outcomes and lifelong

opportunities.” (p. 1013)

The political difference of opinion often leads to the perception of poor validity of the research and fails to address the findings. While the cultural, economic, and political variables are an important part of the single-sex education debate, they have been misused to justify a willful disregard for legitimate research and possible educational implementations that could benefit children.

Feminist and anti-feminist views on the subject of single-sex education is a heated one where name calling is rampant with extreme views. Rather than a model of increasing opportunities for both male and female students, there is a belief that one side will be unserved by new accommodations. In Mills (2010) there is evidence of the opposing perspectives where one group refers to a subset of boys as “poor boys” and the other call them “at-risk”. This type of discussion epitomize the arguments given by both sides that negate the research and play to political agendas. Failed policies of “separate but equal” are frequently mentioned as a rationale to keep the status quo causing the academic gender gap to grow while evaluations that demonstrate academic differences are challenged using a multitude of excuses. When given data displaying a gender gap in writing scores between boys and girls, a feminist group attempted to invalidate the research by saying “not all girls are achieving, and not all boys are underachieving.” (Francis, 2006, p. 188) The retaliation of an anti-feminist group was that schools are not natural because they teach boys how to deal with emotions like girls do, and therefore schools are taught with feminist and liberal approaches (Francis, 2008). For both groups, the actual value of the research was lost because of other agendas, but ultimately it was the student that paid the price.

Conclusion

Differences in the way boys and girls learn are documented with medical facts where studies have charted the development of the brain (Sax, 2007). The brain capacity and intelligence have

been found to be no different, but the sequence and tempo of development for certain areas are vastly different with boys showing advancement in spatial perceptions and girls in integrating information. These differences are reflected in the academic performance for boys and girls with current testing practices being more designed for integrating information. Additionally, teacher perceptions of the behaviors of boys are linked to lower teacher marks and an incorrect assessment that boys are not interested in school.

Identifying any trends in a single-sex academic environment will enable a better allocation of resources and open the door for future research to assist educators. Data shows that discrepancies in academic performance for boys, especially in reading and writing exist but they are sometimes clouded by opposing research that has a political agenda with persuasive verbiage and little valid academic substance. Studies have also shown that when gender accommodative measures are enacted, the academic performance of that gender increase not just for the subject of focus, but for other subjects as well (Marks, 2008). In regards to the school performance of boys, Childs (2001) suggests, “Practical solutions are more likely to involve a fundamental change in teaching strategy rather than efforts to increase the numbers of male teachers in our primary schools.”

School systems today have identified and made academic accommodations for a multitude of groups including, students with learning differences, from low SES, English language learners, and minorities, with great success. The changes made have been in efforts to benefit the child and require only a different set of knowledge, not an overall rework of the educational system. Teachers in training and veteran teachers are expected to learn multiple teaching strategies to give students better opportunities both in and outside the classroom with laws developed to ensure implementation. The identified groups that are already given appropriate accommodations are only a fraction of what a gender group makes in a typical classroom. With opportunities to influence approximately fifty percent of the student body, the research has tremendous potential.

Single-sex schools provide an academic environment where teachers have more opportunities to focus their teaching methods to a specific gender. The data suggests that when schools and educators can provide a setting that optimizes strategies for the student, the student performs better. Groups that are given accommodations without lowering expectations have demonstrated growth and are achieving success in schools where they used to have a disadvantage. Boys and girls do in fact learn differently, but the current system of assessment and academic delivery in our public schools does not reflect. Single-sex schools do not change the forms of assessment but can provide teaching methods that relate better to the gender of their students. Research has consistently shown that when a teacher relates to their students the attitude and academic performance of the student increases.

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