

Academic Performance of Boys and Girls

Girls are from Venus and boys are from Mars. This is a commonly used phrase implying differences at a biological level between boys and girls. This expected biological difference can be seen when newborn boys and girls are immediately gendered by a pink or blue swaddle. Another assumption made early in a child's life is that boys are good at math and girls are good at language. The common assumption is that women, who are stereotyped as being by nature better communicators and more empathetic, are naturally better at reading and writing. As its complement, men are expected to be better at math and science, since they are assumed to be more rational than women. These age-old stereotypes, however, are completely wrong and are also damaging to the success of both girls and boys. Although girls do outperform in language, they are also found to outperform or perform at the same level regarding math and science in the classrooms compared to boys (Voyer et al., 2014). The performance of boys is not reaching the same level as girls in the classroom and achievement in classrooms for these boys is falling behind. This academic difference could easily be dismissed as not an urgent problem, however; students are being stripped of their full potential and, in a sense, the success of every student in the world defines the future. In an attempt to start change, the issue must be handled at its root, which is culture. The issue with differences in performance results not from girl's biological lack of abilities, but rather because they are socialized to not exhibit enough confidence in the places that matter. As for boys, due to their socialized competitiveness, have a greater desire to prove themselves in the places that matter.

As culturally expected, girls have outperformed boys globally in language classes (Eriksson et al., 2020). Trakulphadetkrai (2017) also found a study in the UK where girls outperform boys in math classes, which is not culturally expected. This is not uncommon in

other countries, as there is no common finding that girls do any worse than boys in classroom settings in regard to math and science. According to Reilly et al. (2018), the difference does not appear to be significant until the fourth grade and continues to increase as the students advance their education in k-12. As the students mature and become more aware of the world around them, their academic success changes more and more. However, when it comes to achievement tests, although girls still outperform in language, boys do better in math and science (Eriksson et al., 2020). Research has argued that stereotypes have created a self-fulfilling prophecy for girls and harmful social expectations for boys leading to differences in performance which means that culture is the root of the problem (Voyer et al., 2014; Hadjar et al., 2014).

Cultural expectations for girls from their parents affect how they perform in the classroom. Voyer et al. (2014) suggest that parents attribute the success of their daughters to their effort, whereas boys have their successes attributed to their innate talents. Parental expectations that only a female's ceaseless effort could lead to their success ends up forcing these girls to believe they must put forth maximum effort to get their desired outcome. The girls grow up believing they need to spend more time than the boys to achieve in the classroom making them more likely to spend time studying and reviewing. Similar to this idea, the Kenney-Benson et al. (2006) study found that parents were stricter and more controlling of academic success when it comes to girls leading to a greater focus on planning and performance when in class. Along with the planning the girls put into their learning, girls engage in positive learning strategies that rely on them learning the material and not just preparing to ace a test. Parental expectations for their daughters in part can explain the outperformance girls have in the classroom setting.

Parents often raise their daughters with specific qualities that are not instilled into boys the same way. For example, Hadjar et al. (2014) explains that the female gendered traits of “conformity, cooperation and submission” which are socialized into girls are beneficial in the classroom. Dr. Jeannie Golden (personal communication, March 3, 2021) found this form of compliance in her college experience as well. She recounted an occasion where herself and another girl along with two other boys were in a position to be paid for their work. The girls took the salary at face value without a thought to argue, however, both boys went out of their way to fight for a raise of the offer. The girls in this situation had no disposition to go against the say of authority. Classroom settings thrive on students being compliant to their teachers’ directions and instructions which makes it a perfect environment for the socialized traits of females.

When looking at other forms of academic achievement, girls continue to outperform boys in language-based achievement tests. However, they severely underperform on math and science-based achievement tests compared to boys which might seem to undermine the argument that culture is causing girls to develop qualities to consistently overperform. However, this is easily combated by looking at girl’s lack of self-efficacy and the Expectancy Value model. Voyer et al. (2014) suggests that girls fall victim to the expectancy value model, in which, girls expect to do poorly on their achievement tests and so, therefore, they see no value in even putting forth full effort in the first place. The girls expect to do poorly because of a lack of representation in math books during childhood and because of stereotypes that they do not have the innate talent boys have (Trakulphadetkrai, 2017). Also, Azar (2010) explains that due to anxiety about accuracy girls depend on manipulatives such as counting on their fingers, whereas the culturally promoted competitive spirit of boys gives them the inclination to focus on the speed of giving an answer. This difference in methods leads to girls having a hard time of

keeping up during timed tests and later leads to anxiety and a decreased sense of confidence. Achievement tests, which are based on speed and time, are more attuned to the methods boys use due to their confidence. Whereas classrooms, which are based more on accuracy, are more attuned to girls. Another source of anxiety was found by Dowker et al. (2016) wherein he noticed most teachers in grade school are females. It was found that the female primary school teachers are less comfortable with math than the other subjects. Therefore, the girls in these classes, who find a greater level of connection and association to the female teachers than the boys do, relate the math anxiety the teachers have to their own talent, or rather their perceived lack of it. In result, the girls have extreme math anxiety when it comes to the achievement tests and then are not capable of showing their actual abilities as they do in the classroom.

Shifting the focus from the girls to the boys, it is found that boys underperform in school due to an inability to acclimate to social expectations. These boys find themselves overwhelmed by feelings of isolation which leads to poor classroom behavior. Hadjar et al. (2014) stated that the “*traditional image of male identity*, which includes dominant, ‘go-getter’ or even deviant roles” contributes to classroom behavior that leads to underperformance. As mentioned previously, there are characteristics that are considered feminine, such as conformity and submission, that are necessary in the classroom. Hadjar et al. finds that in an attempt to collect approval from their peers for being manly, the boys reject the “feminine” characteristics. This condition again leads to underperformance. The boys in these classrooms refuse to conform to classroom expectations because they need validation from peers, however, the underperformance enhances this struggle as boys often respond to failure with aggression.

Another contributing factor to the underperformance of boys is their susceptibility to using negative learning strategies. Kenney-Benson et al. study finds that boys focus on

performance and success rather than the actual learning process which would allow them to fully comprehend the topic. This is known as a negative learning strategy. The authors attribute this to the socialized characteristic of competitiveness. Similar to the cultural expectations for girls, the parental expectations for boys of innate talent are harmful to their success. Voyer et al. (2014) explains that parents attribute the success of their sons to their innate talents and therefore boys do not feel an urgency to place their attention on preparing for tests or completing homework.

Cultural expectations of gender act as a double-edged sword for both boys and girls in the academic setting. While girls pass through the classroom with flying colors the boys fall behind. The positions adults put the children in cause the difference in performance. The academic performance of girls is high because of the stereotypes pushed onto them by their parents and other adults during their childhood. The girls find themselves fit for a classroom setting due to their socialized compliance and due to their instilled belief that girls need to put forth full effort in order to achieve their goals. The other edge of cultural expectations hurts the achievement of boys because of the image they are expected to fill. There is a masculine image that boys try to fit into when they are around their peers. The deviance in the classroom that boys exhibit to avoid social isolation impedes their learning. Culture has failed both boys and girls and has limited the academic success of the future people of the world. Since this article locates a cause for academic difference, the next step is research regarding how to tackle the harmful cultural expectations. Without research on how to make a difference, there is a chance that there will never be a world without academically anxious girls and academically underperforming boys.

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