
Gender Inequality In STEM Education

Introduction

The gender inequality is always a significant issue worldwide from past to present. According to the report *Why So Few? Women in Science, Technology, Engineering, and Mathematics* by Catherine, H., & Christianne. C., & Andresse St.R.(2010), the authors “presents in-depth yet accessible descriptions of eight key research findings that point to environmental and social barriers — including stereotypes, gender bias and the climate of science and engineering departments in colleges and universities — that continue to block women’s participation and progress in science, technology, engineering, and math (STEM)” and talked about the inequality of gender of students and faculties in the university in detail. In *Bridging the gender gap: Why do so few girls study Stem subjects?* by Gjersoe, N. (2018), the article introduced that how the gender stereotype created and introduced gender inequality in different countries. (you may want to reduce some sources and add some personal thoughts and information) Moreover, in *The More Things Change, the More They Stay the Same? Prior Achievement Fails to Explain Gender Inequality in Entry into STEM College Majors Over Time.* (2012), the article said that the empirical basis for often-repeated arguments that gender differences in entrance into science, technology, engineering, and mathematics (STEM) majors are largely explained by disparities in prior achievement.” Analyses use data from three national cohorts of college matriculates across three decades to consider differences across several indicators of high school math and science achievement at the mean and also at the top of the test distribution. Analyses also examine the different comparative advantages men and women enjoy in math/science versus English/reading.” Regardless of how prior achievement is measured, very little of the strong and persistent gender gap in physical science and engineering majors over time is explained. Findings highlight the limitations of theories focusing on gender differences in skills and suggest directions for future research. All in all, these peer-reviewed files tell us the gender inequality in STEM education worldwide and in high schools and universities.

Solution one: hold STEM contests specialized for female students in high school

One of the possible solutions to improve the gender inequality in STEM education is to hold some contests for female students. According to Mathematical Association of America (2012), there is a math contest named China Girls Math Olympiad, which is an international competition with a proof-based format similar to the International Math Olympiad. Obviously, it would improve the gender inequality in STEM education because a lot of girls worldwide who are talented in math have attended this contest, and many of them choose STEM majors and performed well in university and later in graduate schools. But just as a coin has two sides, the disadvantage is also very clear. As a former volunteer of this contest who help the registration and document typing myself when I was in high school, it is a fact that the influence of this contest is too narrow because it just concerns the aspect of Math in STEM and even the number of contestants are very limited because only the top candidates in their provinces or states would be invited to attend this contest. In other words, if the student likes other subjects in STEM or math contest is just not her favorite kind of academic activity, she will definitely be excluded no matter how hard she has worked or how talented she is. In this way, my suggestion

is that more levels and genres of such kind of academic activity to satisfy the needs of different kind of students, thus, the gender inequality in STEM education is better improved.

Solution two: Hold STEM based academic organizations in university

Another solution, which is giving some STEM based academic activities in university would also solve the problem of gender inequality. According to Girls Who Code, an organization specialized for enhancing the number of female students in the field of Computer Science and gradually solving the gender inequality problem, has launched on campus student organizations called College Loops whose “Presidents are committed to reaching gender parity in tech by creating an inclusive community on their campus.” (2019)

Certainly, it would be a great program for the gender equality in the field of Computer Science in universities. While this program also has some drawbacks: first of all, the group these organizations can influenced is very limited, since Computer Science is just a part of STEM subjects; second, it would be better if there are direct corresponded programs in K-12 education, since there would be more population they could influence and the time of would not be too limited since it needs long time for a coder to be trained from a beginner to an experienced participant.

Conclusion

In conclusion, there are several major reasons caused the gender inequality in STEM education and two of the possible solutions have also been showed as ways to solve this problem. Also, although there are some deficiencies we have observed and analyzed in the previous paragraphs, they would not hurt the solutions themselves since generally speaking, they are reasonable solutions and they have actually made contributions to the gender equality in STEM education. In the future, I believe that the gender inequality issue would finally be solved in STEM education.

Reference

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