

Research on Women's Educational Inequality

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Abstract. Education is a tool to achieve social equality. To achieve educational equality, it is necessary to prevent inequalities caused by student capital (such as gender, family, city where one lives and studies, etc.). This paper focuses on the inequalities faced by women in education. This paper uses online interviews to invite participants to discuss their educational disparities. This paper found that females are easily bound by the stereotypes around them in the process of making choices, such as major choices, schools, and life choices. This kind of constraint pushes females in the direction of the social stereotype that women are more suitable. However, some women rebel against these constraints. Stereotypes influence women's professional choices and, indirectly, their job choices. Finally, it leads to a gap for women in STEM fields.

Keywords: educational inequality, women, stereotypes, education

1. Introduction

Women face highly inequalities in education. In the global development of education, Yao Yiwei found that the average number of years of schooling for women is lower than that of men in Japan, South Korea, Taiwan, and mainland China [1], which shows that women face shorter years of schooling than men in the education process. In terms of the education process, women have long been absent in higher education and in certain fields, such as STEM, which is physics, chemistry, mathematics and politics. Men account for 93 percent of the members of the Chinese Academy of Engineering and 92 per cent of the members of the Chinese Academy of Sciences [2].

Studies have shown that 'women are more likely to be age-constrained in their choice of doctoral studies and more likely to be influenced by their satisfaction with their supervisors than men [3].'

In terms of educational outcomes and impacts, Liu et al. found that high educational attainment did not bring the desired high returns to women, which made them generally feel that they encountered gender discrimination in their job search [4].

To test whether those inequalities exist and the number of females who face those inequalities. This paper will use qualitative methods, which are interviews to find the inequality participants experienced in their schooling time.

This paper can provide a theoretical basis for policy improvement by stating the inequalities faced by women in education, promote educational equity.

2. Analysis of the Current Situation of Educational Inequality

This paper will analyze the inequality that women experience in education from the perspective of educational opportunities, processes and outcomes.

First, when a girl is born, her place of birth probably determines her fate for the rest of her life. Connelly and Zheng suggest that rural women have significantly lower enrolment and graduation rates than men [5]. Yao Yiwei in her study 'A Comparative Study of the Mechanisms of Educational Inequality between the Sexes in East Asian Societies' states that 'the number of brothers and the number of sisters in mainland China, Japan, and Taiwan show a dilution effect on educational resources, although the regression coefficients are different.' But at the same time, it is also mentioned that the dilution of educational resources has almost no effect on males, but greatly reduces the educational opportunities of females [1].

Second, during the process of receiving education, a large number of studies have found that stereotypes affect women's enthusiasm for physics, science and other technical subjects. This stereotype also makes women less inclined to pursue careers in physics, creating inequality in the educational process for women.

In terms of educational outcomes, ‘men have a gender advantage in achieving intergenerational upward earnings mobility, which is 1.359 times greater than that of women’ [6].

Third, females face inequality in educational outcomes. Which is reflected in their employment situation. Liu Yao-Guo et al. found that higher education does not help females in their careers, but they also need to work twice as hard as men to get the same job opportunities as men, so in order to improve their competitiveness in the job market, women will choose to attend in-depth studies to enrich their CVs [4]. It shows that women are facing highly inequality in educational outcomes, women are putting in the same level of effort as men in the education process, but they are not getting the same job opportunities as men in terms of outcomes. The next chapter will present the process of the qualitative experiment and the results.

3. Research Methodology

This paper uses a qualitative approach through online interviews and aims to explore the phenomenon of educational inequality faced by females. This paper used a snowball sampling method to select nine participants. Their characteristics are shown in Table 1.

Table 1. characteristics of participants

Name	Age	Gender	Birth place	Undergraduate Schools and Majors	Postgraduate schools and majors	Whether study abroad experience	Are you an only child in your family?
Miss Zhou	20	Female	Shan Xi	University of St Andrews Dual degree in Computing and Psychology	No	Yes	No
Miss Zhang	20	Female	Beijing	Beijing Yin Shua University Design	No	No	No
Miss Zhang	20	Female	Si Chuan	Boston University Public relations	No	Yes	No
Miss Niu	27	Female	Hang Zhou	Xi'an Jiaotong University Biomedical Engineering	University of Manchester Medical Imaging Science	Yes	No
Mr. Lu	21	Male	Si Chuan	Beijing Shifan University Education	No	Yes	No
Miss Gao	25	Female	Hang Zhou	Zhengzhou University Automation	University of Manchester Control engineering	Yes	No
Miss Yi	20	Female	Si Chuang	University of Manchester Sociology	No	Yes	No
Mr. Jiang	20	Male	Beijing	Beijing University Preventive medicine	No	No	Yes
Miss Ou	21	Female	Zhe Jiang	Beijing Lin Ye University Agricultural and forestry economic management	Beijing Lin Ye University Economic	No	Yes

All participants read and signed an informed consent before starting the interview. The interviews were audio-recorded with the consent of the participants and have been collated into roughly 400,000 words of interview material.

4. Results and Analyses

This study found that almost every participant, both male and female, indicated that they were surrounded by ideas such as ‘boys should’ or ‘girls should’, and that these socially agreed upon gender rules are not only found in school education, but also the home as an educational setting. Miss Zhou recalls that during her childhood, her parents would stop her from sitting with her knees apart, but not ask her brother; her teachers would define fighting between boys as ‘small game between boys’ and her fights as ‘violence’; and they would define her younger brother and protecting her older sister as ‘chivalry’, but when she fights with others to protect herself, they say, ‘Girls are too violent’. All of these different educational standards for the two sexes invade women's lives in a pervasive way.

The results of study confirm the conclusion of He Xiu-Jun's 2023 thesis that stereotypes can have both negative and positive effects on women [7]. When confronted with statements such as ‘boys will be better suited for liberal arts, girls will be better suited for liberal arts,’ etc. Most participants admitted that they were not affected. But some of them said that they were affected by such statements and deliberately ‘disagreed’ with them.

Miss Zhou, referring to the impact of male and female stereotypes on her, said.

Miss Zhou: ‘Everyone is just talking about the same old thing, they always say that it's good for boys to study science, and I think I will take one more science subject’.

Miss Gao, who is studying automation and control engineering, said when talking about the choice of major because

Miss Gao: I would like to prove myself, and then I would choose a science subject. I would like to prove that this impression is actually false.

Not only girls, boys also face stereotypes.

Mr. Lu also had differences with his father over his choice of major, which stemmed from his father's stereotypical view of male careers.

Mr. Lu: ‘My father, for two reasons, wanted me to apply for science and engineering. The family is always arguing about this matter, of course, because the password in my own hands, I did not listen to him to the back I said I said you do not speak again. You said I will not listen; I will certainly fill in my own favorite professional’.

Faced with the constraints of stereotypes, some people choose to oppose them, but others choose to conform.

Miss Zhang: ‘Now I want to be teacher, it's stable and there are summer and winter holidays, isn't it?’

The stereotypes influenced participants's major choices in their education, such as access to schools.

Miss Ou's parents forced Miss Ou to give up an offer from one excellent school. The reason is ‘don't believe a girl of 11 or 12 years old can go to school in another city, and don't want their daughter to be too far away from them.’ In contrast to Miss Ou, Miss Ou's male friend was admitted to Class B; Miss Ou was admitted to Class A (Class A has higher admission scores than that of Class B). After Miss Ou gave up this opportunity because of her gender, the male friend stayed in school in the capital city and successfully entered the senior high school of this school three years later, while Miss Ou was not entering the senior high school of this school. She loses an opportunity to receive a better education because of her gender.

Miss Ou: ‘I actually had the opportunity to go to the provincial capital to receive better educational resources, but because of my parents' perception of gender, I did not have access to better education.’

Employment and marriage, as a result of educational inequality are also being investigated in this paper.

When female participants talked about their life plans, they invariably mentioned the word ‘marriage’. The plan of marriage and taking care of kids may be the reason women lack in STEM.

Miss Gao, who is already working, said of the future, ‘Like I'm going to plan. Just before when I can't go and get married, get pregnant or something like that.’

Marriage may hinder women from pursuing STEM fields, but it's more the discrimination encountered in the workplace that hinders many women from pursuing further education in the STEM field.

Miss Niu, who works in biomedical engineering, said, ‘It's just the same conditions. Then, between a good girl and an average boy, they will choose an average boy. In addition to the gender discrimination faced in recruitment, women also face gender discrimination in promotion. Mentioning the reason for going abroad to conduct postgraduate studies, Miss Niu mentioned, ‘Because if I don't do it, they will not give priority to me in assessing titles or promotion, but boys are. Do relatively less, relatively less, will also give priority to them.’

Women are less likely to choose STEM due to stereotypes when choosing a major, leading to fewer females working in the STEM realm, leading to a particularly severe lack of women in STEM management.

I: What is the ratio of women to men in your leadership?

Miss Gao: All men.

The gender-based discrimination in employment conforms to Liu's observation that women face inequities in educational outcomes [4]. The relative ease of promotion for men also supports Zhu's earlier observation that men are more likely to achieve intergenerational mobility than women [6].

5. Conclusion

This paper explores the inequalities in educational opportunities, processes, and outcomes that women face due to stereotypes in education. Through the interviews, the author found that women are easily hindered by stereotypes when they face educational choices (e.g., choosing a school or a major). However, such obstacles can also become motivation for some participants to break the stereotypes or to continue to insist on their ideas. Stereotypes have also been successful in 'disciplining' some women, creating a gap in the STEM field. Because fewer women are studying STEM subjects, fewer women are working in STEM fields. Indirectly, this also leads to fewer female leaders in STEM subjects. When talking about the promotion criteria, Miss Gao said that 'because the management is all male. So, they would select someone who also tends to select someone who is the same as him'. Women are more likely to face unequal treatment in the workplace due to gender and education. Finally, it leads to a lack of women in STEM fields.

In addition, during the interview, the researcher found that the words 'secure' and 'stable' were the most common words used by the female participants' parents when planning for their daughter's future. Behind these expectations of women's future stability may be a reflection of subconsciously low expectations of women. The author believes that this difference in expectations can be attributed to some remnants of traditional Chinese feudal thinking. Traditional Chinese thought requires men to build up a career, while for women it is not necessary to fight or struggle but to take care of the family. It has only been a hundred years since Chinese society got rid of the feudal dynasty, so it is difficult to convert many old ideas. It is hoped that later generations will continue to dig deeper and reverse this outdated thinking. The study has shortcomings in that the age of the experimental sample is concentrated in the range of 20–30 years old, which does not cover other age groups. It is hoped that future research can expand the scope of the study sample to obtain more comprehensive findings.

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