The Manifestation of Gender Differences in Education Under the Background of The New Era

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Abstract. With the advent of the new era, educational equity and gender equality have become the focus of social attention. This study explores in depth the manifestation of gender differences in education under the background of the new era, aiming to reveal the specific manifestations and causes of gender differences in the field of education and propose corresponding countermeasures and suggestions. Research has found that gender differences in education are reflected in multiple aspects. There are also gender differences in subject selection, academic performance, and teachers' attitudes towards students. The curriculum and textbook design of schools also imply gender socialization, and the portrayal of gender roles in textbooks often reinforces traditional gender differences and discrimination, affecting students' gender identity and awareness. Gender differences in education are the result of a combination of multiple factors. Sociocultural factors, psychological factors, educational environment, and teaching strategies have all had a profound impact on gender differences. To address this phenomenon, schools should treat every student equally in teaching and provide them with more choices, so that they are not limited by gender stereotypes in subject electives. At the same time, teaching strategies need to be diversified, adapted to the needs of students of different genders, and help students find learning methods that are suitable for themselves.

Keywords: Gender equality; stereotypes; education.

1. Introduction

In the era of gender equality, the impact of gender differences in education has always been a concern. Gender differences exist and cannot be ignored in academic achievements, subject preferences, teacher-student interactions, and gender role cognition. There are many social factors that contribute to gender differences in education and their impact in the context of the new era, including differences in educational levels, socio-cultural factors, and the influence of modernization transitions. The historical reasons for the differences in education levels have led to a generally lower level of education for women compared to men, which has affected women's desire and participation in education. Relatively speaking, some men may not have as strong an interest and demand for educational content as women due to their higher level of education. The transition of social culture and modernization has been driven by reform and opening up, increased investment in education, and adjustments to the family planning policy. This process challenges traditional gender role concepts and promotes active participation of women in fields such as education and employment. At the same time, it also promotes a change in society's perception of male roles, affecting their attitudes and behaviors toward educational participation. By studying gender differences in education, students can better understand their learning strengths and weaknesses, and thus confidently utilize their strengths in the learning process. This also helps to cultivate students' self-awareness and self-development abilities. With the development and changes in society, the issue of gender differences in education has also presented new characteristics and challenges. These studies help to understand the changes in gender roles in the current educational environment, provide a scientific basis for the formulation of educational policies, promote gender equality, and reduce gender discrimination.

2. The Manifestation of Gender Differences in Education under the Background of the New Era

2.1. Teacher's Gender Bias towards Students

There is indeed gender bias among teachers towards students, and this bias is not limited to unfair evaluations of girls but also includes different expectations and attitudes towards boys and girls. Firstly, research has shown that gender bias exists among both male and female teachers, indicating that this bias is not an individual behavior but a social phenomenon. This bias stems from societal stereotypes of women, leading to unfair treatment in education and the workplace. Specifically, in the field of education, teachers' gender bias towards students is manifested in multiple aspects

2.1.1 Prejudice against girls

Research has shown that teachers have biases against female students in their teaching. Firstly, teachers' bias towards abilities underestimates girls' abilities. Some teachers may subconsciously believe that girls are not as capable as boys in certain subjects (such as mathematics and science), and this bias may stem from traditional gender stereotypes. Secondly, there is bias in teacher ratings. Although girls' actual performance may be comparable to boys', teachers may give girls higher scores when grading, not because they perform better, but because teachers expect girls to "follow the rules" and have a greater tolerance for their behavior. However, this bias may also lead to underestimation of girls' abilities in certain fields [1].

2.1.2 Prejudice against boys

In some cases, teachers may hold a negative attitude towards boys due to personal emotions and biases, and even exhibit "misogyny" towards boys, viewing their flaws as "defects". This bias may affect expectations and attitudes towards boys' learning and growth. This bias is manifested in the following aspects: firstly, the severity of criticism. Some teachers may adopt a more severe critical attitude towards boys, even when facing similar levels of errors. This deviation may make boys feel unfair, and even lead to feelings of inferiority and frustration. Secondly, due to differences in expectations and requirements, teachers often have higher expectations for male students, believing that they should possess stronger learning abilities and development potential. However, when boys fail to meet these expectations, they may receive harsher criticism. Finally, neglect and excessive attention coexist. In some cases, teachers may overlook the strengths and efforts of boys due to their mischievous behavior. In other cases, excessive attention to male behavior may lead to unnecessary stress and misunderstandings [1].

2.2. Gender Bias in Curriculum Design

There may be an imbalance in the presentation of male and female roles and images in textbooks. For example, men are often depicted as strong, brave, and rational, while women may be depicted as gentle, dependent, and emotional. The reinforcement of such stereotypes is not conducive to the formation of students' gender equality concepts. In certain disciplines or courses, there may be more emphasis on the traits or achievements of one gender, while neglecting the contributions and importance of the other gender. In some schools or regions, there may be situations where male and female students are arranged in different classes or schools, which not only exacerbates gender segregation but also hinders the elimination of gender discrimination. In terms of subject selection, gender differences are also quite evident. For example, female students are more inclined to choose humanities, language arts, and biological sciences, while male students are more likely to choose physics, engineering, and computer science. This preference for gender roles may be partly due to the implications and guidance of curriculum design and teaching content.

2.3. Unequal Educational Outcomes

Educational resources, including teaching staff, teaching facilities, learning materials, etc., often have significant differences between different regions and schools. Urban schools usually have higher quality educational resources, while schools in rural or remote areas may have limited resources, which directly affects students' learning outcomes and future development. The social-economic background of students is also an important factor leading to unequal educational outcomes. Students from families with better economic conditions may have easier access to additional tutoring, learning resources, and social practice opportunities, while students from poor families may face more challenges such as malnutrition and lack of learning space, which may affect their learning outcomes. The opportunities for different groups to receive high-quality education are not equal. Gender, race, region, and other factors can all become barriers to accessing educational opportunities. For example, women in certain regions or communities may face limited educational opportunities, while minority students may also encounter discrimination or bias in the education system. Even within the same region, the teaching quality between different schools may vary greatly. Excellent teachers are often concentrated in a few "prestigious schools", while ordinary schools may have weak teaching staff and difficulty guaranteeing teaching quality. This inequality in educational quality further exacerbates the inequality in educational outcomes. Policy and institutional factors: Education policy and institutional design are also important factors that affect educational outcomes. Unfair enrollment policies, insufficient investment in education funds, and imperfect education evaluation systems can all lead to unequal educational outcomes [2].

3. The Impact of Gender Differences

3.1. Subject Grades and Cognitive Differences

Gender differences do have a certain impact on academic performance, especially in different subject areas. In science and engineering majors, male students often account for a larger proportion, mainly because science and engineering majors usually require a higher foundation in subjects such as mathematics and physics. In traditional concepts, male students may have certain advantages in these subjects, making science and engineering majors relatively attractive to male students. In contrast, humanities majors may be more favored by girls because they focus on language expression, humanistic literacy, and other abilities, and girls often demonstrate strong advantages in these areas. Cognitive differences are one of the main reasons for differences in student performance. Research has shown that there are differences in cognitive styles between boys and girls. Boys tend to lean towards spatial thinking and problem-solving abilities, and they are better at solving problems related to mathematics and science. In contrast, girls tend to be more inclined towards language and emotional dimensions, and they are better at language communication and detail handling. This cognitive difference in academic performance leads everyone to agree that boys perform better in mathematics and science, while girls perform better in language and social sciences. This gender difference can be traced back to the preschool education stage. For many societies, boys are often encouraged to participate in sports and science activities, while girls are more exposed to language and humanities. This cultivation model can lead to deeper cognitive differences between genders and ultimately affect academic performance [3].

3.2. Personal Choice and Future Development

Firstly, teachers' gender blind spots and gender stereotypes in the educational process have a profound impact on students' growth and development. Some teachers ignore gender differences in their teaching and pay attention to nonintellectual factors such as gender growth and gender role identity, which may lead to problems in students' gender cognition, self-awareness, and social adaptation. In addition, teachers' unintentional remarks in the classroom, such as making different demands or giving different hints to boys and girls, may reinforce gender stereotypes and be

detrimental to the healthy development of students' personalities. Secondly, gender bias in parents and educational environments can also affect children's growth. For example, parents and teachers generally believe that girls have better communication and social skills than boys, which may lead to lower expectations and requirements for boys, thereby limiting their overall development. Meanwhile, society's different expectations of boys and girls can also lead to different challenges and pressures they face during their growth process. Furthermore, gender differences in the educational process are also reflected in different expectations of students of different genders. For example, some studies have shown that boys are often perceived to perform better than girls in mathematics and logic, and this stereotype may affect teachers and parents' educational styles and expectations of boys and girls, thereby impacting their self-awareness and future career choices

Gender differences are particularly evident in higher education demand and major selection. Women have an advantage in the number of applicants for higher education, and they tend to choose majors such as social sciences, literature, and education, while men are more inclined to choose majors such as engineering, mathematics, and physics. This difference is not only reflected in personal interests but also influenced by family background and socio-cultural factors. For example, family background may have a significant impact on children's career choices, while in certain cultures, gender stereotypes and social expectations may hinder women from pursuing higher education and certain majors [4].

3.3. Psychological Health

In terms of hormones and physiological development, there are differences in hormone levels and physiological development speed between males and females, which may lead to different responses and coping styles when facing mental health issues. For example, girls may have an advantage over boys in emotional regulation, as they are better at seeking social support and actively coping to alleviate negative emotions. However, this may also lead to girls being more susceptible to the influence of others' evaluations and developing feelings of inferiority. Boys are usually more susceptible to the influence of self-esteem than girls, as they are more concerned about their achievements and status. When faced with failure or setbacks, boys may be more prone to self-esteem damage, which can lead to a series of psychological problems. Boys often face more academic and social pressure, while girls may face more pressure in terms of appearance, body shape, and interpersonal relationships. These social expectations may lead to different impacts on mental health among students of different genders [5].

4. Suggestion

4.1. Emphasize Gender Equality Education

Firstly, formally incorporate gender equality education into school curricula, from primary school to university, to ensure that all students can receive education in this area. Develop specialized gender equality education materials that cover the diversity of gender roles, the values of gender equality, and the identification and response to gender discrimination. Equality courses can help students understand the concept, importance, and challenges of gender equality. Develop teaching materials, produce teaching videos, case collections, reading materials, etc. for gender equality education, for use by teachers and students. These materials should include rich examples and data analysis to help students better understand gender equality issues. Enhance teachers' awareness of gender equality, provide training on gender equality education, help them recognize potential gender biases in the educational process, and learn how to avoid and correct these biases. Encourage teachers to participate in academic research and exchange activities related to gender equality, and continuously improve their professional competence. Establish incentive mechanisms to commend and reward teachers who have demonstrated outstanding performance in gender equality education, to motivate more teachers to actively participate in gender equality education work [6].

Train teachers on gender equality awareness to ensure that they can effectively impart gender equality knowledge in the classroom. Encourage teachers to adopt gender-sensitive teaching methods, avoid gender stereotypes, and create an inclusive learning environment. Encourage families to participate in gender equality education, and raise parents' awareness of gender equality through parent-teacher conferences, workshops, and other forms. Utilize community resources, such as libraries, cultural centers, etc., to hold public lectures and exhibitions on gender equality themes, and enhance the overall awareness of gender equality in society. Encourage interdisciplinary research to explore the application and impact of gender equality in various fields. Continuously evaluate and improve, regularly assess the implementation effectiveness of gender equality education, and collect feedback from students and teachers. Adjust teaching strategies and content based on evaluation results to ensure the effectiveness and relevance of gender equality education [7,8].

4.2. Eliminating Gender Bias and Stereotypes

Enhance public awareness and self-awareness, widely promote and utilize social media, public service advertisements, lectures, and other channels to popularize gender equality concepts, and raise public awareness of gender bias and stereotypes. Schools and communities carry out gender equality education programs, and teaching methods to identify and resist gender bias. Advocate individuals to regularly reflect on themselves, identify and correct their gender biases, and promote personal growth. Ensure a balance of gender roles in the textbook content, showcase diverse career and interest choices, and avoid reinforcing gender stereotypes. Encourage teachers to adopt open and inclusive teaching methods, guide students to challenge gender stereotypes, and cultivate independent and critical thinking. In positive publicity, the media should actively convey positive gender concepts and showcase the equal contributions and unique values of different genders in various fields of society [6].

5. Conclusion

The existence of gender differences in education is an undeniable fact, and understanding and addressing these differences is crucial for improving teaching effectiveness and meeting individual student needs. Educators should actively address gender differences and promote the comprehensive development and learning outcomes of all students by creating inclusive learning environments, guiding personalized learning, encouraging diverse interest development, and providing gender education and awareness building. Only in this way can society achieve true gender equality in education and lay a solid foundation for students' future development. Creating diverse learning environments, adopting different teaching methods, and personalized assessment and feedback methods, will help achieve a balance and development of gender differences in education.

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