

New Concept and New Practice of Gender Equality Education at the Background of Digital Society

Wenyu Wang*

Leysin American School, Leysin, 1854, Switzerland

ABSTRACT. Digital society is a new social form after the transition of agricultural society, industrial society and information society. In the context of digital society, gender inequality still exists, mainly manifested in the inequality of digital resources, digital identity and digital technology. Carrying out gender equality education is the only way to achieve high-quality economic and social development in the digital era. Gender equality education means that education should embody the concept of gender equality and promote education to undertake the responsibility and mission of gender enlightenment. Gender equality education recognizes the basic rights of every social person and the development freedoms of every man and woman in the digital society. This paper analyzes the goals, ideas and practices of gender equality education in the digital age, providing reference for relevant researchers.

1 INTRODUCTION

Digital society is a social form based on the information society and under the empowerment of the new generation of information technology represented by big data and artificial intelligence [1]. The social production mode, lifestyle and communication mode have undergone revolutionary changes, and the physical real society is highly integrated with the digital virtual society. The core element of the digital society is to map the massive data of the physical society. The ownership, trading rights and benefit distribution are more complex. The integration of real space and virtual space promotes the reconstruction of social production, exchange and symbiosis mode. In recent years, the pace of building a digital society in China has accelerated, and the Internet penetration rate and user scale have increased significantly. During the 14th Five Year Plan period, China embarked on a new journey of building a modern socialist country in an all-round way. Big data, cloud computing, mobile Internet, Internet of things, artificial intelligence and other new generation digital technologies have developed rapidly and become a powerful driving force to promote modernization. Accelerating the pace of building a digital society is a major strategic measure to comply with this trend, an important part of building a digital China, and an inevitable requirement to promote the better and faster development of socialist modernization [2].

The report of the 19th CPC National Congress once again clearly stated: adhere to the basic national policy of gender equality and protect the legitimate rights and interests of women and children. This is the new requirement and new coordinate put forward by the party for China's

education in the new historical stage. The issue of gender equality and gender justice is of great strategic significance in the process of building socialism with Chinese characteristics and realizing the great rejuvenation of the Chinese nation. It plays an indispensable role not only in the theoretical system of socialism with Chinese characteristics, but also in adhering to the socialist core value system. Gender equality education has not been formally incorporated into China's school education system, which inevitably leads to the lack of awareness of gender relations, the lack of civic quality and personality cultivation of the young generation, which in turn affects their subsequent marriage and family life issues and balance, which is not conducive to the construction of a harmonious society. As a new way of education that uses modern information technology such as the Internet and artificial intelligence to interact teaching and learning, it plays an important role in the process of realizing educational modernization and building a powerful educational country in China. Globally, the overall education level of women has reached a record high, but it is still low compared with men [3]. At the same time, gender inequality in higher education, vocational education and other aspects is widespread. Standing at a new historical starting point, the digital society has opened up a new way for gender equality education.

*Corresponding author. Email: ceciliawwy@gmail.com

2 GENDER INEQUALITY IN THE DIGITAL AGE

2.1 Gender inequality in digital resources

The digital gender gap refers to the huge gender differences formed by digital information technology between different gender groups. This difference is reflected in all aspects of digital life. The use of digital equipment, the level of digital skills, and the social expenditure of digital technology are the specific manifestations of the digital gender gap. 52% of women in the world have not yet used the Internet, only 8% of countries have a higher proportion of women than men, and only 25% of countries have basically achieved gender equality in Internet services. In 2019, Rowling, a British scholar, said in her book *invisible women: gender bias in data in a world designed for men* that the existing big data are actually incomplete, lacking data on 50% of the world's population - women. We live in a digital world designed on the basis of male data. The socialization of gender roles, gender discrimination and stereotypes, unequal opportunities, the institutional background of information technology and the patriarchal cultural atmosphere are all the reasons for the digital gender gap [4].

2.2 Gender Inequality in Digital Identity

There is a huge digital gender gap in the field of digital space. The number of women participating in digital information sharing is far lower than that of men, and the number of people participating in digital technology development and decision-making is even less [5]. In this case, women have little discourse power in the construction of gender identity in digital space. Due to the absence of female workers in the field of artificial intelligence, digital technology lacking a gender equality perspective will solidify gender differences from a male perspective, flatten and simplify gender inequality, present implicit gender inequality through databases and algorithms, and interpret it as the generalization and standardization of gender issues with the help of data representation. This is the extension

of gender bias left by the traditional gender division of labour in digital products, which will aggravate gender inequality and produce digital gender discrimination. The concealment of digital power intensifies the spread of wrong gender concepts. Gender stereotypes, gender prejudice and gender discrimination will form an institutionalized and standardized digital order with gender discrimination through the internal mechanism of digital evolution into algorithms.

2.3 Gender Inequality in Digital Technology

In the era of big data, when digital identity is not strongly protected, data leakage, network violence, identity theft and other problems will follow. The insecurity of digital space makes women the biggest victims of digital technology violence and digital crime. Because some digital platforms maliciously disclose personal information, private photos or videos, male online car Hailing drivers often choose sexual assault objects based on female user information on digital platforms. In June, 2021, China promulgated the data security law to rectify and govern some institutions and digital platforms that provide personal information under the banner of big data companies, but the fields involved are far from enough. From the perspective of gender, digital security needs to ensure the security of each individual in the digital space. The digital platform is not an extrajudicial place for sexual crimes and sexual violence [6].

3 STATISTICS OF GENDER INEQUALITY IN THE DIGITAL AGE

The purpose of this paper is to understand gender equality education in the context of digital society, and to explore the concept and practice of gender equality education in the digital era to achieve the purpose of improving the level of gender equality education. The subjects of the study were 600 residents from all walks of life, including 300 males and 300 females. We conducted a questionnaire survey on the scores of liberal arts and science, job remuneration and social status, and obtained the following results (table 1, table 2 and table 3).

Table 1. Science scores and liberal arts scores of males and females

Group	Science scores are better to liberal arts scores (person)	Science scores are better to liberal arts scores (percentage)	Science scores are similar to liberal arts scores (person)	Science scores are similar to liberal arts scores (person)	Science scores are inferior to liberal arts scores (person)	Science scores are inferior to liberal arts scores (percentage)	Total
Male	164	54.7%	60	20.0%	76	25.3%	300
Female	135	45.0%	71	23.7%	94	31.3%	300

Table 2. Monthly salary of males and females

Group	Monthly salary less than 10000 Yuan (person)	Monthly salary less than 10000 Yuan (percentage)	Monthly salary between 10000 Yuan and 20000 Yuan (person)	Monthly salary between 10000 Yuan and 20000 Yuan (percentage)	Monthly salary more than 20000 Yuan (person)	Monthly salary more than 20000 Yuan (percentage)	Total
Male	190	63.3%	87	29.0%	23	7.7%	300
Female	195	65.0%	91	30.3%	14	4.7%	300

Table 3. Social position of males and females

Group	Grassroots staff (person)	Grassroots staff (percentage)	Middle level cadres (person)	Middle level cadres (percentage)	Senior leaders (person)	Senior leaders (percentage)	Total
Male	171	57.0%	101	33.7%	28	9.3%	300
Female	185	61.7%	100	33.3%	15	5.0%	300

Through the above research, we can draw the following conclusions: even in the era of digital society, gender inequality between men and women is still very common, mainly in the performance of Arts and Sciences, salary and social status. No matter which of the above aspects, men have certain advantages over women. This gap needs us to overcome through gender equality education.

4 THE DEVELOPMENT GOAL OF GENDER EQUALITY EDUCATION IN THE DIGITAL AGE

Digital education and training should promote the balanced development of gender groups in learning, using and mastering digital technology [7]. The balanced development of digital technology, first of all, is the balance in the number of learning and using groups. We should encourage girls to choose digital related majors and increase the number of women learning, using and mastering digital technology skills. When the renewal and development of gender cultural concepts and gender equality awareness in the whole society do not fully match and adapt to the development of the digital age, gender discrimination in digital space will intensify. To promote gender balance in digital education, we need to embed gender equality education in digital education, enhance students' interest in choosing majors related to digital disciplines, develop digital education learning and development platforms, and create better platforms and opportunities for women to learn and relearn. Digital education and training should tear down gender labels, improve gender stereotypes among educated people, and establish a concept of gender equality [8]. Digital education and training should eliminate gender discrimination and gender violence under the concept of gender equality. The implicit gender discrimination unconsciously embedded in digital technology will aggravate and expand the existing gender inequality. Gender discrimination and gender violence in the digital age are the further deterioration of gender stereotypes in the

digital space and the alienation of the right to equality of digital identity. In terms of educational effect, only by integrating gender equality education into digital education can we more effectively eliminate gender discrimination and gender violence. Gender discrimination in digital technology includes both explicit and implicit gender discrimination, as well as gender discrimination from personal cognition to system structure. When this implicit and unconscious gender discrimination reaches a certain number and scale, it is easy to produce structural gender discrimination and gender violence in the whole digital system.

5 NEW CONCEPT OF GENDER EQUALITY EDUCATION AT THE BACKGROUND OF DIGITAL SOCIETY

5.1 Break gender prejudice

As human beings, men and women have equal basic rights and equal opportunities for development. In terms of education, men and women have equal opportunities to receive education, choose majors and choose careers [9]. There are two aspects here: personally, anyone can choose according to the will of his heart, and realize his self-worth to the greatest extent, without being bound by the "gender suitability theory". From the external environment, educational institutions can provide equal opportunities without gender restrictions. Respecting everyone's right to choose is one of the important contents of the concept of gender equality. The discipline and specialty pattern of boys' reading science and girls' reading liberal arts is being broken, and the number of female science champions is increasing. However, the gender pattern of discipline and specialty still exists, and this bias may even be based on the so-called scientific data. The problem is that everyone's right to choose is ignored, and the right to choose is based on respecting personality rather than strengthening type. Even

ryone's personality is distinctive. Girls who are poor in science also have science talents; There are boys with strong science and boys with poor science. Once the gender line is used to distinguish the strong from the weak, it will fall into the digital gender trap, and the individual's right to choose will be unconsciously deprived. It should be noted that the public generally has a typed way of thinking, especially in gender. When it comes to girls, they are strong in liberal arts, and when it comes to boys, they are good in science. This typed way of thinking ignores the richness of individuals, and usually the richness of individuals is much greater than the diversity of groups. When the publishing house classifies all boys into one category and all girls into another category and falls into the trap of gender stereotypes. To get rid of the stereotyped thinking and move towards the acceptance of personality and respect for people's basic rights, we must recognize the right to choose without gender restrictions [10].

5.2 Respect diversified development

One of the important characteristics of modern civilized society is to cultivate modern citizens with unique personality charm [11]. Both men and women should become individuals with a sense of social responsibility, rational spirit, independent judgment and an open and equal mentality. Excellent girls can be independent, strong, brave and confident, while excellent boys can also have the ability to communicate and care for others. The rich and diverse gender images in children's works are actually the breaking of the single gender concept, the acceptance and respect of individual life, the tolerance and understanding of the spiritual world of men and women, and the significance and value of gender equality. When people cling to the dualistic thinking mode of men and women, any behaviour across gender will be excluded, ranging from being ignored and isolated, to paying the price of life. Recognizing gender diversity is becoming the proper meaning of gender equality education. The Education Bureau has added a psychology course for students of different grades in its gender equality education program, which specifically emphasizes gender self-awareness: respect the temperament of people of different genders, understand the stereotype of gender temperament, understand the diversity of gender temperament, and every child can be himself with a sense of reason. Gender equality education can also be reflected in the reform of school clothing management rules [12]. The overall income level of Chinese women is lower than that of men. In most countries, equal pay for equal work is mandatory in law, but it is still not effectively guaranteed in practice. To promote the solution of this problem, we can regularly invite a third party to review the company's salary to ensure that the enterprise achieves equal pay for equal work.

5.3 Face up differences

Respect the value and dignity of everyone, break the gender hierarchy and gender prejudice, and treat both men and women as human beings. Gender prejudice often holds a fixed view of a certain gender, which is full of speculation

and imagination of the truth, and has great destructive power on human value and dignity. Behind public opinion, there is a huge gender bias, that is, women are regarded as seducers completely ignoring the truth. In some classic works, young and beautiful women are often the Goblins who seduce men. In historical documents, the change of dynasties is often caused by the emperor's addiction to women. This erroneous prejudice also comes from the widespread unequal power relations between men and women. In the long history of China, women, as appendages of men, have lost their political, economic, cultural and educational rights. Political rights, economic resources and educational opportunities are all privileges that men can enjoy. Although this power relationship is changing in modern times, gender inequality as a cultural concept still exists. Identifying the concept of gender equality is to inspire educators to reflect and question gender bias, break the habitual thinking pattern, rebuild a new gender culture, respect and treat every individual, and treat men and women equally. Only by accurately grasping the connotation of the concept of gender equality can we really start the practice of gender equality education. Many professional women also choose to give up childbirth because they are dominated by such a concept. Women can have the right of reproductive self-determination, but both women and society should respect this physiological difference. The society cannot deprive women of their rights because of their fertility. Women should not ignore this difference for the sake of development, but should realize their free and all-round development on the basis of respecting and recognizing this difference [14].

6 NEW PRACTICE OF GENDER EQUALITY EDUCATION AT THE BACKGROUND OF DIGITAL SOCIETY

6.1 Surmount Gender Segregation

The hollowing out of gender equality refers to that everyone knows the equality between men and women, but in fact, gender equality is only an empty shell with no content, and there are only a large number of gender stereotypes. Once gender equality education stays at the conceptual level, it is easy to fall into the game of playing with concepts. To get rid of this phenomenon, we must concretize gender equality and closely integrate gender equality with daily life. This is an obvious feature of the success of gender classroom. The development of digital economy brings more employment opportunities and digital development space for women to realize their self-worth. With the increasing complexity and functionality of digital technology, the digital industry needs digital talents with more professional digital knowledge learning, more comprehensive digital ability training, more lasting digital experience accumulation, and more long-term lifelong learning ability. Everyone should overcome the impact of gender differences on individual gender stereotypes, tap their potential, break through gender segregation in the industry, and increase the possibility of their own development in the future. In the digital industry, not only individuals are the

object of education, parents and industry related personnel should become the object of gender equality education. Gender stereotypes, gender bias and gender inequality in human society for a long time exist in the whole education system explicitly or implicitly. Sometimes women's lack of confidence in mathematics, science and information technology is caused by the prejudice of society and parents against the traditional gender division. Parents' expectations and perceptions of their children's future careers in the process of their children's growth will affect their children's future career choices. Social evaluation of women's participation in the digital industry is better, which can better enhance women's willingness and confidence to participate in the digital technology industry, and greatly increase the possibility of women's future work in the digital industry [16].

6.2 Improve educational environment

We should build an online ecosystem of smart education, which is embodied in classroom maker, classroom virtualization and campus intelligence. Makers provide personalized learning support and services for students by recording and analysing their learning behaviour. Virtualization enables students to use online resources to study anytime and anywhere, regardless of time, place and other restrictions; Intellectualization integrates campus information system and resources into an organic whole by means of information technology, providing intelligent support for campus management. To find the connection between gender and specific affairs requires educators to be gender sensitive, not only to have the concept of gender equality, but also to have a rich imagination and be good at projecting the concept of gender equality onto specific affairs. In this sense, educators should not imitate and copy gender equality, but have great creativity. The digital gender gap, data abuse, data security, algorithm gender discrimination and other issues in digital enterprises all highlight the importance of digital enterprise ethics construction. On the one hand, in the training of digital technicians, gender equality education is embedded in the IT curriculum system; On the other hand, digital technicians should pay attention to fairness, protect privacy, and embed digital ethics principles such as equality into their designed programs and digital products. In order to bridge the digital gender gap, digital enterprises should also set up special projects to cultivate women's digital literacy and ability and enhance women's interest in the digital industry. School education is the most effective place for gender equality education. It is imperative to comprehensively promote gender equality education in primary, secondary and secondary schools. The school integrates the concept of gender equality from the aspects of educational concept, educational system, teaching arrangement and teaching evaluation to guide all aspects of school education [17].

6.3 Strengthen government supervision

The Outline for the Development of Chinese Women (2021-2030) emphasizes the need to increase the propor-

tion of women among students in science, technology, engineering, mathematics and other disciplines, establish a multi-level female scientific and technological talent training system, and cultivate internationally competitive female scientific and technological talents. Therefore, we need to formulate some detailed rules to ensure the realization of these educational goals. The project offers gender equality courses to guide parents and teachers to break the gender stereotypes in the digital field and make them realize the role and potential of women in digital development. These measures are very meaningful, and provide practical help for women to improve their interests and abilities in the development of the digital economy. Gender equality education in schools in Taiwan is relatively mature [18]. First of all, the gender equality education law has been formulated to establish gender equality educational resources and environment. Secondly, gender equality education was included in the "national" nine-year consistent curriculum outline for primary and secondary schools. In the curriculum outline, the concept, content and class hours of gender equality education are reasonably planned, and the indicators of gender equality education ability are specified, so that there are evaluation indicators for teaching. Thirdly, the Taiwan Institute of education and the education departments of all cities and counties have compiled a series of gender equality education readings and textbooks according to the syllabus for schools to choose. Finally, a large number of researchers have combined theory with practice to truly implement gender equality education by combing the literature and formulating scales. The relevant departments of local governments in the mainland should be deeply aware of the importance of education on the basic national policy of equality between men and women, and have begun to take action. Therefore, under the macro-control and guidance of the government, relevant government departments can use the academic resources of colleges and universities to organize relevant researchers to implement a top-down and bottom-up exploration model to provide guarantee and support for the implementation of gender equality education.

7 CONCLUSIONS

Gender equality education is a great cause full of hope and challenges, which requires perseverance, continuous improvement of the soil, and continuous intensive cultivation. Digital education is the future direction. In digital education, we should strengthen gender equality education, encourage more women to participate in the development of the digital economy, bridge the digital gender gap, and strive to promote gender equality through government enterprise interaction, enterprise education combination and other efforts. I believe that under the influence of digital education supported by gender equality education, we can look forward to a more equal, open and inclusive digital era.

REFERENCES

1. Larasati A M, Ayu N P. The Education for Gender Equality and Human Rights in Indonesia: Contemporary Issues and Controversial Problems[J]. *The Indonesian Journal of International Clinical Legal Education*, 2020, 2(1): 73-84.
2. Heikkilä M. Gender equality work in preschools and early childhood education settings in the Nordic countries—an empirically based illustration[J]. *Palgrave Communications*, 2020, 6(1): 1-8.
3. O'Connor P, Irvine G. Multi-Level State Interventions and Gender Equality in Higher Education Institutions: The Irish Case[J]. *Administrative Sciences*, 2020, 10(4): 98.
4. Psaki S R, McCarthy K J, Mensch B S. Measuring gender equality in education: Lessons from trends in 43 countries[J]. *Population and Development Review*, 2018, 44(1): 117-142.
5. Toraman C, Ozen F. An Investigation of the Effectiveness of the Gender Equality Course with a Specific Focus on Faculties of Education[J]. *Educational Policy Analysis and Strategic Research*, 2019, 14(2): 6-28.
6. Esteves M. Gender Equality in Education: a challenge for policy makers[J]. *International Journal of Social Sciences*, 2018, 4(2): 893-905.
7. Lindner J, Makarova E, Bernhard D, et al. Toward Gender Equality in Education—Teachers' Beliefs about Gender and Math[J]. *Education Sciences*, 2022, 12(6): 373.
8. Silfver E, Gonsalves A J, Danielsson A T, et al. Gender equality as a resource and a dilemma: interpretative repertoires in engineering education in Sweden[J]. *Gender and Education*, 2021: 1-17.
9. Thomson A, Palmén R, Reidl S, et al. Fostering collaborative approaches to gender equality interventions in higher education and research: the case of transnational and multi-institutional communities of practice[J]. *Journal of Gender Studies*, 2022, 31(1): 36-54.
10. Medina M M V, Aguilés A V, Santos S A. Sex and gender equality policies in education in three Southern European societies: The cases of Andalusia and Valencian Community (Spain) and Portugal[J]. *RES. Revista Española de Sociología*, 2020, 29(1): 137-151.
11. Cin F M, Karlıdağ-Dennis E, Temiz Z. Capabilities-based gender equality analysis of educational policy-making and reform in Turkey[J]. *Gender and Education*, 2020, 32(2): 244-261.
12. De Ribaupierre H, Jones K, Loizides F, et al. Towards gender equality in software engineering: the NSA approach[C]//2018 IEEE/ACM 1st International Workshop on Gender Equality in Software Engineering (GE). IEEE, 2018: 10-13.
13. Okenwa-Emgwa L, von Strauss E. Higher education as a platform for capacity building to address violence against women and promote gender equality: the Swedish example[J]. *Public health reviews*, 2018, 39(1): 1-6.
14. Kebinigin B Y, Riyanto A. The Impact of Education on Patriarch Culture and Gender Equality[J]. *Journal of Asian Orientation in Theology*, 2022, 4(1): 15-17.
15. Acar-Erdol T, Bostancioglu A, Gözütok F D. Gender equality perceptions of preservice teachers: are they ready to teach it? [J]. *Social Psychology of Education*, 2022: 1-26.
16. Rosa R, Clavero S. Gender equality in higher education and research[J]. *Journal of Gender Studies*, 2022, 31(1): 1-7.
17. Glas S, Spierings N, Scheepers P. Re-understanding religion and support for gender equality in Arab countries[J]. *Gender & Society*, 2018, 32(5): 686-712.
18. Siyez D M, Beycioglu K. Gender Equality in Education from Kindergarten to Higher Education: Policies and Practices[J]. *Handbook on Promoting Social Justice in Education*, 2020(3): 1687-1710.