



Barriers to Women's Education and Digital Empowerment in the Digital Age

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Abstract

Women's education and digital empowerment are important foundations of gender equality, social development, and economic participation. However, girls and women continue to face several barriers that limit their access to quality education and meaningful digital opportunities. These barriers include socio-cultural restrictions, poverty, household responsibilities, early marriage, poor institutional facilities, lack of safe transport, limited digital devices, unaffordable internet, low digital literacy, and online safety concerns. In the digital age, educational exclusion is closely connected with digital exclusion because online learning, banking, health services, government schemes, employment, and entrepreneurship increasingly depend on digital access and skills. The present paper examines the major barriers affecting women's education and digital empowerment and highlights the need for affordable access, gender-sensitive training, safe digital spaces, institutional support, and family encouragement.

Keywords

Women's Education, Digital Empowerment, Digital Literacy, Gender Equality, Digital Divide, Women's Empowerment

Introduction

Women's education plays a central role in promoting gender equality, confidence, decision-making ability, employment opportunities, and social participation. However, many girls and women face social, economic, institutional, and digital barriers that restrict their educational progress. Traditional gender norms, poverty, household responsibilities, unsafe mobility, poor school infrastructure, and lack of family support often reduce women's access to education. In the digital age, these barriers have become more complex because education, employment, banking, health services, government schemes, and entrepreneurship are increasingly connected with digital platforms. Lack of personal devices, high internet cost, low digital literacy, privacy concerns, and online harassment further limit women's

meaningful participation in digital life. Therefore, removing these barriers is necessary for strengthening women's education, digital inclusion, economic participation, and overall empowerment.

Objectives

1. To examine the major barriers affecting women's education in the digital age.
2. To study the challenges limiting women's digital empowerment and digital participation.
3. To analyze the relationship between educational barriers and digital exclusion among women.
4. To suggest measures for improving women's access to education, digital literacy, and economic participation.

BARRIERS TO WOMEN'S EDUCATION

Women's education is an important foundation of gender equality and social development, but girls and women continue to face several barriers that restrict their access to quality education. These barriers are not limited to schools or colleges only. They are also connected with family attitudes, social norms, economic conditions, institutional facilities, safety, mobility, and digital access. Therefore, barriers to women's education should be understood as multidimensional in nature. In many societies, girls may enter education but face difficulties in continuing and completing it. Household responsibilities, poverty, early marriage, lack of safe transport, poor school infrastructure, and limited access to digital learning can affect their educational progress. These barriers reduce women's confidence, skills, employment opportunities, and participation in social and economic life. Addressing these barriers is necessary for achieving gender equality and meaningful women's empowerment.

Socio-Cultural Barriers

Socio-cultural barriers are among the most serious obstacles to women's education. These barriers are created by traditional beliefs, gender stereotypes, family expectations, and social practices that give less importance to girls' education. In many families, girls are expected to help in household work, take care of younger siblings, or prepare for marriage rather than continue higher education. Such expectations reduce their study time, school attendance, and long-term educational aspirations. Gender stereotypes also affect the way families and communities view girls' education. Boys may be seen as future earners, while girls may be seen mainly in relation to marriage, domestic work, and caregiving responsibilities. This thinking can lead to unequal investment in education, where boys are encouraged to study further while girls are asked to compromise. These social attitudes restrict girls' confidence and limit their opportunities for personal and professional growth.

Socio-cultural norms also influence subject choices and career pathways. Girls may be discouraged from studying science, technology, engineering, mathematics, or professional courses because these areas are often considered male-dominated. Such restrictions reduce women's participation in high-skill and technology-based fields. Gender differences in education and skills are shaped not only by ability but also by stereotypes, family expectations, and institutional practices (OECD, 2023).

Economic Barriers

Economic barriers also play a major role in limiting women's education. Families with low income may find it difficult to afford school fees, books, uniforms, transport, private tuition, examination fees, digital devices, and internet services. In such situations, girls' education may be treated as less important than boys' education, especially when families believe that sons will provide future financial support. Poverty can also push girls into household work, wage work, or early marriage. When families face financial pressure, girls may be withdrawn from school to reduce expenses or to support domestic responsibilities. This creates a cycle in which lack of education reduces women's future employment opportunities and keeps them economically dependent. Thus, economic barriers affect not only educational access but also women's long-term empowerment.

In the digital age, economic barriers have expanded further. Online learning requires smartphones, laptops, electricity, internet connectivity, and data packages. Girls from poor households may not have personal access to these resources, or they may have to share devices with other family members. This limits regular participation in online classes, digital learning, and skill development. Affordability remains a major barrier to women's mobile internet use in many low- and middle-income contexts (GSMA, 2023).

Institutional Barriers

Institutional barriers refer to the problems within educational systems that affect girls' access, safety, retention, and learning outcomes. These include lack of nearby schools, poor infrastructure, unsafe transport, shortage of female teachers, absence of proper toilets, inadequate classroom facilities, gender-insensitive curriculum, and lack of supportive learning environments. Such barriers often discourage families from sending girls to school, especially at higher levels of education. Safety is an important institutional concern. If schools are located far away or transport is unsafe, families may restrict girls' education. Lack of proper sanitation facilities also affects girls' regular attendance, especially during adolescence. Similarly, the absence of female teachers and gender-sensitive counselling may reduce girls' comfort and participation in schools and colleges. Educational institutions also play an important

role in digital inclusion. Schools and colleges that do not have computer labs, internet facilities, digital libraries, trained teachers, or inclusive digital learning systems cannot prepare girls for digital participation. Technology in education requires not only devices but also proper infrastructure, teacher preparation, relevant content, and equity-focused planning (UNESCO, 2023).

Digital Barriers in Education

Digital barriers have become increasingly important in women's education. These barriers include lack of personal devices, poor internet connectivity, low digital literacy, limited access to online platforms, language difficulties, lack of privacy, and limited family support. Even when digital education is available, girls may not be able to use it equally because devices may be controlled by male family members or shared among several people in the household.

Low digital literacy also restricts girls' ability to benefit from online learning. Many girls may know basic phone use but may not be able to attend online classes, search academic material, complete online forms, use educational applications, or protect their privacy. This creates a gap between access and meaningful use. Without proper digital skills, technology cannot fully support women's education.

Digital barriers also include fear of online risks. Girls and women may avoid digital learning because of online harassment, misuse of personal information, image misuse, fraud, unwanted communication, or social criticism. These concerns reduce confidence and restrict independent use of digital platforms. Digital skills development for girls must therefore include access, affordability, safety, confidence-building, and supportive family and institutional environments (UNICEF, 2023).

Barriers to women's education are social, economic, institutional, and digital in nature. Socio-cultural barriers restrict girls through stereotypes, early marriage, domestic work, and limited mobility. Economic barriers reduce access through poverty, educational expenses, and lack of digital resources. Institutional barriers affect girls through poor infrastructure, safety concerns, and weak educational support. Digital barriers further restrict women's learning due to lack of devices, internet, digital literacy, privacy, and online safety. Removing these barriers is essential for strengthening women's education, gender equality, and digital empowerment.

BARRIERS TO WOMEN'S DIGITAL EMPOWERMENT

Women's digital empowerment is an important requirement for gender equality in the modern period, but several barriers continue to restrict women's meaningful participation in digital life. Digital empowerment does not depend only on the availability of technology. It also requires personal access to

devices, affordable internet, digital literacy, online safety, privacy, confidence, and social support. When these conditions are absent, women may remain digitally dependent, even if digital services are available around them.

Barriers to women's digital empowerment are closely linked with social and economic inequality. Many women face restrictions due to poverty, lack of device ownership, low digital skills, family control over technology, fear of online risks, and limited confidence. These barriers reduce women's ability to use digital platforms for education, employment, banking, health services, government schemes, entrepreneurship, and public participation. Therefore, removing these barriers is essential for making digital empowerment meaningful and inclusive.

Lack of Device Ownership

Lack of personal device ownership is one of the major barriers to women's digital empowerment. Many women depend on shared family mobile phones or devices, which limits their privacy, regular use, learning time, communication, and independent access to digital services. When women do not have their own device, they may not be able to attend online classes regularly, use digital banking, search for employment, access health information, or communicate freely. Personal device ownership is important because digital empowerment requires regular and independent use of technology. Shared access often creates dependency and reduces women's confidence. In many households, digital devices may be controlled by male family members, which further restricts women's privacy and freedom of use. Women's lower access to mobile internet continues to be shaped by handset affordability, literacy, safety concerns, and social norms (GSMA, 2024).

Internet Affordability

Internet affordability is another important barrier to women's digital empowerment. Women from economically weaker families may not be able to afford regular data packages, broadband connections, or digital devices. In households with limited income, men's digital use may be prioritized because men are often viewed as income earners, while women's digital use may be treated as less necessary. Affordable internet is essential for women's access to online education, digital banking, telemedicine, government schemes, employment portals, online business, and social communication. If internet access is expensive or irregular, women cannot participate fully in digital learning and digital services. Connectivity and affordability are therefore important conditions for inclusive digital development and women's participation in digital society (International Telecommunication Union, 2023).

Digital Literacy Gap

The digital literacy gap is a serious barrier because access to technology does not automatically lead to empowerment. Digital literacy includes the ability to operate devices, use mobile applications, search for information, evaluate online content, complete digital forms, use e-mail, make digital payments, protect privacy, and avoid online fraud. Many women may use mobile phones for calling or messaging, but they may still lack the skills needed for meaningful digital participation. Digital literacy training should focus on practical skills that women can use in everyday life. These skills include online learning, digital payments, privacy settings, cyber safety, health information, government services, employment platforms, and online communication. When women gain digital literacy, they become more confident and independent in accessing services and opportunities. Digital literacy can support women's empowerment when it improves knowledge, confidence, participation, and access to services (Meherali et al., 2021).

Online Safety and Harassment

Online safety is a major concern in women's digital empowerment. Fear of cyberbullying, stalking, image misuse, fake profiles, online fraud, trolling, sexual harassment, and social judgment can discourage women from using digital platforms. In many cases, families may also restrict women's digital access because of concerns related to reputation, privacy, and online risks. Online harassment reduces women's freedom of expression and limits their participation in digital spaces. If women feel unsafe online, they may avoid digital learning, social media, online work, digital business, or public discussion. Safe digital environments are therefore necessary for meaningful empowerment. Digital literacy programmes should include cyber safety, privacy protection, reporting mechanisms, legal awareness, and confidence-building so that women can use technology safely and independently (UN Women, 2023).

Women's digital empowerment is limited by several barriers such as lack of personal device ownership, unaffordable internet, low digital literacy, and online safety concerns. These barriers restrict women's access to education, employment, banking, health information, government schemes, and public participation. Meaningful digital empowerment requires affordable access, personal devices, practical digital skills, privacy, online safety, family support, and gender-sensitive digital training. When these barriers are reduced, women can use digital technology more confidently, independently, and productively.

DIGITAL EMPOWERMENT AND WOMEN'S ECONOMIC PARTICIPATION

Digital empowerment increases women's economic participation by connecting them with online employment, business, banking, marketing, skill training, and digital payment opportunities. It supports women not only in paid work but also in entrepreneurship, self-employment, savings, credit access, and financial decision-making. However, these benefits become meaningful only when women have digital literacy, internet access, confidence, online safety awareness, financial knowledge, and family support. Thus, digital empowerment strengthens women's economic independence when access, skills, safety, and opportunities work together.

Online Employment

Online employment has opened new possibilities for women's participation in the labour market. Digital platforms allow women to engage in remote work, freelancing, online teaching, data entry, content writing, translation, digital marketing, customer support, graphic designing, virtual assistance, and other service-based activities. These opportunities are particularly useful for women who cannot easily join regular office-based employment due to family responsibilities, childcare duties, distance from workplaces, transport problems, or social restrictions.

One important advantage of online employment is flexibility. Women can work from home, choose suitable working hours, and combine income-generating work with household responsibilities. This flexibility can be valuable for married women, mothers, rural women, and women living in areas where formal employment opportunities are limited. Online work also enables women to connect with employers and clients beyond their local area, which can widen their economic opportunities.

At the same time, online employment is not automatically accessible to all women. Participation in digital work requires digital skills, internet connectivity, awareness of online platforms, language ability, professional communication, and confidence. Women who lack these skills may remain excluded from online labour markets even if opportunities exist. Therefore, digital training programmes should not only teach basic technology use but also focus on employability skills, online professionalism, safe platform use, and income generation. Gender gaps in digital skills and labour market readiness continue to affect women's participation in changing forms of work (OECD, 2023).

Digital Entrepreneurship

Digital entrepreneurship provides women with opportunities to start and expand small businesses through online platforms. Women can use social media, e-commerce websites, messaging applications, digital catalogues, and online payment systems to promote and sell their products or services. Businesses

related to food products, tailoring, handicrafts, beauty services, tuition, home-based products, local crafts, and agricultural goods can reach wider customers through digital marketing.

This form of entrepreneurship is especially significant for women who face restrictions on mobility or have limited access to formal employment. Digital platforms allow women to manage business activities from home, communicate with customers, display products, receive orders, compare prices, and collect payments. In this way, digital entrepreneurship can convert household-based skills into income-generating opportunities.

Digital entrepreneurship also strengthens women's visibility and confidence. When women manage online business activities, they develop communication skills, financial awareness, market understanding, and decision-making ability. These experiences can gradually improve their position within the household and community. However, women entrepreneurs may still face challenges such as lack of capital, limited digital skills, online fraud, weak market networks, lack of family support, and limited control over income.

For digital entrepreneurship to become a strong tool of empowerment, women need practical training in online marketing, customer handling, digital payments, product presentation, pricing, bookkeeping, and cyber safety. Digitization can support women's empowerment when it improves access to information, customers, communication channels, and business opportunities (Dhanamalar et al., 2020).

Financial Inclusion

Financial inclusion is a major dimension of women's economic empowerment. It refers to women's access to formal financial services such as bank accounts, mobile wallets, digital payments, savings, credit, insurance, pensions, and direct benefit transfers. Digital financial services can reduce women's dependence on others by allowing them to send, receive, save, and manage money more independently.

Digital banking and mobile-based financial services are particularly useful for rural and low-income women. They reduce the need for frequent travel to banks and make financial transactions more convenient. Women can receive wages, government benefits, business payments, and remittances through digital platforms. This improves their access to money and can strengthen their role in household financial decisions.

Financial inclusion also supports women's entrepreneurship. Women who use digital payments and mobile banking can manage business transactions more efficiently. They can maintain records, receive

customer payments, save income, and access credit or financial schemes. This can increase their confidence and improve the sustainability of small businesses.

However, digital financial inclusion is not free from barriers. Many women face difficulties due to lack of identity documents, lack of phone ownership, low financial literacy, fear of fraud, limited trust in digital payments, and dependence on male family members for financial decisions. Some women may have bank accounts but may not actively control or use them. Therefore, digital financial inclusion must be supported by financial literacy, cyber safety awareness, personal device access, and confidence-building. Mobile phones can support sustainable development by expanding access to information, financial services, and development-related opportunities when women are able to use them safely and independently (Rotondi et al., 2020).

Digital empowerment strengthens women's economic participation by expanding access to online employment, digital entrepreneurship, and financial inclusion. It enables women to work remotely, start small businesses, connect with markets, receive digital payments, and use financial services more independently. However, these benefits depend on digital literacy, internet access, personal device ownership, online safety, financial awareness, and social support. When these conditions are present, digital empowerment becomes a strong instrument for women's income generation, self-reliance, and economic empowerment.

CONCLUSION

Women's education and digital empowerment are closely connected with gender equality and inclusive development. The study concludes that women face multiple barriers, including socio-cultural norms, poverty, institutional weaknesses, lack of digital devices, unaffordable internet, low digital literacy, and online safety risks. These barriers limit women's access to education, employment, financial services, health information, government schemes, and entrepreneurship opportunities. Meaningful empowerment requires more than access to technology; it needs practical digital training, affordable internet, safe online spaces, supportive families, gender-sensitive institutions, and inclusive policies. Reducing these barriers can strengthen women's confidence, independence, economic participation, and social status.

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