



GIRLS' RIGHTS AND OPPORTUNITIES IN THE DIGITAL SOCIETY: EDUCATION, TECHNOLOGY, AND DIGITAL SAFETY

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Abstract: This article examines the rights and opportunities of girls in the digital society, with particular attention to digital education, participation in science, technology, engineering and mathematics (STEM), digital employment, and online safety. The study also considers the current situation in Uzbekistan and highlights the importance of creating an inclusive and secure digital environment in which girls are not merely consumers of technology but also active participants in its development. The article argues that ensuring girls' rights in the digital era requires coordinated efforts by educational institutions, families, government bodies, technology companies, and civil society organizations.

Keywords: girls' rights, gender equality, digital society, digital technologies, digital education, digital literacy.

Digital technologies have become an integral part of contemporary society. The Internet, artificial intelligence, online educational platforms, social networks, digital financial services, and other technological innovations have significantly changed the ways in which people study, work, communicate, and participate in social life. These transformations have created particularly important opportunities for girls and young women, enabling them to access educational resources, acquire new professional skills, communicate with international academic and professional communities, and participate in the digital economy.

However, technological progress does not automatically guarantee equality. Existing social and economic inequalities may also be reproduced in the digital environment. The gender digital divide remains a significant global challenge. According to the International Telecommunication Union (ITU), in 2024 approximately 70% of men and 65% of women worldwide were Internet users. Consequently, millions more men than women continued to have access to the Internet.

The problem is also evident in the field of science and technology.



According to UNESCO, women account for only about 35% of STEM graduates worldwide, and their representation in many technology-related fields remains considerably lower than that of men. UNESCO emphasizes that technological environments are not inherently gender-neutral and may reproduce existing gender stereotypes and inequalities if inclusiveness is not deliberately ensured.

Therefore, the discussion of girls' rights in the digital society should extend beyond the question of whether they have access to the Internet. It should also address the quality of access, digital literacy, opportunities for technological education and employment, participation in STEM fields, protection of personal data, and safety from online violence and harassment.

One of the most important opportunities created by digitalization is the expansion of access to education. Online courses, digital libraries, open educational resources, virtual classrooms, language-learning platforms, and academic databases allow girls to obtain knowledge regardless of their geographical location. This is particularly important for those who may face financial, social, geographical, or other barriers to traditional educational opportunities.

Digital education can also contribute to greater independence among girls and young women. Through online learning, they can acquire skills in programming, data analysis, artificial intelligence, digital marketing, foreign languages, graphic design, and other areas of the modern labor market. These skills can increase their competitiveness and create opportunities for remote employment, freelancing, entrepreneurship, and participation in international projects.

At the same time, equal access to digital education requires more than simply providing technological devices and Internet connectivity. Girls need adequate digital literacy, critical-thinking skills, access to quality educational content, and supportive learning environments. UNESCO's research demonstrates that gender stereotypes, social expectations, and limited representation of women in STEM can discourage girls from choosing science and technology-related educational and professional pathways.

Increasing girls' participation in STEM education is therefore an important component of gender equality in the digital age. Girls should have equal opportunities to study mathematics, computer science, engineering, artificial intelligence, information technology, and related disciplines. Their participation in these fields is important not only for individual career development but also for the development of more inclusive technological systems. When women participate in the design, development, testing, and regulation of technologies, a wider range of social needs and perspectives can



be considered.

Digital technologies can also contribute to women's economic empowerment. The digital labor market offers new forms of employment that are not necessarily limited by geographical location. Remote work, online entrepreneurship, freelance platforms, digital services, and technology-based businesses can provide girls and women with additional opportunities to achieve economic independence. However, these opportunities can only become sustainable when girls have the necessary digital, professional, financial, and communication skills.

The situation in Uzbekistan demonstrates considerable progress in Internet access among women. According to data from the National Statistics Committee of Uzbekistan, the proportion of women using the Internet increased from 72.6% in 2021 to 92.4% in 2024 and reached 93.1% during January–August 2025. During the same period, Internet use among men was 95.3%. These figures indicate that the gender gap in basic Internet access in Uzbekistan has narrowed considerably, although a difference remains.

This development creates a favorable basis for expanding women's participation in the digital economy and technology sectors. Recent initiatives in Uzbekistan have also focused on strengthening women's digital skills. For example, the "Digital Women in Focus" initiative has aimed to improve women's IT competencies, provide mentorship, and support employment opportunities in the technology sector. Training programs have included areas such as database engineering, networking, cybersecurity, and startup development.

Nevertheless, access to technology should be accompanied by adequate protection from digital risks. The expansion of girls' participation in online spaces has simultaneously increased their exposure to cyberbullying, online harassment, threats, identity theft, privacy violations, fraudulent activities, and other forms of technology-facilitated abuse.

Online violence against women and girls has become an important international concern. UN Women identifies various forms of technology-facilitated violence, including online sexual harassment, cyberstalking, threats, and other forms of digital abuse. Such practices may have serious psychological, social, educational, and economic consequences for victims.

Technology companies also have an important responsibility in ensuring online safety. Digital platforms should develop effective mechanisms for reporting harassment, removing harmful content, protecting minors and vulnerable users, and preventing the misuse of artificial intelligence. At the same time, governments need to establish appropriate legal frameworks



capable of addressing new forms of technology-facilitated violence. UN Women has noted that many legal systems still do not comprehensively address the full range of technology-facilitated violence and that legislation needs to keep pace with technological developments.

Educational institutions likewise play a central role. Schools and universities should incorporate digital citizenship, cybersecurity, media literacy, personal data protection, and responsible use of artificial intelligence into educational programs. Girls should be encouraged not only to consume digital content but also to create digital products, conduct research, develop technological solutions, and participate in innovation.

Family and society also influence girls' participation in digital education and technology. Traditional stereotypes that associate technological professions primarily with men can discourage girls from entering STEM fields. Therefore, parents, teachers, and communities should support girls' interest in science and technology and avoid restricting their educational and professional choices on the basis of gender.

In this context, gender equality in the digital society should be understood as a multidimensional concept. It includes equal access to digital infrastructure, equal opportunities for digital education and employment, participation in STEM and technological innovation, protection of personal data, freedom from online violence, and the ability to participate safely and independently in digital public life.

The digital transformation of society has created significant opportunities for girls and young women in education, professional development, scientific research, entrepreneurship, and social participation. At the same time, digitalization has introduced new forms of inequality and risks that require systematic attention. The gender digital divide, limited participation of women in STEM, insufficient digital literacy, online harassment, privacy violations, cyberbullying, and AI-enabled forms of abuse remain important challenges.

The experience of Uzbekistan demonstrates substantial progress in women's Internet access. However, the next stage of digital inclusion should focus not only on connectivity but also on the quality and safety of digital participation. Girls need opportunities to develop advanced digital competencies, enter STEM and technology-related professions, participate in scientific and innovative activities, and achieve economic independence through digital technologies.

Ensuring girls' rights in the digital society requires a comprehensive approach involving government institutions, educational organizations, families, technology companies, and civil society. Digital education should be combined with cybersecurity, media literacy, personal data protection, and awareness of



digital rights. Most importantly, girls should be regarded not only as users and consumers of technology but also as researchers, developers, entrepreneurs, innovators, and decision-makers.

Thus, the creation of a gender-inclusive digital society is not merely a matter of technological development. It is an essential component of social justice, equal opportunity, human rights, and sustainable development. Providing girls with equal access to education and technology while ensuring their safety and meaningful participation can contribute significantly to the formation of a more inclusive and innovative digital future.

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