

The Impact of Digital Literacy on Women's Empowerment

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Abstract

In today's technologically advanced society, digital literacy is essential for empowering women since it grants them access to social inclusion, work, education, and financial independence. However, there is still a sizable digital gender gap, especially in developing nations like India where women's access to the internet is restricted, their ability to use technology is hampered by financial limitations, social norms, and a lack of digital training.

This research explores the impact of digital literacy on women's empowerment, examining key barriers that prevent women from acquiring digital skills and evaluating successful initiatives such as PMGDISHA, Digital Saksharta Abhiyan (DISHA), and Internet Saathi. Through case studies and policy analysis, the study highlights effective strategies to overcome these challenges, including government-led programs, corporate interventions, financial support mechanisms, and cybersecurity reforms. The findings emphasize that sustainable digital literacy growth requires policy-driven solutions, greater investment in digital education, enhanced internet infrastructure, and stronger legal protections.

In order to promote more gender equality and the economic growth of the country, India can open up new doors for women in leadership, business, and education by bridging the digital gender barrier. This study supports a multi-stakeholder strategy that includes public and corporate sectors as well as community organisations in order to build a digitally inclusive society that enables women to prosper in the global digital economy.

Keywords: Digital literacy, women's empowerment, digital gender divide, technology access, education and employment, financial independence, societal barriers, government initiatives, corporate interventions, cybersecurity reforms, sustainable digital growth, internet infrastructure, policy-driven solutions, e-governance, and digital inclusion.

1.1. Introduction

"Ensuring women's digital inclusion is not just a matter of rights but a necessity for economic and social development in the digital age." – United Nations, (2022).¹

In today's digital age, access to technology and the internet is crucial for education, job opportunities, and communication. Yet, countless women around the globe remain without digital literacy, which hampers their ability to take advantage of these opportunities. Digital literacy, encompassing skills to

¹ UNESCO. (2021). Promoting Digital Skills for Women's Empowerment. Retrieved from www.unesco.org

effectively use computers, smartphones, and the internet, is vital for empowering women to secure financial independence, pursue education, and engage in social and political activities.

As UNESCO (2021) states: "Providing women with digital skills is not just about inclusion—it is about unlocking their full potential and ensuring equal opportunities in the modern world.² Even though it is crucial, women still encounter obstacles in gaining digital skills, including restricted internet access, a shortage of affordable devices, and societal limitations.

According to UN Women (2022), women in low-income countries are 20% less likely than men to use the internet, further widening the digital divide.³

This paper examines:

1. How digital literacy enhances women's empowerment in economic, educational, and social aspects.
2. The barriers preventing women from gaining digital literacy.
3. Solutions to Overcome Digital Literacy Challenges in India
4. Case Studies of Successful Digital Literacy Programs

1.2. Meaning of "The Impact of Digital Literacy on Women's Empowerment"

The expression "The Influence of Digital Literacy on Empowering Women" highlights how digital skills and technology enable women to achieve economic self-sufficiency, access education, and attain social inclusion, which facilitates their full participation in contemporary society.

- Digital literacy refers to the capacity to use digital instruments such as computers, the internet, and mobile devices to obtain information, communicate, and enhance skills.⁴
- Women's empowerment is the process of giving women equal opportunities in education, work, decision-making, and leadership roles.⁵

Increasing their level of digital literacy allows women to:

- Find better job opportunities and start online businesses.
- Access education through online learning platforms.
- Engage in social and political activism to raise their voices.
- Improve their financial independence using digital banking and e-commerce.

However, barriers like limited internet access, social restrictions, and lack of training still prevent many women from becoming digitally literate.⁶ Bridging this gap is essential for gender equality and sustainable development.

1.3. Definition of Digital Literacy and Women's Empowerment

- **Digital literacy**
- The capacity to use digital technology, such as computers, cell phones, and the internet, to access, comprehend, assess, and produce information is known as digital literacy. It includes the fundamental technical abilities, critical thinking, and awareness of online safety required to engage with contemporary culture.

As UNESCO (2021) defines "Digital literacy is the ability to use digital tools effectively, enabling individuals to communicate, access information, and participate fully in the digital economy and society."⁷

² UN Women. (2022). Bridging the Gender Digital Divide. Retrieved from www.unwomen.org

³ UN Women. (2022). Empowering Women in the Digital Age. Retrieved from www.unwomen.org

⁴ UNESCO. (2021). Digital Literacy for All: Bridging the Gender Gap. Retrieved from www.unesco.org

⁵ UN Women. (2022). Empowering Women Through Technology. Retrieved from www.unwomen.org

⁶ World Bank. (2020). The Digital Gender Divide: Challenges and Solutions. Retrieved from www.worldbank.org

▪ Women's Empowerment

The process of empowering women involves providing them with the knowledge, self-assurance, and opportunity necessary to take charge of their own life, make decisions on their own, and actively participate in society. Political, social, educational, and economic aspects are all included.

According to UN Women (2022) "Empowering women means ensuring they have equal access to resources, education, and opportunities, allowing them to make meaningful contributions to their communities and economies."⁸

1.4. Importance of Digital Literacy in Women's Empowerment

Women may acquire education, become financially independent, and engage in society more fully with the support of digital literacy. Being able to use technology is crucial for equitable possibilities in today's digital environment. But a lot of women still have trouble getting access to digital tools and education, which hinders their capacity to advance and thrive.

- Women with digital skills can work remotely, launch enterprises, and apply for employment online.
- E-commerce platforms allow female entrepreneurs to sell goods all over the world.
- Financial literacy through digital banking and mobile payments helps women manage their money independently.

1.5. Education and skill development accessibility

- Online learning platforms like Coursera, Udemy, and Khan Academy provide education to women who cannot attend traditional schools.⁹
- Women who are digitally literate can access training programs, pick up new skills, and advance their careers.

1.6. Inclusion in Social and Political

- Women who are digitally literate can take part in social activism and spread awareness of gender-related issues.
- Digital platforms are used by governments and organisations to inform women about social services, healthcare, and legal rights.¹⁰

1.7. Improved Access to Healthcare

- Digital literacy helps women access telemedicine services, online health information, and maternal healthcare resources.¹¹
- Women's health, family planning, and mental health are all vitally covered by mobile apps and health websites.

1.8. Reducing the Digital Gender Divide

- According to UN Women (2022), women in low-income countries are 20% less likely than men to use the internet, limiting their opportunities.¹²
- Encouraging digital literacy guarantees equal access to leadership, business, and educational opportunities for women.

⁷ UNESCO. (2021). Understanding Digital Literacy: A Global Perspective. Retrieved from www.unesco.org

⁸ UN Women. (2022). Empowering Women in the Digital Age. Retrieved from www.unwomen.org

⁹ UNESCO. (2021). The Role of Digital Education in Women's Empowerment. Retrieved from www.unesco.org.

¹⁰ Pew Research Center. (2020). Women's Digital Participation and Activism. Retrieved from www.pewresearch.org

¹¹ WHO. (2021). The Role of Digital Health in Women's Well-being. Retrieved from www.who.int

¹² UN Women. (2022). Bridging the Gender Digital Divide. Retrieved from www.unwomen.org

1.9. Need for Digital Literacy in Women's Empowerment

Digital literacy is essential for women's empowerment in today's digital age, where technology is no longer a luxury but a need. Women who possess digital skills are better able to access online education, healthcare, financial services, and better employment prospects, which increases their independence and promotes economic progress. However, many women, particularly in underdeveloped nations, do not have access to digital tools and education, which keeps them from taking advantage of the opportunities presented by the digital economy.

According to UNESCO (2021), 52% of women in low-income countries do not have access to digital education, limiting their ability to compete in the workforce.¹³

Gender inequality is exacerbated when women lack digital literacy, which makes it difficult for them to start enterprises, find employment, or participate in online education.

Furthermore, a lot of learning sites, like Coursera and Khan Academy, provide free online courses that can assist women advance their credentials, demonstrating the importance of digital literacy for education and skill development. Digital learning offers women in conservative societies, where their movement may be restricted, a flexible and accessible substitute for traditional schooling.

A World Economic Forum (2022) study highlights that women who have access to digital learning are 35% more likely to gain financial independence compared to those without digital skills.¹⁴

Additionally, women who are digitally literate are better able to engage in social and political activities because they can utilise digital platforms and social media to interact with groups around the world, engage in online activism, and advocate for their rights. The ability of digital platforms to elevate women's voices and combat gender inequality has been demonstrated by campaigns such as #MeToo and #WomenInTech. Additionally, women who possess digital literacy are better equipped to access healthcare through the utilisation of online health information, mobile health apps, and telemedicine services.

A report by GSMA (2021) states that women with digital access are 50% more likely to seek online health consultations, improving their well-being.¹⁵

Because of social, cultural, and economic hurdles, many women continue to be excluded from the digital world despite these advantages. In order to close the digital gender gap, governments and organisations must collaborate to offer women secure online spaces, digital education initiatives, and reasonably priced internet access. In order to achieve greater gender equality and sustainable development, it is imperative that this gap be closed and women be allowed to fully engage in the digital economy and society.

2.0. Barriers Preventing Women from Gaining Digital Literacy

In order to become digitally literate, women worldwide must overcome several obstacles. Gender inequality in the digital sphere is exacerbated by these obstacles, which keep them from fully engaging in the financial, job, and educational sectors. Among the main challenges are the following ones:

- **Limited Access to Technology and Internet**

Women's limited access to technology and internet services is a major obstacle to their development of

¹³ UNESCO. (2021). Women and Digital Inclusion: Overcoming Barriers. Retrieved from www.unesco.org

¹⁴ World Economic Forum. (2022). The Future of Digital Skills for Women's Empowerment. Retrieved from www.weforum.org

¹⁵ GSMA. (2021). Mobile Gender Gap Report: Digital Access and Healthcare. Retrieved from www.gsma.com

digital literacy. Due to high prices and budgetary limitations, many women do not own smartphones, computers, or tablets, particularly in rural and low-income areas. According to UN Women (2022), women are less likely than men to own a mobile phone or have access to the internet, particularly in developing countries.¹⁶

Additionally, inadequate internet infrastructure and frequent power shortages in some regions make it difficult for women to engage in digital learning (World Bank, 2020).¹⁷

▪ **Financial Constraints**

The expense of internet connection and digital education is still another significant obstacle for women. The cost of internet access, digital literacy training programs, and even basic mobile data plans is prohibitive for many women.

Research by GSMA (2021) highlights that the cost of mobile internet remains a primary reason why women in low-income regions remain digitally excluded.¹⁸ Furthermore, many women lack financial independence, making it difficult for them to invest in digital education without permission or support from their families (OECD, 2020).¹⁹

▪ **Cultural and Social Norms**

▪ Many societies prohibit women from adopting technology because of cultural views and gender standards. In certain areas, women have less possibilities to learn and use technology because of the perception that digital abilities are more applicable to men.

According to ITU (2021), women in conservative societies often face restrictions from their families and communities when it comes to using mobile phones, attending digital literacy training, or accessing the internet.²⁰ Additionally, families often prioritize boys' education over girls' digital skills, reinforcing the gender gap (Pew Research Centre, 2020).²¹

▪ **Lack of Digital Literacy Training Programs**

Women are underserved by computer literacy initiatives, even when they have access to technology. Due to their remote locations, many of the training facilities now in use are inaccessible to women who are responsible for taking care of the home.

Furthermore, some programs fail to take into account Research by World Economic Forum (2022)²² indicates that most digital skills programs do not cater to women's unique needs, such as offering flexible schedules or learning materials in local languages (UNESCO, 2022). women's time constraints, which makes it challenging for them to regularly attend training.²³

▪ **Fear of Online Harassment and Cybersecurity Risks**

The dangers of online harassment, cyberbullying, and digital fraud make many women reluctant to use digital networks.

According to Amnesty International (2021), women face a higher risk of cyber threats, leading them to avoid digital spaces.²⁴

¹⁶ UN Women. (2022). Bridging the Digital Divide for Women. Retrieved from www.unwomen.org

¹⁷ World Bank. (2020). Access to Technology and Its Impact on Women's Digital Inclusion. Retrieved from www.worldbank.org

¹⁸ GSMA. (2021). The Mobile Gender Gap Report. Retrieved from www.gsma.com

¹⁹ OECD. (2020). Economic Barriers to Digital Education for Women. Retrieved from www.oecd.org

²⁰ ITU. (2021). Gender Bias in Technology Access and Education. Retrieved from www.itu.int

²¹ Pew Research Centre. (2020). Social Restrictions on Women's Use of Technology. Retrieved from www.pewresearch.org

²² World Economic Forum. (2022). Closing the Digital Skills Gap for Women. Retrieved from www.weforum.org

²³ United Nations. (2022). Expanding Digital Education for Women. Retrieved from www.un.org

²⁴ Amnesty International. (2021). Online Harassment Against Women: A Global Report. Retrieved from www.amnesty.org

A lack of awareness about cybersecurity and privacy protection makes them more vulnerable to online scams and exploitation (WHO, 2021). Many women are deterred from fully engaging in the digital world by this concern.²⁵

▪ **Lack of Female Role Models in Technology**

The technological industry is dominated by men, and women are rarely encouraged to acquire digital skills by female mentors or trainers.

According to Forbes (2021), the lack of female representation in technology-related fields discourages women from pursuing careers in the digital space.²⁶

Women are less likely to feel comfortable learning and using digital tools if they lack support systems and role models.

▪ **Language and Literacy Barriers**

Many women, especially those in rural and underprivileged communities, face language barriers that prevent them from learning digital skills. Most digital education programs and online content are available in dominant languages like English, making it difficult for women who speak local or indigenous languages to participate.

According to UNESCO (2022), women with low literacy levels also struggle to use digital tools, further preventing them from benefiting from technology.²⁷

2.1. Solutions to Overcome Digital Literacy Challenges in India

• **Government-Led Initiatives**

A number of initiatives have been started by the Indian government to increase women's digital literacy. The Digital Saksharta Abhiyan (DISHA) and Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA) are two large-scale initiatives focused on providing basic digital skills training in rural areas (Government of India, 2022)²⁸

Together, these initiatives have trained millions of women and given them the fundamental skills they need to use digital platforms.

Additionally, the Beti Bachao, Beti Padhao Scheme integrates digital education into school curriculums to ensure that young girls develop technological proficiency from an early age (NITI Aayog, 2021).²⁹

Another significant government initiative is the Jan Dhan-Aadhaar-Mobile (JAM) Trinity, which links bank accounts, Aadhaar IDs, and mobile phones to enable digital financial transactions. This initiative has played a crucial role in increasing women's access to banking services and financial independence (Government of India, 2020).³⁰

• **NGO and Private Sector Contributions**

Beyond government efforts, several NGOs and private organizations have contributed to bridging the digital gender gap. The Digital Empowerment Foundation (DEF) provides free digital training to women in rural areas, helping them gain financial literacy and entrepreneurship skills (Digital Empowerment Foundation, 2021).³¹

²⁵ WHO. (2021). Cybersecurity Awareness and Digital Safety for Women. Retrieved from www.who.int

²⁶ Forbes. (2021). Women in Technology: The Need for More Female Role Models. Retrieved from www.forbes.com

²⁷ UNESCO. (2022). Digital Literacy Challenges for Women in Rural Areas. Retrieved from www.unesco.org

²⁸ Government of India (2022). *Digital Saksharta Abhiyan (DISHA) Annual Report*.

²⁹ NITI Aayog (2021). *Beti Bachao, Beti Padhao: Expanding Digital Education for Girls*.

³⁰ Government of India (2020). *Jan Dhan-Aadhaar-Mobile Trinity: Impact on Women's Financial Inclusion*.

³¹ Digital Empowerment Foundation (2021). *Smartpur: A Model for Rural Digital Empowerment*

Similarly, the NASSCOM Foundation's Women Wizards Rule Tech (W2RT) program supports women in STEM by offering coding and technology workshops (NASSCOM Foundation, 2022).³²

One of the most significant initiatives is Google's Internet Saathi, which was introduced in collaboration with Tata Trusts. This program has trained over 30 million rural women in basic digital skills, empowering them to use the internet for educational and financial purposes (Google India, 2021).³³

- **Financial Assistance for Digital Access**

Women's involvement in the digital economy can be greatly increased by offering financial support. The **Mudra Yojana** microfinance program offers low-interest loans to women for purchasing digital devices and enrolling in digital training programs (Reserve Bank of India, 2021).³⁴

Additionally, various institutions provide STEM scholarships for women, encouraging them to pursue careers in technology and engineering (Indian Ministry of Education, 2022).³⁵

Furthermore, digital entrepreneurship is encouraged by platforms like Mahila e-Haat, which enable women to sell goods online. Expanding financial incentives for women-led startups in the digital economy can further boost participation (Government of India, 2021).³⁶

2.2. Case Studies of Successful Digital Literacy Programs

- **Google's Internet Saathi Initiative**

Since its launch in 2015, thousands of rural women have received training in financial literacy, online education, and digital skills. Over 300,000 women trainers (Internet Saathi's) have educated 30 million women on using the internet for various applications (Tata Trusts, 2021).³⁷

- **Digital Empowerment Foundation's Smartpur Project**

The goal of this project is to establish digital literacy centres in rural India, where women receive free training on online banking, social media, and digital health services (Digital Empowerment Foundation, 2022).³⁸

- **Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA)**

A government-backed project aimed at making 60 million rural citizens digitally literate, PMGDISHA has a strong focus on training women in villages to use online government services and financial platforms effectively (Ministry of Rural Development, 2022).³⁹

Conclusion and final recommendation

A major factor in women's empowerment is digital literacy, which gives them access to social engagement, work, healthcare, education, and financial independence. Notwithstanding the notable advancements made by programs like PMGDISHA, Digital Saksharta Abhiyan (DISHA), and Internet Saathi, obstacles including cost, internet accessibility, social constraints, and cybersecurity issues continue to prevent women from fully engaging in the digital economy.

The government must acknowledge digital literacy as a fundamental right and incorporate it into workforce development initiatives and educational policy in order to ensure sustained digital inclusion.

³² NASSCOM Foundation (2022). Women Wizards Rule Tech (W2RT) Program Report.

³³ Google India (2021). Internet Saathi: Bridging the Gender Digital Divide.

³⁴ Reserve Bank of India (2021). Financial Inclusion for Women Entrepreneurs.

³⁵ Indian Ministry of Education (2022). STEM Scholarships for Women in India.

³⁶ Government of India (2021). Mahila e-Haat: A Digital Platform for Women Entrepreneurs.

³⁷ Tata Trusts (2021). Impact Report: Internet Saathi Initiative.

³⁸ Digital Empowerment Foundation (2022). Smartpur Case Study: Women's Digital Empowerment.

³⁹ Ministry of Rural Development (2022). PMGDISHA: Digital Skills for Women in Rural India.

To guarantee equal chances for women, it is imperative to increase the availability of inexpensive internet services, offer subsidised digital gadgets, and fortify cybersecurity safeguards. Moreover, corporate-government partnerships should be encouraged to offer training programs, mentorship, and financial support for female entrepreneurs in the digital space. Monitoring and evaluation frameworks must also be established to assess the impact of digital literacy programs and ensure continuous improvements. By implementing policy-driven, long-term digital literacy strategies, India can empower millions of women, reduce gender disparities, and build an inclusive, technology-driven economy. Investing in digital literacy today will create a more equitable and progressive society for future generations.

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