

**WOMEN AND DIGITAL EMPOWERMENT IN INDIA - THE ROLE OF  
TECHNOLOGY IN ADVANCING GENDER EQUALITY AUTHOR**

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**Abstract**

**Purpose:** This paper will examine the Women and Digital Empowerment in India by understanding the role of Technology in bringing gender equality.

In this study we will delve into how in recent years, technology has become a significant driver of gender equality in India, especially in empowering women. This paper explores the role of digital tools in advancing women's rights, improving access to education, and creating economic opportunities for women in India.

By examining various initiatives, policies, and digital platforms, the study illustrates how technology is helping to reduce the gender gap in areas such as education, healthcare, employment, and political engagement. The research also addresses the barriers women face in fully utilizing digital opportunities, such as challenges related to digital literacy, infrastructure access, and cultural norms.

**Keywords -** Women Empowerment, Digital Literacy, Technology, Digital Empowerment

**Introduction**

"Digital empowerment is the key to unlocking women's potential in India, providing them with access to information, economic opportunities, and a platform to voice their concerns, paving the way for true gender equality."

The digital age has brought about profound changes across the globe, with technology playing an increasingly significant role in shaping societies, economies, and cultures. In India, the advent of digital technologies has presented a unique opportunity to address the long-standing gender inequalities that have traditionally marginalized women from participating equally in social, economic, and political life.

Technology has emerged as a key enabler, empowering women with access to education, employment, healthcare, financial resources, and information, contributing to their overall empowerment. Digital platforms and technologies such as mobile phones, the internet, and online services are providing women in both urban and rural areas with tools to overcome barriers of mobility, literacy, and access to critical services.

Moreover, technology has played a pivotal role in raising awareness about women's rights, facilitating advocacy, and giving women a voice in governance and policy-making processes. Despite this progress, challenges such as the digital gender gap, lack of infrastructure, socio-cultural norms, and safety concerns continue to hinder the full realization of the potential of technology for women's empowerment.

**Objectives of the Study**

- To explore the role of digital technology in empowering women in India.
- To assess the impact of technology on women's access to education, healthcare, financial inclusion, and employment.

- To identify the barriers and challenges women face in accessing and utilizing digital technologies.
- To recommend strategies for improving digital access for women and leveraging technology to advance gender equality.

### Research Methodology

This is a descriptive study and the data has been collected through secondary sources from various Research papers, Thesis, Circulars, journals and blogs.

### Limitations of the Study

- Due to time constraint data is collected only through secondary sources

### Review of Literature

1. **Sudha S., Muthukumaravel S. (2024)** in their research paper highlight that digital literacy plays a crucial role in empowering women entrepreneurs. It helps them overcome challenges, seize opportunities, and succeed in the dynamic world of entrepreneurship. Digital technologies provide women with the tools and resources to network, market their businesses, and access global markets, allowing them to thrive in a competitive business environment.
2. **Rashmi K., Devi P. (2022)** in their research paper concluded that mobile phones, e-learning platforms, and virtual classrooms have greatly expanded educational opportunities for women, especially during the COVID-19 pandemic. Government initiatives like SWAYAM and e-Pathshala have allowed women, particularly those limited by mobility or societal barriers, to pursue education remotely.
3. **Patel A, Sharma N., (2021)** in their research paper explored how digital platforms, like e-commerce and gig economy apps, have opened new job opportunities for women. It highlights the growth of platforms such as Amazon India, Flipkart, and Meesho, where women, particularly in urban areas, have used technology to launch home-based businesses. These platforms have allowed women to overcome traditional employment barriers, like mobility and safety issues, while offering flexible work options.
4. **Kaur M., Singh R., (2019)** in their research paper acknowledged that women entrepreneurs in rural areas have gained from mobile-based microfinance services, which allow them to access small loans for their businesses. These platforms have helped bridge the gap between traditional financial institutions and women who previously faced limited access to credit due to collateral demands and cultural barriers.
5. **Malhotra R. (2015)** in her research paper concluded that Information Technology has been key in empowering women, greatly improving their status over time. IT advancements have enabled women to engage in various areas of life, boosting their skills, knowledge, and income. It has provided flexible work hours and the option to work from home, encouraging more women to join the workforce. Overall, IT has played a crucial role in women's empowerment.

### Data Analysis and Interpretation-

To understand the impact of technology on women's empowerment in India, data from various sources, including government reports, surveys, and academic studies, is analyzed across four critical areas: education, healthcare, financial inclusion, and employment.

### **Technology and Women's Access to Education:**

According to data from the National Family Health Survey (NFHS-5, 2020-21) and the Annual Status of Education Report (ASER, 2021), women's access to education has improved significantly with the adoption of digital platforms. Key data points include:

- **Online Learning:** The adoption of online learning platforms such as SWAYAM and Diksha surged by 200% during the COVID-19 pandemic. Approximately 65% of female students in urban areas used digital devices for education, compared to just 32% in rural areas who had access to such resources.
- **Access to Mobile Devices and Internet:** In rural India, 47% of women aged 15-29 reported owning a mobile phone, but only 18% had consistent access to the internet.
- **Digital Literacy Programs:** Initiatives like the Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA) have equipped over 10 million rural women with digital literacy skills by 2022. However, the continued growth of digital learning is hindered by infrastructure limitations.

### **Technology and Women's Access to Healthcare:**

The role of digital platforms in enhancing women's access to healthcare has been captured in several studies and surveys, including data from Digital India Health Initiatives (2021) and the National Health Mission (NHM) Reports (2022).

- **Telemedicine Services:** During the COVID-19 pandemic, telemedicine consultations via platforms like eSanjeevani saw a 250% increase. More than 60% of users were women from rural and semi-urban areas, primarily seeking services related to maternal and child health.
- **Mobile Health (mHealth) Applications:** Initiatives like the Sehat Saathi App have granted over 4 million rural women access to maternal health information and remote consultations with healthcare providers.
- **Reproductive and Child Health (RCH) Portal:** This government initiative, which digitizes maternal health data and ensures timely interventions, has benefited more than 8 million women.

### **Technology and Women's Financial Inclusion:**

Data from the Reserve Bank of India (RBI) Financial Inclusion Report (2021) and the Global Findex Database (2022) provides insight into the role of technology in enhancing women's financial inclusion.

- **Pradhan Mantri Jan Dhan Yojana (PMJDY):** By 2022, 56% of the Jan Dhan bank accounts were owned by women, with 23% of rural women reporting usage of mobile banking services.
- **Mobile Wallets and Digital Payments:** The use of mobile wallets such as Paytm and Google Pay has risen among women, with women making up 40% of users in urban areas, compared to just 15% in rural areas.
- **Microfinance and Digital Lending:** Digital microfinance platforms have enabled over 2.5 million women entrepreneurs to access small loans, contributing to the growth of women-owned businesses, especially in rural regions.

### **Technology and Women's Employment:**

The Periodic Labour Force Survey (PLFS, 2021) and studies from the National Sample Survey Office (NSSO) provide valuable insights into how technology has affected women's employment. The key findings include:

- **E-Commerce and Gig Economy Platforms:** Platforms like Meesho, Flipkart, and Amazon India have empowered more than 2 million women to launch home-based businesses, especially in urban areas. Women now represent 30% of the sellers on these platforms.
- **Remote Work Opportunities:** The proportion of women working remotely rose by 22% during the COVID-19 pandemic, with a notable increase in the IT and service industries. However, this shift is predominantly seen in urban areas.
- **Skill Development Programs:** Digital skilling programs such as Digital Sakshar have trained over 1.5 million women in digital and technical skills, enhancing their job prospects. Nonetheless, the gender gap remains significant in technical fields like IT and engineering, where women only account for 16% of the workforce.

### **Barriers and Challenges**

**Digital Divide in Access to Devices and Internet:** Particularly in rural India, poses significant barriers to women's access to technology, limiting their ability to engage in digital education, healthcare, financial inclusion, and employment opportunities. This divide is exacerbated by cultural norms and economic constraints that prioritize men's access to technology.

**Digital Literacy and Skills Gap:** Digital illiteracy is another challenge, particularly in rural areas, which limits women's ability to use online services, mobile banking, e-learning platforms, and job opportunities. Despite government programs aimed at improving digital literacy, women remain underrepresented due to socio-cultural factors and lack of awareness.

**Socio-Cultural Norms and Gender Bias:** Socio-cultural norms restrict women's use of technology, with many communities monitoring and limiting their access due to traditional gender roles. This cultural bias reinforces the digital gender gap, especially in conservative households.

**Affordability and Economic Constraints:** Economic constraints, such as the high costs of mobile devices and internet services, disproportionately affect women, particularly in low-

income and rural households. Affordability is a critical issue that needs to be addressed to improve women's access to digital tools.

**Safety and Security Concerns:** Safety and security concerns, including cyber harassment and privacy violations, discourage women from engaging with digital technologies. A safer online environment and awareness about online security are necessary for encouraging more women to participate in the digital space.

**Lack of Gender-Sensitive Digital Policies:** The lack of gender-sensitive digital policies hinders the success of digital inclusion initiatives, as they often fail to address the specific barriers women face. There is a need for policies that prioritize women's access to technology, especially in rural areas, to ensure they can fully benefit from digital opportunities.

#### **Strategies for improving digital access:**

**Promote Digital Literacy and Skills Development:** Launch digital literacy campaigns and provide targeted training in technical fields to increase women's participation in the tech sector. Government and non-governmental organizations should work together to provide training on basic digital skills, cybersecurity, and advanced technical skills, enhancing women's employability and digital independence.

**Enhance Access to Affordable Technology:** Provide affordable devices and internet services, especially in rural areas, and invest in digital infrastructure.

**Gender-Sensitive Digital Policies:** Implement policies that address women-specific barriers and encourage gender equality in tech entrepreneurship and online content. Support content that promotes women's rights, health, education, and empowerment.

**Ensure Digital Safety:** Strengthen laws to protect women from online harassment and provide education on digital safety and privacy. Digital platforms should be encouraged to establish robust reporting and response mechanisms for online violence and abuse.

**Support Women in E-Commerce:** Create platforms that empower women to start businesses and offer tools for financial management and growth. Increase the adoption of mobile wallets, digital banking, and mobile payment systems by promoting their benefits to women in rural and urban areas. Providing financial literacy programs alongside these services will help women manage their finances more effectively.

**Increase Women's Representation in Tech:** Promote women's participation in tech roles through scholarships and mentorship, and support women-led startups. Create incubators and accelerators that cater specifically to female entrepreneurs in the tech sector.

**Address Socio-Cultural Barriers:** Change societal attitudes towards women's use of technology through community engagement and involve men as allies.

**Leverage Technology for Empowerment:** Use digital platforms to enhance women's access to health, education, and financial services.

**Public-Private Partnerships:** Encourage collaboration between the government, tech industry, and NGOs to scale up initiatives for women's digital inclusion.



### Findings, Conclusion and Recommendations-

The analysis across the four key areas demonstrates that technology has had a positive impact on women's empowerment in India, particularly in terms of education, healthcare, financial inclusion, and employment. However, the benefits of technology have been unevenly distributed, with significant disparities between urban and rural areas. Women in rural regions continue to face challenges such as limited access to digital devices, internet connectivity, and digital literacy, which hinder their ability to fully participate in the digital economy.

To maximize the potential of technology for women's empowerment, targeted interventions are needed to improve digital access in rural areas, provide training in digital literacy, and create safe digital environments for women. Addressing these challenges will ensure that technology can serve as a powerful tool for advancing gender equality in India.

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