

Role of Technology in Women Empowerment: Opportunities and Challenges

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Chapter

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ABSTRACT

Women empowerment is an essential component of inclusive and sustainable development. It refers to the process through which women acquire equal rights, opportunities, resources, confidence, and decision-making power to participate effectively in social, economic, political, and cultural activities. In the contemporary era, technology has emerged as a significant catalyst for accelerating women's empowerment by reducing barriers related to education, employment, financial inclusion, healthcare access, and entrepreneurship.

Digital technologies such as mobile banking, online education platforms, e-commerce, telemedicine, digital governance services, and social media networks have created new opportunities for women, especially those living in rural and economically disadvantaged areas. Technology has enabled women to access information, develop skills, establish enterprises, participate in markets, and become financially independent.

The present paper examines the role of technology in promoting women empowerment in India. It discusses the contribution of digital technology in economic empowerment, education and skill development, safety, healthcare, agriculture, and social awareness. The paper also analyses various government initiatives such as Mission Shakti, Digital Shakti, Lakhpati Didi Yojana, Beti Bachao Beti Padhao, One Stop Centre Scheme, and other digital platforms designed for women's welfare. Further, the study highlights challenges such as the digital divide, lack of digital literacy, cyber security concerns, financial constraints, language barriers, and socio-cultural restrictions. The paper concludes that strengthening digital infrastructure, improving digital literacy, ensuring affordable internet access, and encouraging women-led digital entrepreneurship are essential for achieving inclusive empowerment.

Keywords: Women Empowerment, Technology, Digital Literacy, Financial Inclusion, E-Commerce, Rural Women, Digital Transformation

INTRODUCTION

"You can tell the condition of a nation by looking at the status of its women."

Jawaharlal Nehru

The status of women represents the social, economic, and cultural progress of a nation. Women constitute nearly half of the world's population and their participation is essential for achieving sustainable development. In the twenty-first century, women empowerment has become a major concern in global development policies because economic growth and social progress cannot be achieved without equal participation of women.

Historically, women in Indian society experienced different social positions during different periods. During the Vedic period, women enjoyed comparatively respectable status, access to education, and participation in intellectual and social activities. However, during the medieval period, several restrictive practices such as child marriage, restrictions on women's education, social discrimination, and limitations on freedom affected women's development.

The nineteenth and twentieth centuries witnessed significant social reform movements for women's rights. Reformers such as Raja Ram Mohan Roy, Ishwar Chandra Vidyasagar, and Savitribai Phule made remarkable contributions towards women's education, widow remarriage, and social equality. After independence, the Constitution of India provided several provisions to ensure equality and protection of women. Articles related to equality before law, equal opportunities, education, and protection from discrimination created a strong foundation for women's empowerment. The National Policy for Empowerment of Women (2001) further strengthened efforts to promote women's social, economic, and political development.

In the present digital era, technology has emerged as a transformative force for women's empowerment. Digital tools have expanded women's access to knowledge, financial services, employment opportunities, healthcare facilities, and entrepreneurial platforms. Mobile phones, internet services, digital payments, online learning, and e-commerce platforms have enabled women to overcome traditional barriers and participate actively in the economy.

Therefore, technology is not merely a communication tool but has become an instrument of social transformation, equality, and empowerment.

CONCEPT AND MEANING OF WOMEN EMPOWERMENT

Women empowerment is a multidimensional process through which women gain the ability to make independent decisions, control resources, access opportunities, and participate equally in social, economic, political, and cultural life. It encompasses providing women with equal educational opportunities, economic independence, social dignity, political participation, legal awareness, decision-making power, and self-confidence. Empowerment enables women to realize their potential, exercise their rights, and contribute meaningfully to family, community, and national development.

According to Naila Kabeer (1999), *"Women's empowerment is the process by which those who have been denied the ability to make strategic life choices acquire such ability."*

Similarly, Jo Rowlands defines empowerment as increasing people's capacity to make choices and transform those choices into meaningful actions and outcomes. The United Nations further emphasizes that women's empowerment requires equal participation in all spheres of society, equitable access to resources, and equal opportunities in decision-making processes. Thus, women empowerment is a comprehensive process that promotes dignity, equality, independence, and confidence, enabling women to actively contribute to inclusive and sustainable development.

REVIEW OF LITERATURE

The relationship between technology and women empowerment has received increasing attention in recent years. Various researchers have examined how digital technologies, ICT, digital literacy, and online platforms contribute towards improving women's economic independence, social participation, education, and access to resources.

Kabeer (1999) examined the concept of women's empowerment and argued that empowerment is a process through which women gain the ability to make strategic life choices. The study highlighted that access to resources, agency, and achievements are the three important dimensions of empowerment. This framework provides a theoretical foundation for understanding how technology can enhance women's choices and capabilities.

Hilbert (2011) analysed the gender digital divide and observed that unequal access to information and communication technologies creates barriers to women's social and economic development. The study emphasized that digital inclusion of women is essential for achieving gender equality.

Gurumurthy (2004) studied the role of ICT in women's empowerment and argued that technology can provide women with better access to information, education, employment opportunities, and decision-making platforms. However, social inequalities and lack of digital skills remain major barriers.

Mukherjee, Ilavarasan and Kar (2024) conducted an empirical study on poor unemployed working-age women in India to examine the impact of digital skills training on empowerment. Using survey data of 6,989 women, the study found that digital skill development programmes improved women's ability to access employment opportunities, information, and digital services.

Goyal and Kamath (2024) examined technologies that improve women's healthcare access in India through a scoping review of 43 studies. The study found that mobile applications, SMS-based services, telemedicine, and digital health platforms improved women's awareness and access to healthcare facilities. However, digital literacy and technological accessibility remained important challenges.

Kumar, Kumar and Devi (2026) investigated the relationship between digital literacy and women's empowerment among rural women in Himachal Pradesh. Based on data collected from 250 rural participants, the study used statistical techniques including t-tests and PLS-SEM and found a significant positive relationship between digital literacy and women's empowerment. Education was identified as an important factor influencing digital capability.

Tamang et al. (2026) analysed the impact of digital literacy on women empowerment with special reference to Uttar Pradesh. The study highlighted that digital literacy improves women's access to information, financial services, and decision-making opportunities, strengthening their empowerment process.

Samuel, George and Samuel (2020) examined women's participation in emerging technologies such as Artificial Intelligence, big data, and information systems. The study found that education, confidence, and self-efficacy are crucial factors determining women's participation in advanced technological fields.

Pal and De (2021) critically analysed ICT-based development programmes for women and observed that technology provides opportunities for empowerment but may also increase inequalities if issues such as digital divide, online harassment, and unequal access are ignored.

Research Gap

The existing literature indicates that technology has significant potential to empower women; however, several gaps remain. Most studies focus on digital literacy and ICT access, while limited research examines the combined role of technology in economic empowerment, entrepreneurship, agriculture, healthcare, safety, and social transformation. Further, rural women's experiences with digital technology require more detailed investigation because socio-economic barriers, cultural restrictions, and infrastructure limitations continue to affect digital inclusion.

Therefore, the present study attempts to analyse the multidimensional role of technology in women empowerment by examining opportunities, government initiatives, challenges, and future prospects in the Indian context.

Objectives of the Study

The major objectives of the present study are:

- To examine the concept and dimensions of women empowerment.
- To analyse the role of technology in promoting women empowerment and financial inclusion.
- To assess government initiatives for technology-based women empowerment in India.
- To identify challenges and suggest policy measures for digital women empowerment.

METHODOLOGY

Research Design

The present study is based on a descriptive and analytical research design. It analyses the role of technology in women empowerment through a comprehensive review of existing literature, government reports, policy documents, research articles, books, and other reliable secondary sources. The descriptive approach explains the concept and dimensions of women empowerment, while the analytical approach evaluates the impact of technology on women's socio-economic development and empowerment.

Nature of the Study

The study is qualitative in nature and focuses on understanding the relationship between digital technology and women's empowerment. It analyses how technological advancements contribute to improving women's education, employment, entrepreneurship, financial inclusion, and overall socio-economic development through the interpretation of secondary data and existing literature.

Sources of Data

The present study is based exclusively on secondary data obtained from credible and authoritative sources. These include peer-reviewed research articles published in national and international journals, books and edited volumes, government reports, publications of the Ministry of Women and Child Development, Digital India reports, reports of the United Nations and other international organisations, and scholarly databases such as Google Scholar. The collected data have been critically reviewed and synthesised to examine the role of technology in women empowerment.

Method of Analysis

The collected data have been analysed using content analysis, comparative analysis, and thematic analysis. These analytical techniques facilitate a systematic examination of the existing literature and secondary data to assess the role of technology in women empowerment. The analysis is organised around key themes, including digital literacy and education, economic empowerment and entrepreneurship, digital financial inclusion, healthcare technology, digital safety and awareness, government initiatives, and challenges to digital inclusion.

Scope of the Study

The study is confined to the Indian context, with particular emphasis on women, especially rural women, who continue to face significant barriers in accessing digital technologies and resources. It examines the role of technology in enhancing women's education, economic participation, financial inclusion, and social empowerment, while highlighting its potential as an effective instrument for promoting gender equality and inclusive development.

Historical Background of Women Empowerment

The global movement for women's empowerment gained significant momentum during the twentieth century with increasing recognition of women's rights, equality, and participation in development processes. The United Nations declared 1975 as International Women's Year and organised the First World Conference on Women in Mexico City in 1975, which marked an important milestone in promoting international efforts towards gender equality. Subsequently, the period 1976–1985 was declared the UN Decade for Women, focusing on key areas such as equality, development, peace, education, employment, health, and legal rights for women.

In India, efforts towards women empowerment were strengthened through various constitutional provisions, policies, and development programmes. The National Policy for Empowerment of Women, 2001 was introduced to eliminate discrimination against women and promote their social, economic,

and political advancement. In the contemporary era, technological development has emerged as a transformative force by creating new opportunities for women through improved access to information, digital education, financial services, employment opportunities, and entrepreneurship. Thus, technology has become an important instrument for accelerating women empowerment and inclusive development.

Dimensions of Women

Dimensions of Women refer to the different aspects of women's lives and development. These include **education, economic independence, social status, political participation, health, and personal empowerment**. Together, these dimensions reflect women's **equality, freedom, dignity, and overall well-being**.

Educational Empowerment: Educational empowerment constitutes the foundation of women's empowerment, as it enhances knowledge, skills, confidence, critical thinking, and awareness of rights and opportunities. Education enables women to make informed decisions regarding their health, careers, family, and participation in social and economic activities. An educated woman is better equipped to contribute to household welfare, community development, and national progress. Technological advancements have significantly strengthened educational empowerment by expanding access to online learning, digital classrooms, e-learning platforms, virtual training programmes, and skill development initiatives. These digital resources have reduced geographical and socio-economic barriers, enabling women, particularly those in rural and remote areas, to acquire quality education and professional competencies. Consequently, technology has emerged as a powerful catalyst for promoting lifelong learning and educational inclusion among women.

Economic Empowerment: Economic empowerment enables women to generate income, access financial resources, own and control productive assets, and actively participate in economic activities. Financial independence enhances women's decision-making capacity, improves their socio-economic status, and strengthens their role within the household and society. It also promotes entrepreneurship, employment opportunities, and sustainable livelihoods, thereby contributing to inclusive economic development. Technological advancements have significantly accelerated women's economic empowerment through digital financial services, including mobile banking, Unified Payments Interface (UPI), digital wallets, and online banking platforms. These innovations have simplified financial transactions, expanded access to formal financial services, and encouraged greater participation of women in entrepreneurship, e-commerce, and self-employment. Consequently, digital technology has become an important catalyst for enhancing women's financial inclusion and economic independence.

Social Empowerment: Social empowerment ensures equality, dignity, freedom, and respect for women by enabling them to participate actively in social life and challenge existing gender-based inequalities. It aims to reduce discrimination, violence, dowry practices, and restrictive social norms that limit women's opportunities and rights. Socially empowered women possess greater confidence, awareness, and ability to claim their rights and contribute

to community development. Technology has further strengthened social empowerment by providing digital platforms for women to express their views, access information, raise awareness, and participate in social movements. Social media, online communities, and digital awareness campaigns have created new opportunities for women to voice their concerns, connect with others, and promote gender equality and social justice.

Political Empowerment: Political empowerment refers to the active participation of women in governance, electoral processes, leadership roles, and policy-making activities. It enables women to exercise their political rights, influence decisions affecting their lives, and contribute to democratic processes. Increased political awareness and participation strengthen women's representation and promote inclusive governance. Digital technologies have further enhanced political empowerment by providing women with access to political information, government schemes, online grievance redressal systems, and digital platforms for public participation. These tools help women become more aware of their rights, engage with government institutions, and participate effectively in decision-making processes.

Legal Empowerment: Legal empowerment ensures that women are aware of their constitutional rights, legal protections, and available mechanisms for seeking justice. It enables women to understand and exercise their rights related to equality, personal safety, property ownership, workplace security, and protection against gender-based discrimination. Legal awareness plays a crucial role in strengthening women's confidence and ability to challenge social injustices. Digital technology has expanded access to legal information through online legal awareness platforms, mobile applications, and government portals. These digital resources help women gain knowledge about laws related to domestic violence, workplace harassment, property rights, and gender equality, thereby improving access to justice and promoting a more inclusive legal environment.

Psychological Empowerment: Psychological empowerment focuses on developing confidence, self-esteem, motivation, and leadership abilities among women. It enables women to overcome social barriers, recognize their potential, and develop a sense of independence and self-worth. Strong psychological empowerment enhances women's ability to make decisions, take initiatives, and actively participate in personal, professional, and social spheres. Technology-based learning platforms, online training programmes, and digital networking opportunities have contributed significantly to building women's confidence and professional identities. Through access to knowledge, skill development resources, and online communities, women can enhance their capabilities, share experiences, and develop leadership qualities necessary for personal and socio-economic advancement.

ROLE OF TECHNOLOGY IN WOMEN EMPOWERMENT

Technology has transformed the lives of women by providing opportunities for economic independence, education, safety, healthcare, and social participation. The major areas where technology contributes to women's empowerment are discussed below:

Economic Empowerment and Entrepreneurship: Technology has significantly enhanced women's economic empowerment by enabling their active participation in the digital economy. Digital financial services, online banking, mobile payment systems, and digital wallets have improved women's access to formal financial services and strengthened their financial independence. Women can now transfer money, receive digital payments, access banking facilities, and manage their financial resources conveniently through mobile applications. These technological innovations have contributed to greater financial inclusion, entrepreneurship development, and economic decision-making among women.

E-Commerce and Digital Entrepreneurship: The growth of e-commerce platforms has created new opportunities for women entrepreneurs by enabling them to access wider markets beyond geographical limitations. Online marketplaces allow women to promote and sell a variety of products, including handicrafts, handloom items, clothing, food products, beauty products, and household goods. Digital platforms such as Amazon, Flipkart, Meesho, Myntra, Etsy, and Shopify have provided women with opportunities to establish online businesses and generate income. These developments have particularly benefited rural women associated with Self-Help Groups (SHGs), micro-enterprises, and small-scale businesses, helping them achieve economic independence and sustainable livelihoods.

Education and Skill Development: Technology has transformed women's access to education and skill development by overcoming geographical, social, and economic barriers. Online learning platforms, digital classrooms, and virtual training programmes provide women with flexible opportunities to acquire knowledge and enhance their professional skills. These digital resources have expanded educational access, particularly for women who face constraints due to family responsibilities, mobility limitations, or social restrictions. Digital platforms offering courses in areas such as coding, digital marketing, entrepreneurship, management, science, and technology have enabled women to develop competitive skills and improve their employment opportunities. Digital education has emerged as an effective tool for promoting lifelong learning, self-reliance, and inclusive development by empowering women with knowledge, confidence, and professional capabilities.

Safety, Social Connectivity and Awareness: Technology has played a significant role in enhancing women's safety, social connectivity, and awareness by providing innovative digital solutions. Mobile safety applications, emergency alert systems, location tracking facilities, online complaint platforms, and women helpline services have improved women's access to timely support and protection. These technological tools have increased women's confidence and enabled them to respond effectively to situations involving risks and harassment. Social media and digital platforms have also created spaces where women can express their opinions, share experiences, and raise their voices against discrimination, violence, and harassment. Digital movements such as #MeToo have demonstrated the power of technology in creating awareness, encouraging collective action, and developing support networks for women facing harassment. Thus, technology has emerged as an important instrument for promoting women's safety, social participation, and empowerment.

Digital Healthcare and Telemedicine: Technology has significantly improved women's access to healthcare services by reducing geographical barriers and providing convenient digital health solutions. Online doctor consultations, digital health records, telemedicine services, mental health support platforms, and health awareness initiatives have enhanced the availability of healthcare information and services for women. Digital healthcare platforms enable women to access medical advice, reproductive healthcare information, preventive health awareness, and psychological support from remote locations. These technological advancements are particularly beneficial for women in rural and underserved areas, contributing to improved healthcare access, timely medical assistance, and overall well-being.

Digital Agriculture and Women Farmers: Technology has created new opportunities for women engaged in agriculture by improving access to information, resources, and modern farming practices. Digital agricultural applications provide women farmers with valuable services such as weather information, market price updates, crop advisory services, modern farming techniques, and online training programmes. These digital resources enable women to make informed decisions, improve agricultural productivity, and enhance farm management practices. The integration of Artificial Intelligence (AI)-based agricultural solutions and digital tools has further strengthened the role of women in farming by reducing dependence on traditional methods and promoting efficient resource utilisation. Digital agriculture has the potential to enhance the economic participation of women farmers, increase their income opportunities, and contribute to sustainable agricultural development.

GOVERNMENT SCHEMES FOR WOMEN EMPOWERMENT IN INDIA

The Government of India has introduced several schemes and digital initiatives to promote women's empowerment by improving their access to education, employment, financial resources, safety, healthcare, and entrepreneurship. Technology has become an important component of these programmes by enabling transparency, accessibility, and direct delivery of benefits.

MISSION SHAKTI SCHEME

The Mission Shakti Scheme was launched by the Government of India during the Fifteenth Finance Commission period (2021–2022 to 2025–2026) with the objective of strengthening women's safety, security, and empowerment. The scheme focuses on creating an enabling environment for women through institutional support, protection mechanisms, and empowerment initiatives. It has two major components: Sambal (Safety and Security of Women) and Samarthya (Empowerment of Women).

(a) Sambal – Safety and Security of Women: The Sambal component focuses on preventing violence against women and ensuring timely access to protection and support services. It includes various initiatives aimed at improving women's safety and providing legal, medical, and counselling assistance.

Beti Bachao Beti Padhao (BBBP): The Beti Bachao Beti Padhao Scheme was launched by the Hon'ble Prime Minister Shri Narendra Modi on 22 January 2015 at Panipat, Haryana. The scheme aims to address the declining child

sex ratio, eliminate gender discrimination, ensure the survival and protection of girls, and promote girls' education. Digital platforms and awareness campaigns have played an important role in increasing awareness about the scheme and encouraging community participation.

One Stop Centre Scheme (Sakhi): The One Stop Centre Scheme provides integrated support services to women affected by violence. It offers medical assistance, legal support, counselling services, temporary shelter, and police assistance under one platform. Digital complaint systems and online access mechanisms have improved women's ability to seek timely support.

Women Helpline Scheme: Women helpline services such as 181, 1090, and 1091 provide emergency assistance and support to women facing violence, harassment, or exploitation. These services help women access immediate protection and guidance.

Nari Adalat: Nari Adalat provides a community-based platform for addressing women-related issues through alternative dispute resolution mechanisms. It promotes gender justice, awareness of rights, and social empowerment at the grassroots level.

SHe-Box Portal: The Sexual Harassment Electronic Box (SHe-Box) is a digital platform designed for registering complaints related to workplace sexual harassment. It enables women employees from both organised and unorganised sectors to report cases online and access appropriate redressal mechanisms.

(b) Samarthya – Empowerment of Women: The Samarthya component of the Mission Shakti Scheme focuses on the long-term empowerment, capacity building, and economic independence of women. It aims to enhance women's access to support services, livelihood opportunities, skill development, and social security measures, thereby promoting their active participation in socio-economic development.

Shakti Sadan: Shakti Sadan was established by merging the Swadhar Greh and Ujjawala schemes. It provides comprehensive support services to vulnerable women, including safe shelter, food and clothing facilities, healthcare support, counselling, vocational training, and legal assistance. The scheme aims at the rehabilitation, protection, and empowerment of women facing difficult circumstances.

Sakhi Niwas (Working Women Hostel): Sakhi Niwas provides safe, secure, and affordable accommodation facilities to working women who live away from their families. It encourages women's participation in employment by reducing challenges related to mobility, safety, and residential facilities.

Palna Scheme: The Palna Scheme provides childcare facilities for children of working mothers. By reducing childcare-related responsibilities, the scheme supports women's workforce participation and enables them to pursue employment and economic opportunities.

Pradhan Mantri Matru Vandana Yojana (PMMVY): The Pradhan Mantri Matru Vandana Yojana (PMMVY) was launched in 2017 to provide maternity benefits and financial support to pregnant and lactating women. Digital

registration, online monitoring, and direct benefit transfer mechanisms have improved accessibility, transparency, and efficient delivery of benefits to eligible women.

- (c) **Lakhpati Didi Yojana:** The **Lakhpati Didi Yojana** is a significant initiative of the Government of India aimed at enhancing the economic empowerment and financial independence of rural women through **Self-Help Groups (SHGs)**. The scheme focuses on transforming women from beneficiaries into entrepreneurs by providing them with opportunities for skill development, entrepreneurship training, financial assistance, digital awareness, and market linkages. Under this initiative, women are encouraged to establish and expand small-scale enterprises in diverse sectors such as **food processing, handicrafts, tailoring, agriculture-based activities, and digital services**. The scheme promotes income generation, self-reliance, and sustainable livelihoods among rural women. By strengthening women's entrepreneurial capabilities and improving access to markets and financial resources, the Lakhpati Didi Yojana contributes significantly to rural economic development and inclusive growth.
- (d) **Digital Shakti Programme:** Digital Shakti is an initiative aimed at enhancing digital literacy, online safety, and technological awareness among women. The programme focuses on developing digital skills, promoting cyber safety awareness, improving online financial literacy, and encouraging the effective use of digital platforms. Such initiatives enable women to access digital resources confidently, participate in the digital economy, and benefit from emerging technological opportunities.
- (e) **Mahila-e-Haat:** Mahila-e-Haat was an online marketing platform launched by the Ministry of Women and Child Development to support women entrepreneurs by providing them with a digital marketplace. The platform enabled women to display their products, connect directly with customers, expand their market reach, and enhance income opportunities. Digital marketplaces have played an important role in supporting rural women, Self-Help Groups, and small-scale entrepreneurs by providing wider access to consumers and promoting economic self-reliance.
- (f) **NARI e-Samvad Portal:** The NARI e-Samvad Portal is a digital initiative designed to facilitate access to information related to women's welfare and empowerment programmes. It provides information regarding government schemes, women's welfare initiatives, health awareness, and safety measures. The portal also serves as a communication platform between government institutions and women's organisations, promoting better coordination, awareness, and participation in women-centric development programmes.

CHALLENGES OF TECHNOLOGY-BASED WOMEN EMPOWERMENT

Although technology has created significant opportunities for women's empowerment, several socio-economic, infrastructural, and digital barriers continue to restrict women's equal participation in the digital ecosystem. Addressing these challenges is essential to ensure that technological benefits reach all sections of women, particularly those living in rural and disadvantaged areas.

Digital Divide Between Rural and Urban Women: The digital divide remains one of the major challenges in technology-based empowerment. Urban women generally have better access to smartphones, internet facilities, and digital training opportunities, whereas rural women often face limited connectivity, inadequate infrastructure, and restricted access to digital resources. This gap reduces their ability to benefit from technological advancements.

Lack of Digital Literacy and Skills: Limited digital knowledge and skills among women, especially in rural areas, act as a major barrier to effective technology adoption. Many women lack awareness regarding the use of digital devices, online banking services, digital platforms, and internet-based applications. Without adequate digital literacy and training, technology cannot fully contribute to women's empowerment.

Cyber Security and Online Harassment: The increasing use of digital platforms has also exposed women to various online risks, including cyber bullying, online fraud, identity theft, cyber stalking, and digital harassment. Fear of cybercrime and lack of awareness about online safety measures discourage many women from actively participating in the digital environment.

Financial Barriers: Economic constraints limit women's access to essential digital resources such as smartphones, internet connectivity, digital devices, and paid online learning programmes. Women from economically weaker sections often face difficulties in adopting digital technologies due to affordability issues.

Social and Cultural Barriers: Traditional gender norms and patriarchal attitudes continue to influence women's access to technology. In some communities, women may be discouraged from using smartphones, social media, or online platforms due to social restrictions and concerns regarding mobility and independence.

Language and Content Barriers: The availability of digital content mainly in English creates difficulties for women with limited language proficiency. Development of regional language content and user-friendly digital platforms is necessary to ensure inclusive digital empowerment.

Electricity and Internet Connectivity Problems: Poor electricity supply and inadequate internet connectivity, particularly in rural and remote areas, restrict women's access to online education, digital financial services, healthcare facilities, and entrepreneurship opportunities. Strengthening digital infrastructure is essential for achieving equitable technology-based empowerment.

SUGGESTIONS FOR STRENGTHENING TECHNOLOGY-BASED WOMEN EMPOWERMENT

To maximize the benefits of technology for women's empowerment, it is essential to address existing digital, social, and economic barriers. The following measures can strengthen technology-driven women empowerment:

Expansion of Digital Literacy Programmes: Regular digital literacy and skill development programmes should be organised, particularly for rural and economically disadvantaged women, to enhance their ability to use digital devices, online services, and technological resources effectively.

Affordable Internet and Digital Devices: Government and private institutions should promote affordable access to smartphones, computers, and reliable internet facilities to ensure wider participation of women in the digital ecosystem.

Promotion of Digital Entrepreneurship: Women should be encouraged to utilise e-commerce platforms and digital marketplaces for promoting local products, developing enterprises, and expanding income-generating opportunities.

Cyber Security Awareness Programmes: Training programmes on online safety, privacy protection, cyber laws, and responsible digital behaviour should be provided to protect women from cyber-related risks.

Regional Language Digital Content: Digital platforms should develop and provide content, training materials, and services in regional languages to make technology more accessible and inclusive for women from diverse backgrounds.

Strengthening Rural Digital Infrastructure: Improved internet connectivity, electricity supply, and digital infrastructure in rural areas are necessary to bridge the digital divide and ensure equal access to technological opportunities.

Integration of Technology in Education and Skill Development: Girls and women should be encouraged to acquire digital skills from an early stage through technology-based education, online learning, and vocational training programmes.

Support for Women-Led Startups and Enterprises: Financial assistance, mentorship, incubation support, and market linkages should be provided to women entrepreneurs to promote innovation, self-employment, and sustainable economic empowerment.

CONCLUSION

Technology has become an important tool for women empowerment by improving access to education, employment, entrepreneurship, healthcare, financial services, and social participation. Digital platforms and government initiatives such as Mission Shakti, Digital Shakti, Lakhpati Didi Yojana, and Beti Bachao Beti Padhao have contributed significantly to enhancing women's opportunities and independence. However, challenges such as the digital divide, lack of digital literacy, cyber security risks, and socio-cultural barriers continue to limit women's participation in the digital world. Therefore, strengthening digital education, affordable access, safe online environments, and supportive policies is essential. Equal access to technology can empower women and contribute to inclusive growth, gender equality, and sustainable development.

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