



Digital Initiatives For Empowering Women Towards A Sustainable Future

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Abstract

Gender equality and sustainable development depend on women's digital empowerment. To close the gender gap in technology access and empower women, the Indian government has launched several digital projects. The Government of India's digital literacy efforts are pivotal in enabling women to have a sustainable future, promoting socio-economic inclusion, and mitigating gender gaps in digital technology access. This article thoroughly examines the panorama of contemporary digital literacy programmes for women in India. It seeks to evaluate their efficacy, pinpoint obstacles, and investigate viable fixes to enhance the results of digital literacy. The article thoroughly assesses secondary data from government websites and reliable sources, including reports and publications. This article aims to illuminate these issues and offer insights into the complex nature of the digital gender gap in India. The study also examines possible approaches and remedies to overcome these obstacles and raise women's digital literacy. To encourage digital inclusion and empowerment, these solutions include community-based strategies, the integration of mobile technologies, customized training courses, and focused awareness campaigns. This paper aims to inform policymakers, practitioners, and stakeholders about digital projects that empower women and promote a sustainable future. It thoroughly analyses available data and identifies key obstacles and opportunities. To bridge the digital gender gap and promote inclusive development, the article highlights the significance of digital literacy as a driver for women's socioeconomic empowerment.

Keywords

Digital initiatives, women empowerment, Sustainable future, Digital literacy.

1. INTRODUCTION

In the era of digital transformation, societies' functioning, communication, and access to information have undergone profound changes. Recognizing the pivotal role of digital technologies in fostering gender equality and socioeconomic progress, the Indian government has initiated various projects to empower women and enhance their digital literacy. However, women continue to need help accessing and utilizing digital resources, hindering their full participation in the digital society and economy. This study examines the current landscape of digital programs for women in India, assesses their effectiveness, identifies challenges impeding women's engagement and access, and proposes strategies to enhance digital empowerment for a sustainable future (Rathi, S.2015). Digital literacy has become indispensable for socioeconomic development, enabling individuals to communicate, acquire knowledge, and participate in diverse aspects of modern life. Governments worldwide, including India, have embarked on initiatives to empower women and marginalized groups through digital literacy promotion, recognizing the transformative potential of digital technologies.

Given women's significant hurdles in education, employment, and healthcare, digital efforts are crucial in advancing gender equality and sustainable development in India.

The Digital India initiative, launched in 2015, aimed to establish a knowledge-based economy with accessible technology. It transformed electronic payments and saw India surpassing China in digital transactions in 2021, with 48.6 billion transactions. This digital revolution has shifted India's economy into the fourth industrial revolution, as highlighted by the Prime Minister during Digital India Week 2022. "India can proudly claim that it's not just a part of the industry revolution 4.0, but is leading it". (Sneha Mohan,2023)

Women's Empowerment

"Empowerment means that people—both women and men—can control their lives: set their agendas, gain skills (or have their skills and knowledge recognized), increase self-confidence, solve problems, and develop self-reliance." (UN Women, Women's Empowerment Principles, 2011)

Empowering women is essential to sustainable development and a human rights issue. Gender inequality still exists in many parts of the world, including access to healthcare, education, employment, and political representation. The United Nations has set out the Sustainable Development Goals (SDGs), which depend on empowering women since they are crucial for advancing economic growth, social advancement, and environmental sustainability. This essay examines the relationship between women's empowerment and a sustainable future, stressing the obstacles to advancement and the many advantages of gender equality.

Women's Empowerment: A Catalyst for Sustainable Development

- 1. Environmental Sustainability:** In the fields of agriculture, conservation, and resource management, women are indispensable. Providing women with resources, knowledge, and training enhances their capacity to tackle environmental problems and promote sustainable practices.
- 2. Adaptation and Mitigation of Climate Change:** Women are disproportionately impacted by climate change because they are typically the significant carers and resource managers in underdeveloped nations. Women can better adjust to the effects of climate change and reduce greenhouse gas emissions when policies and activities are gender-responsive.
- 3. Health and Well-being:** Attempts to attain universal health coverage and enhance the health of mothers and children are hampered by gender differences in healthcare outcomes and access. Sustainable development is aided by investments in women's health, especially their sexual and reproductive rights, which also encourage healthier families and communities. (Sinha, B 2019).

India presents opportunities and challenges for digital empowerment programs due to its large population and diverse socioeconomic landscape. Despite significant progress, gender disparities persist in access to and use of digital technologies, with women lagging behind men in internet usage, particularly in rural areas. Here are some aspects of life that have a direct influence on digital literacy, especially on women.

Digital literacy for Social empowerment

- Getting access to fresh and practical knowledge, data, and awareness on various problems, subjects, and pursuits that appeal to women. Their thinking was frequently stimulated and widened by this fresh information and understanding.
- Taking part in various activities where you can reflect on topics that impact you, openly discuss issues, and share concerns and experiences with other women and others in positions of power.
- Family communication is simple.
- Raise consciousness of social issues.

Digital literacy and political empowerment

- Being able to speak up for their rights.
- Lack of the ability to make decisions.
- Organising various actions and discussing issues impacting women and women's communities through networking or meetings with individuals in industry government and other female groups.
- Better Governance

Digital literacy and Psychological empowerment

- An improvement in self-worth and confidence.
- Sensing more esteem and worth.
- A more robust drive, inspiration, zeal, and curiosity in acquiring new abilities and information.
- Having less of a sense of isolation from other people, especially from other strong women; consequently, feeling happier, more content, and appreciating life more.

Digital Literacy and Educational Empowerment

- Provide them with digital access to world knowledge in a language and format they are familiar with.
- Broad knowledge in every field and comprehension of novel ideas.
- Digital literacy supports adult and non-formal education for women.
- Indigenous Wisdom.

Digital Literacy and Economic Empowerment

- It makes a monthly salary boost possible for them.
- Jobs and merger opportunities with major industries are made possible by digital literacy.
- Digital education gives women financial stability and is the foundation for all other forms of women's empowerment.
- Women's enhanced entrepreneurship through digital literacy and expanded access to the labour market.
- A rise in the average income of village households.

The Government of India has launched various digital literacy projects to bridge these gaps and empower women by equipping them with the necessary skills to navigate the digital realm effectively. However, obstacles such as inadequate infrastructure, cultural norms, and lack of knowledge hinder women's participation in these initiatives, limiting their ability to leverage digital technologies for socioeconomic advancement. Addressing these challenges requires a multifaceted approach involving targeted capacity-building efforts, community engagement, and policy interventions. (Ganeshan, M. K., & Vethirajan, C. 2020).

Impact of Digital Literacy on Rural Women's Empowerment

With over 624 million internet users, India's digital landscape has grown significantly despite women making up only 34% of this population. This gender gap highlights the necessity of focused initiatives to give women digital empowerment, especially in rural areas where access and connectivity are still scarce. In India, women comprise a sizable share of the rural populace and are integral to the rural economy. These women work as vendors in cities and make a living by making handicrafts, sewing, rolling cigarettes, and weaving baskets and textiles. The following details are critically needed for their continued development:

- Opportunities for education outside the community.
- Employment in the formal and informal sectors.
- Government support programmes that promote job progress while adhering to customs.
- State laws that combat social inequality, domestic abuse, and sexual harassment.
- Up-to-date daycare centres.

Even if internet penetration in rural areas has increased significantly, digital literacy is more critical for women's empowerment. NABANNA is a prime example of how Digital literacy can empower rural women. In Nabanna, India, a UNESCO project called "Networking Rural Women and Knowledge" investigates creative ways to help impoverished women by utilising databases and intranet portals.

However, obstacles like social norms and educational gaps still exist, making it difficult for women to take full advantage of digital potential. In response, the Indian government has started several programmes to empower women through digital means, particularly granting them equal access to opportunities and resources. By addressing women's obstacles, such as restricted access to education and skill-building opportunities, these programmes hope to promote more gender equality in the digital arena and unleash the unrealized potential of women all around the nation. (Richa, 2015)

The average cost of broadband access needs to be raised by the Indian government. Women earn 25% less on average than males worldwide. Expensive internet costs particularly discriminate against women. They are educating people about women's rights and digital skills. They require an internet connection and instruction in digital literacy in public schools. There are situations when the absence of content in native languages makes the internet unfriendly to women.

The number of financial services linked to mobile service access and internet connections, considered online crimes, is also rising. To effectively safeguard women against cybercrime, cyber legislation must be highly effective. More rules are needed in 74% of the countries (Smitha H.S,2022).

This article examines current digital literacy programs for women in India, identifies barriers to participation, and proposes strategies to enhance the effectiveness of digital empowerment initiatives. Shedding light on these issues aims to foster a more sustainable and equitable future for all. Despite India's aggressive digitization efforts, women remain marginalized on political, economic, and social fronts, with only 29% of internet users being female.

Bridging the gender gap in technology adoption is crucial to prevent further marginalization. While policy interventions focus on improving infrastructure and promoting digital skills, addressing underlying social and cultural inequalities is essential for meaningful change. For instance, only 28% of Indian women own a mobile phone compared to 43% of men, highlighting the need for holistic approaches to address gender disparities in access to information and technology. (Tyers, A.2021)

Objectives:

- To study the digital literacy initiatives for women's empowerment in India.
- Identify barriers and challenges hindering women's access to digital literacy programs.

Methodology

This paper is a descriptive and analytical study of women's empowerment in India, based on secondary data sources, aiming to understand the current circumstances of women in the country.

The government of India has launched various digital literacy initiatives for women. These are:

S.no	Digital Initiatives	Area of Benefits
1	Pradhan Mantri Gramin Digital Saksharta (PMGDSS)	Empowering rural women with digital skills and bridging the digital divide.
2	National Digital Literacy Mission	Providing essential digital skills, enhancing access to education and employment opportunities, and promoting gender equality in digital access.
3	Mahila E-Haat	Offering a platform for women to showcase products, fostering economic independence, and empowering women entrepreneurs.
4	DIGI LAMP	Enhancing digital literacy among students, promoting online safety, and equipping them with essential computer skills.
5	Digital Didi	Combating misinformation around menstruation, providing digital literacy, and empowering women with digital training.
6	Digital Financial Literacy Session for SHG Women	Empowering women with digital and financial literacy, enabling informed decision-making, and fostering leadership.
7	GOAL(Going Online As Leaders)	Empowering rural girls through digital education, connecting them with mentors, and providing exposure to digital tools.
8	Citizen Media Network	Empowering women in digital journalism, providing platforms for story development, and offering training for rural reporters.
9	Internet Saathi	Increasing internet usage among rural women, providing digital literacy programs, and bridging the digital gender gap.
10	Helping Women Go Online	Empowering women with internet skills through guided training, promoting digital literacy, and enhancing economic opportunities.
11	English and Digital for Girls' Education	Improving life prospects for adolescent girls through English proficiency, digital skills, and informed decision-making.
12	START	Promoting digital inclusion and fighting information poverty among rural and tribal communities.
13	SHE host	Promoting livelihood opportunities for rural women through local art, craft, and cultural promotion.
14	SoochnaPreneur	Equipping information entrepreneurs with welfare scheme information dissemination through a mobile application.

15	Internet Roshni	Focusing on digital inclusion for the Adivasi Community, especially women, in Assam.
16	Digital Sarthak	Enabling women entrepreneurs to connect online, expand clientele, and outreach effectively through online platforms.
17	Project WAAT	Building a community to combat online abuse and cyberbullying and provide support resources.
18	Mobile for Social & Behavioural Change	Exploring mobile technology projects benefiting women, youth, and communities.
19	Community Information Resource Centres	Establishing community-oriented hubs for digital literacy and development services nationwide.
20	Helping Women Get Online	Empowering women with internet skills through guided training and promoting digital literacy.
21	Beti bachao beti padhao	Raising awareness and improving welfare services for girls through personal campaigns.
22	We Think Digital for Women	It offers tools and digital learning modules that are easily accessible to develop skills for a digital environment.
23	Learn English	Promoting gender equality in education through digital platforms and resources.
24	SheThePeople	Leveraging technology to provide women opportunities for upskilling, mentorship, and employment.
25	Maternal Health Programme	Using technology to improve maternal health outcomes and access to healthcare for women.
26	DigitalALL	Promoting gender equality through technology and digital innovation initiatives.
27	Smart Electric Sari	Enhancing safety and comfort for women in extreme work environments through intelligent textile technology.
28	Digital Saksharta Abhiyan	Providing digital literacy training to rural women, enabling participation in the digital economy.
29	Vodafone's initiative ' Sakhi	Enhancing safety and confidence for women travellers through mobile service and safety features.
30	SEWA	Supporting rural women through self-employment initiatives and promoting economic empowerment.
31	Ujjas Innovation	Raising awareness about women's issues through newsletters, radio, and technology.
32	Smile	Organizing IT seminars and workshops for women's empowerment and skill development.
33	The Dhan Foundation and Swayam Krishi Sangam	Educating poor women about ICT promotes respect, honour, and independence.
34	Dairy Information & Services Kiosk (DISK)	Providing dairy information and services to women producers to enhance productivity and livelihoods.
35	Embalam	Connecting villages through hybrid wired and wireless networks, empowering women with information.
36	NABANNA	Exploring innovative uses of databases and intranet portals to benefit poor women in rural areas.
37	e-Mahila	Teaching rural women to access and use the internet for various purposes and empowerment.
38	Gyandoot	Providing e-government services and promoting digital inclusion in rural areas.
39	Digital Board Operation	Enhancing education quality through digital classrooms, resources, and intelligent tutoring.
40	Bharat Padhe Online	Crowdsourcing ideas for improving e-learning and online education during the pandemic, especially for girls.
41	Digital learning programmes like e-Pathshala, DIKSHA, NROER, NPTEL, e-pg pathshala, SWAYAM and Swayam-Prabha PM eVidya-One Nation One Digital Platform	Facilitating blended learning through digital platforms and schemes during the COVID-19 crisis.
42	Chaa Jaa	Connecting, informing, and equipping adolescent girls with digital media and resources.
43	Unnati 21	Training children and adolescents in digital literacy through integrated programs and courses.
44	Ok To Talk	Online support for mental health and wellbeing, especially for girls and young women.
45	Centre for Catalyzing Change (C3)	Equipping adolescent girls with digital literacy skills in rural, tribal, and vulnerable regions to access technology and opportunities.
46	One-stop centre scheme	Providing support and assistance to women affected by violence through dedicated schemes and services.
47	Women helpline scheme	Offering toll-free telecom services and support to women affected by violence and emergencies.

48	Working Women Hostel	Promoting safe and convenient living arrangements for working women through dedicated hostels.
49	Wadhar greh	Providing essential support and care for women in distress through shelter, food, and medical assistance.
50	SafetyPin	Enhancing women's safety through location-based apps and community-driven initiatives.
51	Safe Sawaari	Tracking private vehicles and ensuring safety features for women travelers through mobile apps.
52	HIMMAT	Providing safety and emergency assistance for single working women travelers through dedicated apps.
53	SHeroes	Offering social networking and support platforms for women to connect, share, and seek assistance.
54	bSafe	Ensuring women's safety through voice activation, live streaming, and emergency alert features.
55	Maya Period Tracker	Tracking menstrual cycles, forecasting fertility, and managing general health for women.
56	BabyGoGo Mom App	Offering parenting advice, baby-related queries, and evidence-based information for mothers.
57	Kavalan	Assisting in emergencies such as eve-teasing and kidnapping through dedicated police apps.
58	Abhayam app	Ensuring the safety of women travellers by providing support and assistance through mobile apps.
59	Indian Police at Your Call App of National Informatics Centre	Facilitating easy access to police stations and emergency services for women through dedicated apps.
60	112 India	Allowing women in trouble to call an emergency number and send SOS alerts with a single tap for assistance.
61	Women Wireless Engineer	women to become wireless engineers and set up wireless networks in their remote villages
62	MeraApp	that provides information and facilitates the delivery of welfare schemes to empower communities through access to rights and benefits like healthcare, education, social security, finance, disability, and livelihood.

Table .1 Digital Initiatives in India

Barriers and challenges in women empowerment

In the Indian context, women have not benefited from the Digital revolution mainly because of social structures, values, and beliefs. The benefits of this transformation have yet to reach rural India; urban India has been enjoying them. There is still a long way to go, despite the efforts to harness digital information as effectively as possible to empower our women. Encouraging women and girls to use digital literacy is fraught with difficulties. These are discussed as follows:

Poverty: Poverty in India, affecting 37% of the population, is a barrier to Digital literacy empowerment in Women as many view it as a luxury they cannot afford, prioritizing basic needs over technology access.

Literacy: In India, literacy challenges persist, particularly for women, with only 45% of females above 7 years old being literate and high dropout rates indicating limited access to education beyond primary levels, exacerbated by language barriers and systemic issues despite government initiatives for free education.

Computer literacy: Computer literacy in India faces disparities, with urban students having better access to primary education while rural students rely on limited government support, hindered by affordability issues and language barriers, especially as most resources are in English, impeding widespread internet access and education.

Socio-Cultural aspects: Socio-cultural norms in India perpetuate gender disparities, favouring boys over girls in education and digital technology access, with women often confined to household roles, limiting their exposure to technology and opportunities for empowerment.

Early marriages: Early marriages in India, affecting over 50% of adolescent girls, contribute to high dropout rates and limited educational opportunities, perpetuating gender inequalities and hindering access to digital literacy as family responsibilities take precedence over personal development, leaving television as the primary source of information and entertainment.

Language barriers: Language diversity in India poses a significant barrier to empowerment, with internet learning predominantly in English, inaccessible to many in rural areas, highlighting the challenge of imparting knowledge across numerous languages and hindering widespread digital access and communication.

Ownership: Due to poverty and gender-based societal conventions, women in rural India rarely own communication assets like radios, mobile phones, and laptops. Men and boys are frequently given preference, highlighting the inequities in technology access primarily observed in urban regions. (Bimal 2012).

Conclusion:

Infrastructural, social, cultural, and linguistic hurdles preventing women from obtaining digital literacy must be addressed through coordinated initiatives at the regional, national, and international levels to close the gender gap in technology. By utilising digital efforts, we can provide women with possibilities for holistic growth, information, and resources, promoting their independence and strength in all spheres of life. Information technology empowers women. Their position has shifted from before. The advancement of information technology has made it possible for women to engage in all facets of society. It has given women more income, knowledge, and skills, which has empowered them. More women can now work from home because of flexible schedules and internet access. Thus, women's empowerment has significantly benefited from digital literacy. Its capacity to transcend social, political, and economic boundaries gives women the leverage they need to create a new identity and a more respectable position for themselves in society.

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