
NEP 2020 and Women's Digital Empowerment: Opportunities and Challenges for Inclusive Education in India**Dr. Sanjay Kumar¹ ; Dr. Deepti Shrivastava² ; Dr. Abha Dayal³ & Susheel Kumar⁴****DOI: <http://doi.org/10.5281/zenodo.23423079>****Review: 03/09/2026****Acceptance: 08/09/2026****Publication:****16/10/2026**

Abstract: The National Education Policy (NEP) 2020 seeks to advance equitable access, Inclusive education, Digital learning and the development of 21st-century skills. Within this framework, women's digital empowerment has emerged as a significant pathway to educational inclusion. Digital technologies can broaden women's opportunities for learning, skill development, employment and entrepreneurship; however, disparities in connectivity, affordability, digital literacy and online safety continue to reinforce the gender digital divide. This qualitative study explores the opportunities and challenges of women's digital empowerment under NEP 2020 and examines its relevance to inclusive education in India. Adopting an interpretive, exploratory and document-based approach, the study draws on policy documents, academic literature, institutional reports and selected case evidence, analysed thematically. The study finds that NEP 2020 offers a favorable policy framework for strengthening women's participation in digital education and skill development. Nevertheless, infrastructural constraints, inadequate digital skills, social barriers, language limitations and online safety concerns may hinder its effective implementation. The study concludes that genuine digital empowerment requires more than technological access; it depends on digital competence, autonomy, affordability and safety. A gender-responsive approach is therefore essential to advance inclusive education through NEP 2020.

Keywords: NEP-2020, Women's Digital Empowerment, Digital Divide, Digital Literacy, Gender Equality, Inclusive Education, Digital Education.

I. Introduction:

Digital technology has become an important component of contemporary education. Smart phones, internet connectivity, digital learning platforms and online educational resources have expanded the ways in which learners' access and exchange knowledge. Digital competence is therefore increasingly associated with educational participation, employability and social inclusion. For women and girls, digital access has particular significance. Digital technologies can provide flexible learning opportunities and help overcome geographical and institutional barriers. (Kumar,2021). Women in rural and underserved areas can potentially access online courses, digital educational resources, vocational programmes and professional networks without relocating. Digital platforms may also support women whose education is affected by family responsibilities or restricted mobility. (Government of India, 2020). However, technological access does not automatically produce equality. Women may experience unequal access to devices, connectivity, digital skills and independent technology use. Social norms, affordability, language barriers and concerns about online safety can further restrict participation.

The National Education Policy (NEP) 2020 provides an important framework for addressing these issues through its emphasis on equitable and inclusive education, technology-enabled learning, vocational education,

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skill development and flexible learning opportunities. From a gender perspective, the significance of digital education lies not merely in providing women with technology but in enabling them to use technology independently and meaningfully.

This study therefore examines the relationship between NEP 2020, women's digital empowerment and inclusive education in India, focusing on both the opportunities created by digital transformation and the barriers that may prevent women from benefiting equally. **(Das et. al. 2021)** The central argument is that digital inclusion must move beyond access to technology towards digital literacy, agency, safety and meaningful participation.

Conceptual Framework: -

NEP 2020 and Digital Education: NEP 2020 recognizes technology as an important instrument for improving access, teaching-learning processes, teacher development and educational resources. Its emphasis on digital and flexible forms of learning creates opportunities for learners who may face geographical, economic or institutional barriers.

For women, technology-supported education can provide greater flexibility and access to learning beyond conventional classrooms. **(Bagdi et al.2023)**. However, its effectiveness depends on infrastructure, affordability, digital competence and social conditions.

Women's Digital Empowerment: Women's digital empowerment refers to women's ability to access, understand, use and benefit from digital technologies independently and safely. **(Anraye et al.2023)**

It includes five closely related dimensions:

- i. **Digital access** – access to devices and connectivity.
- ii. **Digital literacy** – the ability to use digital tools and information effectively.
- iii. **Digital agency** – confidence and independence in making decisions about technology.
- iv. **Economic opportunity** – use of digital skills for employment and entrepreneurship.
- v. **Digital safety** – awareness of privacy, cybersecurity and online risks.

Digital Inclusion and Inclusive Education: In the digital age, inclusive education must include meaningful digital participation. A learner may have access to online education but remain digitally excluded because of limited devices, poor connectivity, lack of skills, affordability, language barriers or an unsafe digital environment. **(Babu & Menon, 2022)**. Therefore, digital inclusion requires not only infrastructure but also skills, affordability, accessibility, safety and social support.

II. Review of Related Literature: -

Existing literature on NEP 2020 identifies technology-enabled education as an important means of expanding educational access and supporting innovative teaching-learning practices. **(Ghosh, 2004)**. The policy's emphasis on digital learning, vocational education and skill development provides opportunities for integrating technology with women's educational and economic empowerment. Research on the gender digital divide, however, indicates that inequalities exist not only in access to technology but also in digital skills, confidence and the ability to convert digital access into educational and economic benefits. **(Government of India, 2020)**. Thus, providing women with devices or internet connectivity alone may not result in meaningful empowerment. Digital

literacy is particularly important because it enables women to access educational resources, communicate with institutions, evaluate information and participate independently in digital environments. (Shama, 2018). Digital competence may also support employment, online entrepreneurship, remote work, e-commerce and professional networking.

Rural and marginalized women may benefit considerably from digital education because it can reduce geographical barriers. Nevertheless, poor connectivity, affordability, limited device ownership, inadequate training and social restrictions may reduce these benefits. The literature also highlights concerns related to online harassment, privacy, cybersecurity and misinformation. Similarly, language remains an important factor in digital inclusion because educational resources that are not available in accessible languages may exclude many learners. (Singh, 2013). Overall, the literature demonstrates considerable potential for technology-supported women's empowerment but also reveals the need for a gender-responsive framework that connects digital access with skills, agency, safety and opportunity.

III. Research Gap

Although NEP 2020, women's education and digital learning have received considerable scholarly attention, their intersection requires further qualitative examination. Limited attention has been given to women's digital empowerment as a multidimensional process involving access, literacy, agency, economic opportunity and safety. The present study addresses this gap by examining women's digital empowerment under NEP 2020 from the perspective of inclusive education.

Research Questions

- i. How can NEP 2020 contribute to women's digital empowerment in India?
- ii. What opportunities can digital education create for women's educational and economic participation?
- iii. What factors contribute to the gender digital divide?
- iv. What social, economic, technological and institutional barriers restrict women's digital participation?
- v. What measures can strengthen women's digital empowerment and inclusive participation in education?

Objectives of the Study

The study aims:

- i. To examine the provisions of NEP 2020 related to digital education, gender equality and inclusion.
- ii. To explore the potential of digital education for women's empowerment.
- iii. To examine the relationship between digital skills, education and economic opportunities.
- iv. To identify major barriers to women's digital participation.
- v. To suggest measures for gender-responsive digital education under NEP 2020.

Methodology

Research Approach

The study adopts a **qualitative, interpretive and exploratory approach** to examine digital empowerment, inclusion, gender inequality and policy implementation.

Research Design

A **qualitative document-based research design** is used. The study draws upon:

- NEP 2020 and related policy documents;
- Government and institutional reports;
- Scholarly literature on digital education and gender;
- Research on the digital divide; and
- Selected case-based evidence.

Qualitative Analysis and Discussion

Theme 1: Digital Access and the Gender Digital Divide

The analysis indicates that access to digital technology is the first condition for digital empowerment but does not by itself guarantee inclusion. Women may have less access to personal devices, reliable connectivity or affordable internet.

The digital divide is therefore both a technological and social issue. Differences in household resources, location, education and social expectations can influence women's ability to use technology independently.

NEP 2020's emphasis on inclusive and technology-supported education creates an opportunity to address these inequalities, but implementation must ensure that disadvantaged women are not excluded from the digital transformation.

Theme 2: Digital Literacy and Educational Empowerment

Digital literacy enables women to search for information, access online courses, communicate with educational institutions and participate in independent learning. Digital education can also provide flexible learning opportunities for women who face geographical or family-related constraints. However, digital literacy should extend beyond basic device operation. Women need the ability to evaluate information, use educational platforms, create digital content and participate safely in online environments. Thus, digital literacy represents an important foundation for educational agency.

Theme 3: Digital Agency and Women's Empowerment

The analysis suggests that empowerment occurs when women can use technology independently and make informed decisions about its use. Digital agency includes confidence in using digital tools, independent access to information and the ability to participate in digital spaces without unnecessary restrictions. This distinction is important because women may technically have access to technology while lacking control over how and when it is used. Therefore, NEP 2020's digital vision should focus not only on access but also on women's independent and meaningful participation.

Theme 4: Digital Skills, Employment and Entrepreneurship

Digital competence can create opportunities beyond formal education. Women can potentially use digital skills for online employment, entrepreneurship, e-commerce, digital marketing, tutoring, freelancing and professional networking. The combination of digital literacy, vocational education and entrepreneurship training can therefore strengthen women's economic participation. NEP 2020's emphasis on skill development provides an opportunity to connect digital education with livelihood development. However, women also require financial literacy, market knowledge and awareness of digital safety to benefit from these opportunities.

Theme 5: Rural, Social and Linguistic Barriers

Digital education has particular potential for rural women because it can reduce geographical barriers to learning. However, poor connectivity, limited device ownership, affordability and inadequate technical support can restrict participation. Social norms may also influence women's freedom to use digital devices and internet services. Language is another important factor. Multilingual digital educational resources can improve accessibility for women who have limited proficiency in English or other dominant languages. Consequently, digital inclusion requires attention to geography, affordability, social conditions and language.

Theme 6: Digital Safety and Institutional Preparedness

Digital participation can expose women to cyberbullying, online harassment, privacy violations, fraud and misinformation. Digital empowerment must therefore include knowledge of cybersecurity, privacy and responsible digital citizenship. Educational institutions also require trained teachers, reliable infrastructure, technical support and gender-responsive digital policies.

Teachers are particularly important because they can help learners develop digital competence while promoting safe and responsible technology use. Therefore, effective implementation of NEP 2020 requires both individual digital capacity and institutional preparedness.

Major Findings: -

The study identifies the following major findings:

- i. NEP 2020 provides a supportive policy framework for technology-enabled and inclusive education.
- ii. Digital access is necessary but insufficient for women's empowerment.
- iii. Digital literacy strengthens educational participation and independence.
- iv. Digital skills can create economic opportunities through employment, vocational learning and entrepreneurship.
- v. Rural women face additional barriers related to connectivity, affordability, infrastructure and social conditions.
- vi. Digital safety is essential for meaningful and sustainable digital participation.
- vii. Gender-responsive implementation is necessary to ensure that technological development does not reproduce existing inequalities.
- viii. Women's digital empowerment should be measured through agency and participation, not merely through device ownership or internet access.

Opportunities under NEP 2020: -

NEP 2020 creates several opportunities for women's digital empowerment:

- i. **Flexible learning:** Online and blended education can accommodate women with geographical or family constraints.
- ii. **Wider educational access:** Digital platforms can connect women with courses and learning resources beyond their locality.
- iii. **Skill development:** Technology can support vocational and professional training.
- iv. **Employment and entrepreneurship:** Digital skills can facilitate online work, business and access to wider markets.
- v. **Lifelong learning:** Digital platforms can support continued education beyond formal schooling.
- vi. **Greater participation:** Digital tools can enable women to participate in knowledge networks and professional communities.

Limitations of the Study: -

This study is qualitative and document-based and therefore does not establish statistically measurable causal relationships between NEP 2020 and women's digital empowerment. The digital experiences of women vary according to region, socioeconomic status, education, age, language and infrastructure. The findings should therefore be interpreted within the limitations of documentary research. Future studies may employ surveys, interviews and mixed-method approaches to examine women's actual experiences of digital education across different regions and social groups.

Conclusion: -

NEP 2020 provides an important framework for advancing technology-enabled and inclusive education in India. Its emphasis on digital learning, skill development and equitable access creates significant opportunities for women's educational and economic empowerment. Digital technologies can expand access to learning, provide flexible educational pathways and support employment and entrepreneurship. However, the benefits of digital transformation are not equally available to all women. The gender digital divide is shaped by affordability, infrastructure, digital literacy, social norms, language and online safety. The study therefore argues that digital inclusion must go beyond providing access to technology. Meaningful digital empowerment requires women to possess the skills, confidence, freedom and safety necessary to use technology independently and productively.

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