INTERNATIONAL JOURNAL OF NOVEL RESEARCH AND DEVELOPMENT (IJNRD)
© 2026 IJNRD | Volume 11, Issue 2, February 2026 | ISSN: 2456-4184 | IJNRD.ORG

A Study on the Role of National Education Policy (NEP) 2020 in Shaping India's Digital Learning System

Duyir Poyom,

Assistant Professor, Department of Education, Donyi Polo Government College, Kamki, West Siang, Arunachal Pradesh

Abstract

The present study examined the role of the National Education Policy (NEP) 2020 in shaping India's digital learning system. The objective of the study was to analyze how NEP 2020 contributed to the integration of technology across different levels of education and strengthened the digital education ecosystem in India. The study adopted a qualitative research design and relied on secondary data collected from academic books, peer-reviewed journals, research articles, official government documents, websites, and newspapers. The findings revealed that NEP 2020 played a transformative and strategic role by promoting initiatives such as the establishment of the National Educational Technology Forum (NETF), expansion of digital infrastructure, encouragement of online and blended learning, development of multilingual digital content, and strengthening of teacher digital competencies. The policy also addressed issues related to digital divide and inclusivity. The study concluded that effective implementation and sustained collaboration were essential for realizing the full potential of NEP 2020 in advancing India's digital learning system.

Keywords: National Education Policy (NEP) 2020, Technology & Digital Learning System

Introduction

Education is widely recognized as the foundation of national development and social transformation. In the 21st century, the rapid advancement of digital technologies has significantly reshaped the global educational landscape. The integration of Information and Communication Technology (ICT), online learning platforms, digital content, virtual classrooms, artificial intelligence, and adaptive learning systems has transformed traditional teaching-learning processes into more dynamic, flexible, and learner-centered models. In this context, digital learning has emerged as a powerful tool to enhance accessibility, quality, equity, and efficiency in education systems worldwide.

India, being one of the largest education systems in the world, has faced persistent challenges such as unequal access to quality education, shortage of trained teachers, infrastructure gaps, regional disparities, and socio-economic inequalities. With the expansion of internet connectivity and digital technologies, the potential to bridge these gaps through digital learning became increasingly evident. However, before 2020, the integration of technology into India's education system was largely fragmented and uneven, lacking a comprehensive and unified policy framework.

The introduction of the **National Education Policy (NEP) 2020** marked a historic and transformative reform in India's educational trajectory. Replacing the 1986 National Policy on Education, NEP 2020 aims to overhaul the entire education system from early childhood education to higher education. One of the most significant and forward-looking aspects of NEP 2020 is its strong emphasis on digital learning and technology integration. The policy recognizes technology as a powerful enabler in achieving the goals of access, equity, quality, affordability, and accountability in education.

NEP 2020 envisions the creation of a robust digital infrastructure to support teaching, learning, assessment, teacher training, and educational administration. It highlights the importance of digital platforms such as DIKSHA (Digital Infrastructure for Knowledge Sharing), SWAYAM, SWAYAM Prabha, e-Pathshala, virtual labs, and online repositories of educational resources. The policy also emphasizes the development of high-quality digital content in multiple Indian languages to ensure inclusivity and regional representation. By promoting blended learning models, online education frameworks, and virtual laboratories, NEP 2020 seeks to transform conventional classroom-based education into a more flexible and technology-driven ecosystem.

The outbreak of the COVID-19 pandemic further accelerated the need for digital learning solutions, exposing both the strengths and weaknesses of India's digital education infrastructure. During this period, digital platforms became the primary mode of instruction, making the implementation of NEP 2020's digital vision even more critical. The pandemic highlighted issues such as the digital divide, limited device accessibility, poor internet connectivity in rural areas, and lack of digital literacy among teachers and students. Recognizing these challenges, NEP 2020 proposed measures such as teacher capacity building in digital pedagogy, development of digital repositories, establishment of the National Educational Technology Forum (NETF), and strengthening of open and distance learning systems.

The policy also underscores the role of emerging technologies such as Artificial Intelligence (AI), Machine Learning (ML), Blockchain, Augmented Reality (AR), and Virtual Reality (VR) in enhancing personalized and experiential learning. It promotes research and innovation in educational technology and encourages collaboration between educational institutions, government agencies, and private stakeholders to build a sustainable digital ecosystem. Through these initiatives, NEP 2020 aims to create a future-ready workforce equipped with digital competencies and 21st-century skills.

Furthermore, NEP 2020 emphasizes inclusive digital education by addressing the needs of socio-economically disadvantaged groups (SEDGs). It advocates for equitable access to digital devices, affordable internet connectivity, and accessible learning materials for learners with disabilities. By promoting multilingual digital content and open educational resources (OER), the policy attempts to democratize knowledge and reduce regional and socio-economic disparities in education.

In the higher education sector, NEP 2020 supports online degree programs, digital credit banks, academic bank of credits (ABC), virtual mobility of students, and interdisciplinary digital learning opportunities. It encourages institutions to adopt digital governance systems, online assessments, and technology-enabled quality assurance mechanisms. The policy thus redefines the structure and functioning of educational institutions through comprehensive digital transformation.

Despite its ambitious vision, the successful implementation of NEP 2020's digital initiatives depends on multiple factors, including infrastructure readiness, financial investment, teacher preparedness, stakeholder collaboration, and effective monitoring mechanisms. The transition from policy formulation to ground-level implementation poses significant challenges, particularly in rural and underprivileged regions. Therefore, it becomes essential to critically examine how NEP 2020 has influenced India's digital learning system, the extent of its implementation, the opportunities it has created, and the challenges it continues to face.

NEP 2020 represents a paradigm shift in India's educational philosophy, placing digital learning at the core of systemic reform. As technology continues to redefine knowledge creation and dissemination, understanding the role of NEP 2020 in shaping India's digital learning landscape becomes crucial for educators, policymakers, researchers, and stakeholders. This research

endeavors to provide a comprehensive understanding of how national policy initiatives are steering the digital future of education in India and how they can be strengthened to achieve inclusive, equitable, and high-quality learning for all.

Objective of the Study

1. To Study the Role of National Education Policy (NEP) 2020 in Shaping India's Digital Learning System.

Literature Review

The National Education Policy (NEP) 2020 represents a transformational shift in India's educational landscape by emphasizing the strategic integration of digital technology to enhance learning, teaching, and educational administration. Research literature identifies digital learning as a central pillar of NEP 2020, noting that the policy's framework foregrounds technology as a catalyst for expanding access, improving quality, and fostering equity across educational contexts (Maurya & Sharma, 2023).

Maurya and Sharma (2023) highlight that NEP 2020 explicitly advocates the use of digital platforms and blended learning models to make education more accessible and inclusive. The authors discuss the establishment of institutional mechanisms such as the National Educational Technology Forum (NETF) to foster innovation, research, and professional development in digital education. However, they caution that infrastructure gaps and limited digital literacy among educators and learners may impede effective implementation.

A policy review by Prakash, Singh, Mittal, Hayavadana, and Khurana (2025) examines the readiness of educational institutions in adopting online and blended learning under NEP 2020. Their study, incorporating empirical data from diverse institutions, reveals that although awareness of digital initiatives under NEP is high, infrastructural and pedagogical preparedness remains insufficient. This underscores a significant gap between policy aspirations and ground-level execution, especially in resource-constrained settings.

Similarly, Patil and Kumar (2024) investigate how NEP 2020 promotes *technology-enabled learning* (TEL) to foster personalized, adaptive, and interactive learning environments. They assert that digital tools such as artificial intelligence and analytics can enhance educational outcomes when integrated with sound pedagogical strategies. Yet, they also highlight persistent challenges such as digital divides and cyber security concerns that require focused attention to ensure safe and equitable implementation.

Extending the discourse to higher education, Chakraborty Acharya (2025) explores the digital application of NEP 2020 within open and distance learning (ODL) systems. This case study demonstrates how initiatives like digital libraries, MOOCs, online assessments, and learning management systems have found practical expression in some institutions. The study reveals that digital applications hold great promise for educational transformation, but equitable access remains a priority to ensure that all learners benefit irrespective of socio-economic backgrounds.

The literature also reflects broader analyses of NEP 2020's comprehensive goals that connect digital education to systemic reform. Sharma (2025) offers a holistic perspective on the policy's objectives, noting how NEP 2020 situates digital inclusion alongside curriculum restructuring, teacher development, and lifelong learning. This research emphasizes that technological integration is not peripheral but deeply interwoven with NEP's vision for an inclusive, holistic, and future-ready educational ecosystem.

In synthesizing these studies, common themes emerge regarding the role of NEP 2020 in shaping digital learning. First, the policy's prioritization of digital platforms, blended learning modalities, and capacity building highlights a deliberate strategy to transform traditional teaching-learning processes into more flexible, learner-centered systems (Maurya & Sharma, 2023; Prakash et al., 2025). Second, while digital learning is seen as a vehicle for expanding access and enhancing quality, widespread systemic challenges—such as infrastructure limitations, uneven teacher preparedness, and persistent digital divides—pose significant barriers to realization (Patil & Kumar, 2024; Chakraborty Acharya, 2025). Finally, broader policy analyses underscore that successful digital transformation under NEP requires not only technological investment but also pedagogical innovation, continuous professional development, and sustained policy support mechanisms (Sharma, 2025).

Methodology

The study adopted a qualitative research design, relying on secondary data gathered from a variety of credible sources. These included academic books, peer-reviewed journals, research articles, websites, newspapers, and official government publications.

National Education Policy 2020:

The National Education Policy (NEP) 2020 is a comprehensive reform framework introduced by the Government of India to transform the country's education system and replace the earlier National Policy on Education of 1986. It aims to provide equitable, inclusive, and high-quality education for all while promoting holistic development, critical thinking, creativity, and 21st-century skills. The policy introduces a new 5+3+3+4 curricular structure in school education, emphasizes early childhood care and education, foundational literacy and numeracy, multilingualism, and experiential learning, and reforms board examinations to reduce rote learning. In higher education, NEP 2020 promotes multidisciplinary institutions, flexible subject choices, multiple entry and exit options with the Academic Bank of Credits, establishment of the Higher Education Commission of India, and encouragement of research through the National Research Foundation. It also focuses on teacher education reforms, integration of technology and digital learning, vocational education from an early stage, inclusion of socially and economically disadvantaged groups, and increased public investment in education, aiming to make India a global knowledge superpower while preserving its cultural heritage.

Digital Learning

Digital learning refers to the use of digital technologies, platforms, and tools to facilitate teaching and learning processes across formal, non-formal, and informal educational settings. It encompasses a wide range of instructional approaches, including online learning, blended learning, virtual classrooms, learning management systems (LMS), mobile learning, and the use of multimedia resources to enhance student engagement and understanding. Digital learning promotes flexibility, accessibility, and learner-centered education by enabling students to access educational content anytime and anywhere (Means et al., 2013). With the integration of information and communication technologies (ICT), education has shifted from traditional teacher-centered methods to interactive and collaborative learning environments that foster critical thinking and problem-solving skills (Redecker, 2017).

The rapid advancement of digital technologies and increased internet penetration have significantly transformed the educational landscape worldwide. Digital platforms such as MOOCs (Massive Open Online Courses), e-learning portals, and virtual labs provide opportunities for self-paced learning

and skill development (UNESCO, 2020). In higher education, digital learning enhances academic flexibility, supports personalized learning pathways, and encourages interdisciplinary collaboration (Garrison & Vaughan, 2008). Furthermore, blended learning models, which combine face-to-face instruction with online components, have been found to improve student performance and engagement compared to traditional classroom instruction alone (Means et al., 2013).

Digital learning also plays a crucial role in promoting inclusive education by reaching geographically remote and socially disadvantaged learners. During the COVID-19 pandemic, digital learning became essential for ensuring continuity of education, highlighting both its potential and the challenges related to digital divide, cybersecurity risks, and unequal access to devices and internet connectivity (Dhawan, 2020). Despite these challenges, digital learning continues to evolve through emerging technologies such as artificial intelligence, adaptive learning systems, virtual reality, and data analytics, which enhance personalization and real-time feedback mechanisms (Holmes et al., 2019).

In the Indian context, initiatives such as DIKSHA, SWAYAM, and the National Education Policy (NEP) 2020 emphasize the integration of technology in education to improve quality, accessibility, and equity (Government of India, 2020). Overall, digital learning represents a transformative shift in education, fostering innovation, lifelong learning, and the development of digital competencies necessary for the 21st century.

Role of National Education Policy (NEP) 2020 in Shaping India's Digital Learning System

The National Education Policy (NEP) 2020 plays a transformative role in shaping India's digital learning system by integrating technology into all levels of education and promoting digital inclusion, innovation, and quality enhancement. The major roles assigned by NEP 2020 in strengthening digital learning are as follows:

1. Integration of Technology in Teaching–Learning

NEP 2020 emphasizes the systematic integration of technology in classroom processes to enhance teaching effectiveness, student engagement, and learning outcomes. It encourages the use of digital tools, smart classrooms, virtual labs, and interactive platforms to support experiential and competency-based learning.

2. Development of National Educational Technology Forum (NETF)

The policy proposes the establishment of the **National Educational Technology Forum (NETF)** as an autonomous body to provide evidence-based advice on technology adoption, digital infrastructure, and innovative practices in education.

3. Promotion of Digital Infrastructure

NEP 2020 highlights the need to strengthen digital infrastructure across schools and higher education institutions, particularly in rural and remote areas, to reduce the digital divide and ensure equitable access to digital resources.

4. Expansion of Online and Blended Learning

The policy encourages blended modes of learning by combining online and face-to-face instruction. It supports the development of high-quality online courses and digital repositories to ensure continuity of education during emergencies such as pandemics.

5. Strengthening Digital Platforms

NEP 2020 promotes national digital platforms such as **DIKSHA, SWAYAM, SWAYAM Prabha, and National Digital Library (NDL)** to provide free and accessible educational resources to learners and teachers across India.

6. Teacher Training in Digital Competencies

The policy stresses continuous professional development (CPD) for teachers to equip them with digital skills, pedagogical knowledge for online teaching, and effective use of educational technologies.

7. Digital Content Development in Regional Languages

To ensure inclusivity, NEP 2020 encourages the creation of high-quality digital content in multiple Indian languages, thereby supporting multilingual education and wider accessibility.

8. Use of Technology for Assessment and Evaluation

NEP 2020 promotes technology-enabled assessment systems to ensure transparency, efficiency, and competency-based evaluation through digital testing and adaptive assessment tools.

9. Promotion of Virtual Labs and E-Learning Resources

The policy supports the establishment of virtual laboratories and simulation-based learning tools to enhance practical knowledge, especially in science and technical education.

10. Encouragement of Research and Innovation in EdTech

Through the National Research Foundation (NRF), NEP 2020 encourages research in educational technology, artificial intelligence, data analytics, and digital innovation to improve educational outcomes.

11. Bridging the Digital Divide

The policy recognizes challenges related to access and affordability and calls for public-private partnerships, community-based initiatives, and innovative solutions to ensure digital inclusion for socially and economically disadvantaged groups.

12. Open and Distance Learning (ODL) Enhancement

NEP 2020 strengthens Open and Distance Learning systems by integrating digital technologies to improve flexibility, accessibility, and quality of higher education.

Discussion

Discussion: Role of NEP 2020 in Shaping India's Digital Learning System

The National Education Policy (NEP) 2020 marks a significant shift in India's approach to digital learning by positioning technology not as a supplementary tool but as an integral component of educational reform. The policy recognizes that digital transformation is essential for improving access, equity, quality, and efficiency in education. By embedding technology into the core framework of school and higher education, NEP 2020 attempts to create a future-ready education system aligned with global standards and national developmental goals.

One of the most critical aspects of NEP 2020 is the systematic integration of technology into teaching–learning processes. The emphasis on smart classrooms, virtual laboratories, online resources, and blended learning models reflects a move toward experiential and competency-based education. This shift helps reduce dependence on rote learning and encourages interactive, student-

centered pedagogies. Technology-enabled learning environments also promote critical thinking, collaboration, and creativity, which are essential 21st-century skills.

The establishment of the National Educational Technology Forum (NETF) demonstrates the policy's commitment to informed and evidence-based adoption of technology. By providing guidance on digital innovations and best practices, NETF is expected to bridge the gap between technological advancement and educational application. This institutional support ensures that technology integration is systematic rather than fragmented.

NEP 2020 also addresses the urgent need to expand digital infrastructure across the country, particularly in rural and underserved areas. The recognition of the digital divide as a structural challenge is significant. The policy's call for public-private partnerships, improved internet connectivity, and accessible digital devices aims to ensure that technological advancement does not widen educational inequalities. In this context, digital inclusion becomes central to achieving educational equity.

The strengthening of national digital platforms such as DIKSHA, SWAYAM, SWAYAM Prabha, and the National Digital Library further reinforces the policy's vision. These platforms provide free and quality digital content to learners and teachers, supporting continuous learning beyond traditional classrooms. The encouragement of digital content in regional languages also enhances inclusivity and aligns with the multilingual vision of the policy.

Teacher empowerment is another crucial dimension of NEP 2020's digital agenda. The policy emphasizes continuous professional development to equip teachers with digital competencies and online pedagogical skills. Without adequate teacher training, digital initiatives may remain underutilized. Therefore, capacity building ensures effective implementation of digital learning strategies.

Moreover, NEP 2020 promotes technology-enabled assessment systems and virtual laboratories, which improve transparency, accessibility, and practical learning opportunities. In higher education, the encouragement of research and innovation in educational technology through the National Research Foundation supports the development of indigenous digital solutions tailored to India's needs.

Overall, the discussion highlights that NEP 2020 envisions digital learning as a transformative force rather than a temporary response to crises like the COVID-19 pandemic. By combining infrastructure development, teacher training, digital content creation, research promotion, and inclusive strategies, the policy lays the foundation for a robust and sustainable digital learning ecosystem in India. However, effective implementation, adequate funding, and continuous monitoring remain essential to fully realize the transformative potential of NEP 2020 in shaping India's digital education landscape.

Conclusion

the National Education Policy (NEP) 2020 plays a transformative and strategic role in shaping India's digital learning system by integrating technology into every level of education. It envisions a learner-centered, inclusive, and future-oriented education system where digital tools enhance accessibility, quality, and equity. Through initiatives such as the establishment of the National Educational Technology Forum (NETF), strengthening of digital infrastructure, promotion of online and blended learning, development of multilingual digital content, teacher capacity building, and encouragement of research and innovation, NEP 2020 lays a strong foundation for a robust digital ecosystem. The policy not only addresses the challenges of the digital divide but also prepares learners and

educators for the demands of the 21st century. However, the successful realization of its goals depends on effective implementation, adequate funding, continuous monitoring, and collaborative efforts among stakeholders. If implemented effectively, NEP 2020 has the potential to revolutionize India's digital learning landscape and contribute significantly to national development and global competitiveness.

APA References

Chakraborty Acharya, S. (2025). *Digital application of NEP 2020 in higher education: An Open University case. ShodhGyan-NU: Journal of Literature and Culture Studies, 3*(1), 15–28. https://doi.org/10.29121/shodhgyan.v3.i1.2025.38

Maurya, N., & Sharma, S. (2023). *Role of technology and digital learning in NEP 2020. International Journal of Political Science and Governance, 5*(1), 407–409. https://doi.org/10.33545/26646021.2023.v5.i1e.639

Patil, S., & Kumar, P. (2024). *Promoting technology enabled learning in the light of NEP 2020. ShodhKosh: Journal of Visual and Performing Arts, 5*(6). https://doi.org/10.29121/shodhkosh.v5.i6.2024.5689

Prakash, A., Singh, I., Mittal, P., Hayavadana, J., & Khurana, P. (2025). *A policy review on NEP 2020's vision for online & blended learning models for digital transformation in Indian classrooms. Journal of Informatics Education and Research, 5*(4).

Sharma, N. (2025). *A comprehensive analysis of India's National Education Policy 2020: Objectives, implementation, and future prospects. Journal of Integrative Education Studies.* https://doi.org/10.64229/crdmhk70

Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. *Journal of Educational Technology Systems, 49*(1), 5–22. https://doi.org/10.1177/0047239520934018

Garrison, D. R., & Vaughan, N. D. (2008). *Blended learning in higher education: Framework, principles, and guidelines*. Jossey-Bass.

Government of India. (2020). *National Education Policy 2020*. Ministry of Education. https://www.education.gov.in

Holmes, W., Bialik, M., & Fadel, C. (2019). *Artificial intelligence in education: Promises and implications for teaching and learning*. Center for Curriculum Redesign.

Means, B., Toyama, Y., Murphy, R., & Baki, M. (2013). The effectiveness of online and blended learning: A meta-analysis of the empirical literature. *Teachers College Record, 115*(3), 1–47.

Redecker, C. (2017). *European framework for the digital competence of educators (DigCompEdu)*. European Commission.

UNESCO. (2020). *Education in a post-COVID world: Nine ideas for public action*. UNESCO.