

CHAPTER-13

INTEGRATING DIGITAL LIBRARIES INTO THE FRAMEWORK OF THE NATIONAL EDUCATION POLICY 2020

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ABSTRACT

With the support of inclusive learning, digital transformation, and multidisciplinary education, the National Education Policy (NEP) 2020 seeks to overhaul India's higher education system. The digitalization of libraries is a crucial part of this change since they are vital knowledge centres that support research, free access, and lifelong learning. The transition from traditional to digital libraries is examined in this article, with an emphasis on how these libraries might improve accessibility, lower expenses, and promote education that is multidisciplinary and research-focused. Despite their benefits, digital libraries—especially those in rural and underdeveloped areas—face concerns related to cybersecurity, digital literacy gaps, and infrastructure. To enhance digital libraries in line with NEP 2020, the paper addresses tactics including investing in digital infrastructure, promoting open-access materials, using AI-driven cybersecurity measures, and creating multilingual content. With the speed at which Blockchain, cloud computing, and artificial intelligence are developing, digital libraries have the potential to significantly influence how higher education is shaped in the future. Institutions may close the digital divide and establish an inclusive, tech-driven academic ecosystem by tackling current issues and utilizing new technologies, which will guarantee the accomplishment of NEP 2020's goals.

Keywords: NEP 2020, Digitized Libraries, Higher Education, Open Access Resources, Digital Transformation, E-Learning Platforms, Artificial Intelligence in Libraries

INTRODUCTION

Overview of NEP 2020 and its Vision for Higher Education

The National Education Policy (NEP) 2020 is a transformative initiative aimed at overhauling India's education system to make it more inclusive, multidisciplinary, and technology-driven (Government of India, 2020). One of its key objectives is to integrate digital learning and technology-driven education to ensure equitable access to quality education for all students, regardless of their geographical location (Aithal & Aithal, 2020).

A crucial aspect of NEP 2020 is the promotion of open access to knowledge, which aligns with the growing significance of digitized libraries in higher education. The policy encourages institutions to leverage digital resources, online repositories, and e-learning platforms to support a more interactive and engaging academic environment (Kumar & Chand, 2021).

SIGNIFICANCE OF THE PAPER

This paper explores how digitized libraries are essential for implementing NEP 2020 in higher education institutions. It discusses their role in enhancing learning experiences, democratizing knowledge access, and fostering a culture of innovation and research. Additionally, the article examines challenges associated with digital library adoption, such as infrastructure limitations, the digital divide, copyright issues, and data security (Kumar, 2023).

By understanding the importance, challenges, and strategies for strengthening digitized libraries, policymakers, educators, and institutions can effectively align with NEP 2020's vision and create an inclusive, technology-driven academic ecosystem in India.

LITERATURE REVIEW

The digitization of libraries has emerged as a transformative trend in higher education, aligning with the goals of the National Education Policy (NEP) 2020. Traditional libraries, as highlighted by Ghosh (2019), have historically been the backbone of knowledge dissemination but are limited by physical constraints and high maintenance costs. The shift towards digital platforms offers a solution, with cloud-based systems and AI-driven tools improving resource accessibility and user experience (Sharma, 2021).

The role of digitized libraries in promoting open-access resources and multidisciplinary learning has been emphasized by Chakraborty and

Gupta (2021). Their research highlights how these libraries democratize knowledge, reducing costs for students while fostering collaborative research. Additionally, Kumar and Chand (2021) explore how technologies like AI and blockchain enhance research processes and address issues such as copyright management and secure data sharing.

However, challenges persist, as noted by Mehta and Sharma (2022), including digital literacy gaps and infrastructure disparities in rural areas. Addressing these issues is critical for aligning with NEP 2020's emphasis on inclusivity. Solutions such as regional language digitization, as proposed by Saxena (2020), and government-backed initiatives like the National Digital Library of India (NDLI) are pivotal for bridging the digital divide.

This literature underscores the transformative potential of digitized libraries while highlighting areas for improvement in their implementation within India's higher education framework.

OBJECTIVES OF THE PAPER

- Examine the Role of Digitized Libraries in NEP 2020 Implementation.
- Highlight the Benefits of Digital Transformation in Libraries.
- Identify Challenges in Digital Library Integration.
- Discuss the barriers to adopting digitized libraries, such as infrastructure limitations, digital literacy gaps, and cybersecurity concerns.
- Explore Emerging Technologies in Digital Libraries.
- Propose Strategies for Strengthening Digital Library Infrastructure.

THE EVOLUTION OF LIBRARIES: FROM TRADITIONAL TO DIGITAL

Libraries have long been the backbone of higher education, providing access to books, journals, and research materials. Traditionally, libraries operated as physical spaces where students and faculty accessed printed resources. However, with technological advancements and the digital revolution, libraries have evolved into dynamic, digitized knowledge hubs that facilitate anytime, anywhere access to academic resources (Ghosh, 2019).

This section explores the transition from traditional to digital libraries, highlighting key technological innovations, their benefits, and the

impact of digitized libraries on research, learning, and teaching in higher education institutions.

Traditional Libraries: Strengths and Limitations

Traditional libraries have been instrumental in knowledge preservation and academic research for centuries. Their primary functions include:

- Providing physical access to books, journals, and manuscripts.
- Supporting faculty and student research with printed materials.
- Maintaining archives of historical and scholarly works.
- Offering reading rooms and study spaces.

While traditional libraries have served as centres of academic excellence, they face several limitations in the digital age:

- **Limited Accessibility:** Students and researchers must be physically present to access resources.
- **Space Constraints:** Libraries require large physical spaces to store books and archives.
- **High Maintenance Costs:** Managing physical collections involves preservation, staffing, and infrastructure expenses (Chakraborty & Gupta, 2021).
- **Difficulty in Updating Resources:** Printed materials take time and effort to update compared to digital resources.

The Shift towards Digitized Libraries

The advent of digital technology has revolutionized how libraries function, leading to the development of digitized libraries that provide seamless access to electronic resources (Sharma, 2021). Some key technological advancement driving this transformation includes:

- **E-Books and Digital Journals:** Online access to millions of books and peer-reviewed journals through platforms like DOAJ, Springer, and JSTOR.
- **Open-Access Repositories:** Libraries now host institutional digital repositories for storing theses, research papers, and academic content (National Digital Library of India, 2021).
- **Cloud-Based Library Management Systems (LMS):** AI-driven cataloguing, metadata management, and search tools improve resource discovery (Kumar, 2023).

- Artificial Intelligence (AI) and Big Data: AI-powered recommendation systems and automated indexing enhance library user experiences (Sharma, 2021).
- Virtual Libraries and Digital Archives: Platforms such as Google Books, World Digital Library, and Project Gutenberg provide access to historical and contemporary works.

Benefits of Digitized Libraries

The transition to digital libraries has brought numerous advantages to higher education institutions, particularly in the context of NEP 2020:

Table 1: Benefits of Digitized Libraries

Digital Libraries	Impact on Higher Education
24/7 Accessibility	Students and faculty can access resources anytime, anywhere.
Cost-Effective	Reduces expenses on physical book purchases and maintenance.
Supports Research & Innovation	Provides access to real-time, updated scholarly content.
Remote Learning & Inclusion	Helps students in rural areas access quality educational resources.
Eco-Friendly	Reduces the need for paper-based materials, supporting sustainability goals.

Challenges in the Adoption of Digitized Libraries

Despite their advantages, digitized libraries face certain challenges in Indian higher education institutions:

- Digital Divide: Limited internet connectivity and infrastructure in rural areas hinder access (Saxena, 2020).
- Lack of Digital Literacy: Many students and faculty require training to navigate digital resources effectively (Mehta & Sharma, 2022).
- Copyright and Licensing Issues: Ensuring affordable and legal access to digital resources remains a challenge (Pandey & Misra, 2022).

- **Data Privacy and Cybersecurity Concerns:** Protecting academic databases from cyber threats is critical (Kumar, 2023).

The evolution of libraries from traditional to digital formats has transformed the academic landscape, making education more accessible, efficient, and research-oriented. With NEP 2020 emphasizing digital integration, it is crucial for higher education institutions to strengthen their digital library infrastructure. However, to maximize the impact of digitized libraries, institutions must address accessibility issues, digital literacy, and data security concerns.

THE ROLE OF DIGITIZED LIBRARIES IN IMPLEMENTING NEP 2020

With the National Education Policy (NEP) 2020 emphasizing digital transformation in higher education, digitized libraries play a crucial role in ensuring equitable access to quality academic resources. These libraries bridge the gap between traditional and modern learning methods, fostering research, innovation, and self-paced learning (Aithal & Aithal, 2020).

This section explores how digitized libraries support NEP 2020's vision, enhance teaching-learning processes, and contribute to multidisciplinary and research-oriented education.

Key Functions of Digitized Libraries in Higher Education

Enhancing Access to Knowledge and Research

The National Education Policy (NEP) 2020 emphasizes the importance of open-access educational resources to ensure equitable and seamless access to quality learning materials. Digitized libraries play a pivotal role in supporting this vision by offering a diverse range of resources and tools. They provide e-books, research articles, and digital journals, enabling students and educators to access academic materials without geographical or time constraints (Chakraborty & Gupta, 2021). Furthermore, institutional repositories and digital archives serve as centralized platforms for storing and disseminating theses, dissertations, and research papers, fostering a culture of academic sharing and collaboration (National Digital Library of India, 2021). Additionally, the integration of AI-based search tools within digital libraries enhances resource discovery, allowing users to efficiently find and utilize relevant research materials, thereby improving the overall learning and research experience (Sharma, 2021). This alignment of digitized libraries with NEP 2020's objectives demonstrates their

critical role in transforming higher education into a more accessible, inclusive, and technology-driven ecosystem.

Supporting Multidisciplinary and Flexible Learning

The National Education Policy (NEP) 2020 emphasizes the importance of open-access educational resources to ensure equitable and seamless access to quality learning materials. Digitized libraries play a pivotal role in supporting this vision by offering a diverse range of resources and tools. They provide e-books, research articles, and digital journals, enabling students and educators to access academic materials without geographical or time constraints (Chakraborty & Gupta, 2021). Furthermore, institutional repositories and digital archives serve as centralized platforms for storing and disseminating theses, dissertations, and research papers, fostering a culture of academic sharing and collaboration (National Digital Library of India, 2021). Additionally, the integration of AI-based search tools within digital libraries enhances resource discovery, allowing users to efficiently find and utilize relevant research materials, thereby improving the overall learning and research experience (Sharma, 2021). This alignment of digitized libraries with NEP 2020's objectives demonstrates their critical role in transforming higher education into a more accessible, inclusive, and technology-driven ecosystem.

Bridging the Digital Divide

A key objective of the National Education Policy (NEP) 2020 is to promote inclusive education, ensuring equitable access to learning resources for students in remote and underprivileged areas. Digitized libraries significantly contribute to this goal by providing 24/7 remote access to learning materials, allowing students to access educational resources anytime, anywhere, regardless of their geographical location (Saxena, 2020). To address the challenges faced by students in rural regions with limited internet connectivity, digitized libraries also offer low-bandwidth digital resources, enabling seamless access to academic content without requiring high-speed internet (Government of India, 2020). Furthermore, mobile-friendly learning platforms are integrated into these libraries, supporting online education and ensuring that students can access resources conveniently on their smart phones and other devices (Srivastava, 2023). By bridging the digital divide, digitized libraries play a crucial role in fulfilling NEP 2020's vision of creating an inclusive and accessible educational ecosystem.

Strengthening Research and Innovation

The National Education Policy (NEP) 2020 places a strong emphasis on research-driven education to foster innovation and academic excellence. Digital libraries play a pivotal role in enhancing research capabilities by providing access to global academic databases such as Scopus, Web of Science, and IEEE Xplore, enabling students and researchers to engage with high-quality, cutting-edge scholarly content (Sharma, 2021). These libraries also integrate AI-powered research tools, which assist in analyzing trends, conducting literature reviews, and identifying relevant research insights more efficiently (Kumar, 2023). Additionally, digital libraries support open-access publishing and host peer-reviewed digital platforms, ensuring that academic work is accessible to a broader audience while promoting collaborative research and knowledge dissemination (Chakraborty & Gupta, 2021). By empowering researchers with advanced tools and resources, digitized libraries align with NEP 2020's vision of creating a robust and research-oriented academic environment.

Challenges in the Integration of Digitized Libraries

Despite their benefits, digitized libraries face several barriers in fully supporting NEP 2020:

Table 2: Problems faced by digital libraries

Challenges	Impact on Higher Education
Infrastructure Gaps	Many institutions lack digital infrastructure for seamless access.
Digital Literacy Barriers	Students and faculty require training on digital resource usage.
Limited Digital Content in Regional Languages	Many resources are only available in English, limiting accessibility.
Data Privacy & Cybersecurity Risks	Academic databases need stronger security protocols.
High Costs of Subscription-Based Digital Libraries	Access to premium databases like Springer, Elsevier, and JSTOR remains expensive.

Solutions for Strengthening Digital Libraries in Higher Education

To maximize the impact of digitized libraries in NEP 2020's implementation, institutions must adopt strategic solutions:

NEP 2020 emphasizes research-driven education

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Promoting Digital Literacy

To maximize the benefits of digitized libraries, it is essential to equip students and faculty with the necessary skills to effectively utilize digital resources. Workshops and training programs are crucial for building digital literacy, ensuring that users can navigate, access, and leverage the wealth of knowledge available through digital platforms (Mehta & Sharma, 2022). Additionally, the integration of AI-driven chatbots within digital libraries offers personalized assistance, guiding users in locating relevant information, resolving queries, and optimizing their research experience (Sharma, 2021). These initiatives not only enhance user proficiency but also contribute to creating a more efficient and inclusive digital learning environment, aligning with the goals of modern academic ecosystems.

Expanding Open-Access Resources

To promote equitable access to academic resources, institutions should actively contribute to open-access repositories, making free educational content widely available to students and researchers (Chakraborty & Gupta, 2021). These repositories foster a culture of knowledge-sharing

and democratize education by reducing reliance on costly learning materials. Additionally, collaborations with global digital platforms can further enhance resource accessibility by providing affordable access to premium research databases and scholarly content (Kumar, 2023). Such initiatives not only bridge financial barriers but also support a more inclusive and research-oriented academic ecosystem, aligning with the goals of modern education policies.

Developing Multilingual Digital Content

To foster inclusive learning, libraries should prioritize the digitization of regional language materials, ensuring that educational resources are accessible to a diverse audience across linguistic and cultural backgrounds (Saxena, 2020). This initiative addresses the language barriers faced by many students in India and promotes equitable access to knowledge. Furthermore, the integration of AI-based language translation tools can significantly enhance this effort by making English-language materials available in multiple Indian languages, thereby broadening the reach of academic content (Srivastava, 2023). These steps are essential to creating a more inclusive, multilingual academic ecosystem that aligns with the diverse needs of learners.

Enhancing Cybersecurity Measures

Ensuring the security of digital academic resources is critical in the era of digitized libraries. Universities must adopt robust data encryption and implement secure access protocols to safeguard sensitive information and prevent unauthorized access to academic materials (Kumar, 2023). Additionally, the development and enforcement of strong cybersecurity laws are essential to protect digital repositories and ensure the integrity of academic content (Pandey & Misra, 2022). These measures not only enhance trust in digital systems but also ensure the safe and reliable functioning of digitized libraries, fostering a secure environment for learning and research.

CONCLUSION

A revolutionary step in realizing the goal of NEP 2020 is the incorporation of digital libraries into higher education. These libraries act as information centres that support multidisciplinary learning, inclusive education, and high-calibre research. Institutions can improve academic resource security, efficiency, and accessibility by utilizing Blockchain, AI, and cloud computing technology. However, issues like cybersecurity, digital literacy limitations, and

infrastructural deficiencies need to be resolved by investing in open-access materials, forming public-private partnerships, and implementing strategic policies. The function of digital libraries will keep changing as India transitions to a digital-first educational system, bridging the knowledge gap between urban and rural areas and encouraging a lifelong learning culture.

By embracing innovation, collaboration, and inclusivity, higher education institutions can ensure that digitized libraries become pillars of academic and research excellence, fully realizing the objectives of NEP 2020 and beyond.

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