

Remodeling Libraries for Vikasit Bharat 2047: A Strategic Research and Action Framework

Dr Banothu Champla

Assistant Librarian Institution: Vignan's Foundation for Science Technology & Research Deemed University Hyderabad.

Abstract—India's vision of *Vikasit Bharat 2047* envisions the transformation of the nation into a developed, knowledge-driven, innovation-oriented, and digitally empowered society. In this transformative journey, libraries must evolve beyond their traditional role as repositories of printed information and emerge as dynamic knowledge ecosystems that actively contribute to academic excellence, research productivity, digital inclusion, and socio-economic development.

This research paper examines the need for remodeling academic and public libraries through digital transformation, inclusive infrastructure development, innovation ecosystems, and governance reforms. Based on analytical review of national policy frameworks particularly the National Education Policy (NEP) 2020 and Digital India initiatives along with survey observations and case-based insights from higher education institutions, the study proposes a comprehensive and phased strategic framework for library transformation by 2047.

The findings reveal significant challenges such as inadequate digital integration, limited research data services, urban-rural disparities, funding constraints, and skill gaps among library professionals. The study concludes that sustainable, inclusive, and technology-enabled library transformation is essential for building a knowledge-driven society. Strategically modernized libraries can function as smart learning environments, innovation hubs, digital literacy centers, and catalysts of national development.

Index Terms—Vikasit Bharat 2047; Library Modernization; Digital Libraries; Smart Libraries; NEP 2020; Knowledge Society; Innovation Ecosystem.

I. INTRODUCTION

India's aspiration to become a developed nation by 2047, marking 100 years of independence, requires a robust and inclusive knowledge infrastructure. Knowledge institutions such as libraries form the

intellectual backbone of educational and research ecosystems. However, traditional library models centered primarily on print collections and passive service delivery are no longer adequate in a rapidly evolving digital and knowledge-based economy.

The vision of *Vikasit Bharat 2047* emphasizes innovation, digital empowerment, research excellence, skill development, and inclusive growth. In alignment with this national mission, libraries must be repositioned as strategic knowledge infrastructures that actively support teaching-learning processes, interdisciplinary research, entrepreneurship, and community development.

The National Education Policy (NEP) 2020 underscores the importance of digital infrastructure, multidisciplinary learning, research enhancement, and equitable access to education. These objectives depend significantly on modern, well-networked, and technology-enabled library systems. Similarly, initiatives such as Digital India, Skill India, and Start-up India reinforce the need for information access, digital literacy, and innovation support areas where libraries can play a transformative role.

This paper critically examines the need to remodel libraries through digital integration, smart infrastructure, innovation ecosystems, and responsive governance models. It argues that sustainable and inclusive modernization of libraries is fundamental to achieving the developmental aspirations of Vikasit Bharat 2047.

II. REVIEW OF LITERATURE

The evolution of libraries in response to technological and societal change has been extensively discussed in scholarly literature. S. R. Ranganathan's (1931) *Five Laws of Library Science*

laid the foundation for user-centered service, accessibility, and adaptability. His principles particularly “Books are for use” and “Every reader his/her book” remain highly relevant in the digital era, where access extends beyond physical collections to digital resources and open knowledge platforms.

The National Education Policy (2020) highlights digital access, research support, and multidisciplinary education, recognizing libraries as essential enablers of academic excellence. It advocates strengthening institutional repositories, digital resources, and research dissemination mechanisms.

The Digital India Programme (MeitY, 2015) aims to ensure universal digital access and promote e-governance. Libraries can significantly contribute to this mission by providing digital literacy training, internet access, and community information services, particularly in rural and semi-urban regions.

Suber (2012) emphasizes the importance of open access in democratizing knowledge and enhancing research visibility. Institutional repositories, open educational resources (OER), and digital archives are increasingly considered core functions of modern academic libraries.

The IFLA Trend Report (2015) identifies technological innovation, information accessibility, privacy concerns, and community engagement as global factors shaping the future of libraries. It stresses that libraries must adapt to emerging technologies such as artificial intelligence (AI), big data, and cloud computing.

Corrall, Pinfield, and McMillan (2013) discuss the growing importance of research data management (RDM) services, highlighting the evolving role of libraries in supporting data curation and research lifecycle management.

Borgman (2007) further explores how digital infrastructures reshape scholarly communication and knowledge dissemination.

Despite these advancements, literature indicates persistent challenges such as digital disparities, inadequate funding, lack of trained professionals, and resistance to technological change. These findings underscore the need for comprehensive policy support and structured strategic planning for inclusive and sustainable library modernization.

III. NEED OF THE STUDY

Although national initiatives emphasize digital transformation and knowledge empowerment, many libraries in India continue to face structural and technological limitations. Significant disparities exist between urban and rural institutions in terms of infrastructure, digital access, and professional competencies.

Rapid technological advancements including artificial intelligence, cloud-based systems, block chain for record management, and data analytics require libraries to adopt modern tools and user-centered service models. However, a structured and long-term framework specifically aligning library transformation with the goals of *Viksit Bharat 2047* remains limited.

This study is therefore necessary to:

- Identify existing gaps in infrastructure, services, and governance
- Develop a phased strategic roadmap for transformation by 2047
- Align library modernization with national development objectives
- Promote inclusive and equitable knowledge access.

IV. RESEARCH METHODOLOGY

1. Research Approach:

This study adopts a mixed-method, exploratory, and analytical research approach to examine the present condition of academic and public libraries and to develop a strategic action framework aligned with the national vision of *Viksit Bharat 2047*. The research integrates qualitative insights with quantitative data to ensure depth, objectivity, and policy relevance.

The study is action-oriented, as it not only analyzes existing gaps but also proposes a phased and implementable roadmap for transforming libraries into smart, inclusive, and innovation-driven knowledge ecosystems by 2047.

2. Research Design:

The research design is:

- Descriptive -to describe the present status of library infrastructure, services, and digital integration.

- Exploratory -to investigate emerging trends such as AI integration, research data management, and smart library systems.
- Analytical - to evaluate gaps between current library systems and the requirements envisioned under NEP 2020 and Digital India initiatives.

The study focuses on four major dimensions:

1. Digital Transformation
2. Inclusive Infrastructure
3. Innovation and Skill Development
4. Governance and Policy Reforms.

V. DATA COLLECTION

The study utilizes both primary and secondary data sources to ensure reliability and depth of analysis.

Primary Data:

- Survey observations from selected higher education institutions regarding automation status, digital access, and research services
- Informal discussions with library professionals concerning technological adoption and training needs.

Secondary Data:

- Policy documents such as NEP 2020 and Digital India
- Institutional reports and case studies
- Scholarly literature on digital libraries, open access, and smart systems.

VI. DATA COLLECTION METHODS

The following data collection tools were employed:

1. Structured questionnaires
2. Case study analysis of successfully modernized libraries
3. Institutional document analysis
4. Observational method for assessing physical and digital infrastructure

The data collection process was conducted during the academic year 2024–2025.

VII. DATA ANALYSIS TECHNIQUES

The collected data were analyzed using:

A. Descriptive Statistical Analysis:

Used to measure:

- Percentage of automation levels
- Availability of digital resources

- Implementation of AI/RFID
- Budget allocation patterns

B. Thematic Analysis:

Qualitative responses were categorized into themes such as:

- Digital integration gaps
- Skill deficiencies
- Infrastructure challenges
- Policy implementation issues.

C. Comparative Analysis:

Comparison was made between:

- Urban vs. semi-urban institutions
- Fully automated vs. partially automated libraries
- Institutions aligned with NEP vs. those lacking alignment

The findings were interpreted in relation to national development objectives and global best practices.

8. Sampling Technique:

A purposive sampling method was adopted to select institutions representing varying levels of automation (fully automated, partially automated, and traditional systems). Institutions from urban and semi-urban regions were included to assess digital disparities.

IX. KEY CHALLENGES IDENTIFIED

The study identifies several structural and operational challenges:

1. Limited Digital Integration: Many libraries lack integrated library management systems (ILMS), AI tools, and remote access facilities.
2. Urban–Rural Digital Divide: Rural institutions face inadequate internet connectivity and limited access to digital resources.
3. Inadequate Research Support Services: Limited implementation of research data management and institutional repositories.
4. Funding Constraints: Insufficient allocation for modernization and technological upgrades.
5. Skill Gaps: Lack of continuous professional development among library professionals.
6. Policy Fragmentation: Weak coordination between national initiatives and institutional implementation.

X. STRATEGIC FRAMEWORK FOR LIBRARY TRANSFORMATION

A. Digital Transformation:

- Complete automation through integrated library management systems
- Establish institutional repositories and digital archives
- Implementation of RFID and cloud-based systems
- Adoption of AI-based search tools and chatbots
- Development of research data management services

B. Smart and Inclusive Infrastructure:

Future-ready libraries must ensure accessibility for all users through assistive technologies such as screen readers, Braille interfaces, and accessible digital platforms. Green building practices, energy-efficient systems, and collaborative learning spaces promote sustainability and innovation.

C. Libraries as Innovation and Skill Development Hubs:

Libraries should incorporate:

- Makerspaces and fabrication labs
- Entrepreneurship information centers
- Digital literacy and coding workshops
- Collaborative research environments

These initiatives align with Skill India and Start-up India missions.

D. Policy and Governance Reforms:

- Strengthening national networking platforms such as INFLIBNET, DELNET, and NDLI
- Promoting Open Educational Resources (OER)
- Establishing performance evaluation metrics
- Ensuring continuous professional development programs

XI. PHASED ACTION PLAN

Phase – I (2025-2030) Foundation Stage:

- Complete automation
- Establish digital repositories
- Strengthen national networking
- Provide basic digital literacy training

Phase – II (2030-2040) Expansion Stage:

- Integrate AI-based services
- Expand research data services
- Strengthen rural outreach
- Implement green infrastructure

Phase – III (2040-2047): Consolidation Stage:

- Fully smart, globally connected libraries
- Advanced AI-driven research support
- Libraries functioning as innovation ecosystems
- Sustainable and inclusive service models.

XII. CONCLUSION

The vision of Vikasit Bharat 2047 demands a transformative shift toward a knowledge-driven, digitally empowered, and inclusive India. Libraries must evolve from passive repositories to proactive knowledge ecosystems that foster education, research, innovation, and community development.

Although progress has been made in automation and networking, significant challenges remain in digital integration, funding, rural access, and professional competencies. Addressing these challenges requires coordinated policy support, strategic planning, sustainable investment, and continuous capacity building.

Remodelling libraries is not merely a technological upgrade but a comprehensive institutional reform integrating governance, infrastructure, and human resource development. Modernized libraries aligned with national priorities and global standards will play a pivotal role in shaping a developed, equitable, and knowledge-based India by 2047.

REFERENCES

Here's a structured list of references and sources you can use for the topic "Remodelling Libraries for Vikasit Bharat 2047: A Strategic Research and Action Framework." Since the exact document could not be located online, the list below gathers *relevant academic and policy literature*, reports, and studies that are directly associated with libraries in the context of the Viksit Bharat 2047 vision including modernization strategies, digital transformation, policy frameworks and library roles in nation building:

- [1] Borgman, Christine L. 2007. *Scholarship in the Digital Age: Information, Infrastructure, and the Internet*. Cambridge, MA: MIT Press.
- [2] Corral, Sheila, Stephen Pinfield, and Jane McMillan. 2013. "Research Data Management and Libraries: Current Activities and Future Priorities." *Journal of Librarianship and Information Science* 45(4).

- [3] Government of India. 2020. *National Education Policy 2020*. New Delhi: Ministry of Education.
- [4] IFLA. 2015. *IFLA Trend Report: Surviving and Thriving in a Changing Information Environment*. The Hague: International Federation of Library Associations and Institutions.
- [5] MeitY. 2015. *Digital India Programme*. Government of India.
- [6] Ranganathan, S. R. 1931. *The Five Laws of Library Science*. Madras: Madras Library Association.
- [7] Suber, Peter. 2012. *Open Access*. Cambridge, MA: MIT Press.
- [8] UGC. 2018. *UGC Regulations on Minimum Qualifications for Appointment of Teachers and Academic Staff*. New Delhi: University Grants Commission.
- [9] NDLI. 2022. *NDLI Usage and Development Report*. Ministry of Education, Government of India.