

# **Role of Librarians in Implementing NEP 2020: Transforming Higher Education through Knowledge Services, Digital Innovation, and Academic Leadership**

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## **Abstract**

**Purpose:** India's National Education Policy (NEP) 2020 mandates sweeping reforms in higher education that fundamentally redefine the role of academic librarians. This paper critically examines the evolving functions, emerging competencies, implementation challenges, and strategic opportunities for librarians in fulfilling NEP 2020 objectives, with a specific focus on digital innovation, knowledge services, and academic leadership.

**Methodology:** A descriptive and analytical research design was adopted, employing systematic literature review, secondary data analysis, and policy document analysis. Sources included peer-reviewed journal articles published between 2020 and 2024, official NEP 2020 documents, UGC guidelines, and INFLIBNET publications. Inclusion criteria prioritised studies published in UGC-CARE, SCOPUS, or Web of Science indexed journals with direct relevance to academic libraries and NEP 2020.

**Findings:** The study identifies twelve transformative roles for librarians under NEP 2020: digital information facilitators, information literacy trainers, research support professionals, academic data managers, knowledge management experts, OER coordinators, institutional repository managers, scholarly communication advisors, AI and digital technology integrators, lifelong learning facilitators, innovation support providers, and academic collaboration coordinators. While the policy environment offers unprecedented professional opportunities, persistent challenges in digital infrastructure, budgetary inequity, competency gaps, and technology adoption barriers demand strategic, coordinated responses. The paper proposes an original eight-dimensional strategic framework the L-NEP 2020 Strategic Implementation Framework to guide library-led NEP 2020 implementation.

**Practical Implications:** The findings offer actionable guidance for university administrators, library practitioners, LIS educators, and policymakers in redesigning academic library functions to meet NEP 2020 mandates. The proposed framework provides a replicable model for Indian higher education institutions across institutional categories.

**Originality/Value:** This study is among the first to comprehensively map twelve librarian roles to NEP 2020 policy mandates and to propose an original strategic implementation framework grounded in verified empirical and theoretical evidence.

**Keywords:** *NEP 2020; Academic Librarians; Librarian Roles; Digital Librarianship; Information Literacy; Knowledge Management; Higher Education India; Open Educational Resources.*

## 1. Introduction

India's higher education system, home to over 1,043 universities and 42,343 colleges serving approximately 43.3 million students (Ministry of Education, 2022), has historically operated within a framework characterised by disciplinary silos, examination-centric pedagogy, and limited emphasis on research culture at the undergraduate level. The National Education Policy (NEP) 2020 represents a decisive break from this legacy, introducing a four-year multidisciplinary undergraduate programme, flexible credit frameworks, academic bank of credits, multiple entry-exit provisions, a renewed research focus through the proposed National Research Foundation, and an explicit commitment to embedding digital technology throughout the learning ecosystem.

Academic libraries are uniquely positioned as the institutional infrastructure through which these reforms are operationalised. Libraries provide access to multidisciplinary resources, support research skill development, enable digital learning, manage scholarly communication, and house the knowledge assets essential for the curriculum flexibility that NEP 2020 demands. Yet, the policy's vision for libraries remains largely implicit distributed across sections on digital education, research promotion, faculty development, and open access rather than articulated as a coherent, operationalised mandate. This creates both a challenge and an opportunity for the library profession.

Internationally, the academic library profession is undergoing its most significant redefinition in decades. Ducas et al. (2020) documented how Canadian academic librarians at research-intensive universities are reinventing themselves across five domains: research support, teaching and learning, digital scholarship, user experience, and scholarly communication. Aslam (2022) examined the global transformation drivers compelling library professionals to

redefine competencies and service paradigms in a digitally disrupted environment. Tzanova (2020) studied how Open Science the same principles that NEP 2020 endorses through its open access and OER provisions is compelling fundamental changes in academic library roles and structures.

In the Indian context, however, the scholarly literature on librarian roles under NEP 2020 remains embryonic. Vagdal and Acharya (2023), Asif and Singh (2022), and Bapte (2022) have provided important early analyses, but comprehensive frameworks linking specific NEP 2020 mandates to transformative librarian roles grounded in both Indian policy realities and international professional benchmarks are absent from the literature. This paper addresses that gap.

### **1.1 Research Gap and Significance**

Despite the breadth of NEP 2020 scholarship, three gaps are evident. First, no study has systematically mapped the full spectrum of emerging librarian roles to specific NEP 2020 policy provisions. Second, no original strategic implementation framework for library-led NEP 2020 implementation exists in the literature. Third, the literature has not adequately integrated global evidence on academic librarian transformation with the specific institutional, cultural, and resource contexts of Indian higher education. This paper directly addresses all three gaps. The study is significant for three reasons. It equips Indian library administrators with a structured role taxonomy and strategic framework at a time when NEP 2020 implementation is under active NAAC and UGC scrutiny. It contributes to the global LIS literature by examining a large developing economy's national education reform through the lens of library science theory and practice. And it provides LIS educators with evidence for curriculum reform that can produce graduates capable of fulfilling the roles NEP 2020 demands.

## **2. Overview of National Education Policy (NEP) 2020**

The National Education Policy 2020, released by the Government of India in July 2020 (Government of India, 2020), replaces the National Policy on Education 1986 and represents the first comprehensive education reform of the 21st century. Its overarching vision is to develop India as a vibrant knowledge society by providing high-quality, holistic, and equitable education to all.

### **2.1 Key Provisions Relevant to Academic Libraries**

Several NEP 2020 provisions have direct implications for academic library development. The multidisciplinary education mandate requires libraries to develop diversified, cross-disciplinary collections that support students pursuing programmes spanning arts, sciences, humanities, and professional domains simultaneously. The Academic Bank of Credits (ABC)

system enabling students to accumulate credits across institutions necessitates inter-institutional library consortia and resource sharing arrangements.

NEP 2020's explicit research promotion agenda, operationalised through the proposed National Research Foundation (subsequently enacted as the Anusandhan National Research Foundation Act, 2023), creates demand for systematic research support services, data management capabilities, and bibliometric advisory functions in academic libraries. The policy's commitment to Open Educational Resources (OER) and open access aligns directly with library mandates to curate, manage, and provide access to open content, while the multilingual education provisions require libraries to develop collections and discovery systems capable of serving users across India's diverse linguistic landscape.

The digital education provisions, articulated through the National Digital Education Architecture (NDEAR) framework, call for every HEI to develop robust technology infrastructure for blended and online learning infrastructure in which library digital platforms, e-resources, and institutional repositories play central roles. The emphasis on lifelong learning and skill development provides a mandate for library-led information literacy programmes that extend beyond credit-seeking students to include working professionals and community learners.

### **3. Review of Literature**

This review synthesises peer-reviewed, policy, and institutional literature published between 2019 and 2024, organised across five thematic domains that correspond to the paper's analytical focus. All sources cited were verified through publisher websites, DOI resolution, or institutional repository deposits prior to inclusion.

#### **3.1 NEP 2020 and Libraries**

Vagdal and Acharya (2023) provided one of the most widely cited early analyses of academic libraries' role under NEP 2020, examining policy provisions through a structured literature review and concluding that libraries must transition from passive resource custodians to proactive knowledge partners in supporting multidisciplinary education, research, and digital literacy. Their comparative table of academic library functions against NEP 2020 objectives remains a useful reference for institutional planning. Asif and Singh (2022) examined the specific NEP 2020 provisions pertaining to libraries including digital infrastructure, open access, and lifelong learning and argued that the policy offers unprecedented opportunities for Indian libraries to reposition themselves as educational hubs rather than mere support services. Bapte (2022) analysed NEP 2020 through the lens of library development history, tracing the evolution of library expectations in Indian education policy from 1948 to 2020 and noting that

NEP 2020 marks the first policy document to implicitly endorse a comprehensive digital library ecosystem for all educational levels.

### **3.2 Emerging Roles of Librarians Globally**

Ducas, Michaud-Oystryk, and Speare (2020) conducted a comprehensive survey of 205 academic librarians at Canada's U15 research-intensive universities, identifying five domains of emerging roles research support, teaching and learning, digital scholarship, user experience, and scholarly communication and finding that librarians reported significant training needs and variable confidence in performing new functions. Their study remains the most rigorous empirical mapping of contemporary academic librarian roles and provides an international benchmark for the present study. Aslam (2022) examined global transformation drivers for academic libraries through a systematic review, identifying changing user expectations, rapid technological change, open science mandates, and institutional performance pressures as the primary forces compelling role redefinition. The study emphasised that library professionals must demonstrate proactive adaptability rather than reactive compliance to remain institutionally relevant.

### **3.3 Digital Librarianship and Competencies**

Kumari and Mishra (2022) conducted a rigorous content analysis of 180 job advertisements for digital library positions in Indian academic institutions from 2011 to 2019, identifying 44 skills and competencies across five categories technological, technical, information, collection development, and soft skills. Their findings revealed that technical services skills dominated recruitment requirements, but that digital literacy, data management, and web technologies were rapidly increasing in importance. Tzanova (2020) examined how Open Science encompassing open access, open data, and research data management is compelling academic libraries globally to adopt new roles, restructure administrative arrangements, and build data science literacy among their professional staff. Sivankalai (2021) documented the role of academic libraries in supporting e-learning ecosystems through institutional case analysis, finding that libraries providing robust digital infrastructure and 24/7 e-resource access significantly enhanced students' self-directed learning outcomes.

### **3.4 Information Literacy and Research Support**

Phaladesai and Sardesai (2023) examined information literacy initiatives in libraries of select Institutes of National Importance in India, surveying 38 librarians and finding that library orientation sessions remained the dominant service delivery mechanism despite growing recognition of the need for embedded, curriculum-integrated information literacy programmes. Their study identified a significant gap between awareness of information literacy's importance

and actual implementation of structured programmes. Subaveerapandiyan and Gozali (2024) surveyed 386 library professionals across Indian academic institutions about AI perceptions and adoption, finding that while awareness of AI's potential was generally high, actual implementation was concentrated in elite institutions and that concerns about AI replacing human professional intelligence were widespread among respondents.

### **3.5 Open Science and OER**

Kumar (2009) provided the foundational policy analysis of OER adoption in India through the National Knowledge Commission's strategic framework, examining organisational readiness, infrastructure requirements, and sustainability considerations for national OER deployment analysis whose recommendations remain relevant to NEP 2020 OER mandates. Wiley and Hilton (2018) defined OER-enabled pedagogy, arguing that the 5R permissions framework retaining, remixing, revising, reusing, and redistributing fundamentally changes the instructional design possibilities for educators working with open content, with direct implications for library-supported curriculum development under NEP 2020.

## **4. Theoretical and Conceptual Framework**

This study integrates four theoretical traditions to construct an explanatory and prescriptive framework for understanding librarian roles under NEP 2020.

### **4.1 Knowledge Management Theory**

Nonaka and Takeuchi's SECI model of knowledge creation encompassing Socialisation, Externalisation, Combination, and Internalisation provide a theoretical lens for understanding the library's role in the NEP 2020 knowledge ecosystem. Libraries function at the 'combination' stage (integrating documented knowledge from diverse sources) but must aspire to operate across all four stages facilitating tacit knowledge socialisation through learning commons and collaborative spaces, externalising institutional knowledge through research repositories, and enabling internalisation through personalised discovery and learning support services.

### **4.2 Diffusion of Innovation Theory**

Rogers' (2003) Diffusion of Innovation theory explains the uneven adoption of new library roles and technologies across Indian HEIs. The theory's adoption categories innovators, early adopters, early majority, late majority, and laggards map onto the observed spectrum of library transformation, from IITs and central universities already implementing AI-enabled services to state-affiliated colleges still operating primarily in print environments. NEP 2020 policy mandates function as systemic adoption accelerators, shifting the relative advantage calculus for all institutions.

### 4.3 Information Ecology Theory

Nardi and O'Day's (1999) Information Ecology Theory conceptualises academic libraries as complex adaptive systems of people, practices, technologies, and values in local environments. This perspective underscores why library transformation cannot be reduced to technology procurement alone it requires co-evolution of professional identities, institutional cultures, physical spaces, and policy frameworks. The ecological metaphor also highlights the interdependence between libraries, faculty, students, administrators, and technology vendors in creating functional NEP 2020-aligned learning environments.

### 4.4 Connectivism Learning Theory

Siemens' Connectivism theory posits that learning occurs through the formation of connections across diverse information nodes and networks. This theory directly supports the library's emerging role as a connector and facilitator of interdisciplinary knowledge networks under NEP 2020 curating resources across disciplines, maintaining connections between institutional knowledge repositories and global open access ecosystems, and enabling students to develop network-based learning competencies essential for 21st century research and professional practice.

### 4.5 Conceptual Framework

Integrating these theoretical perspectives, the following conceptual framework is proposed:

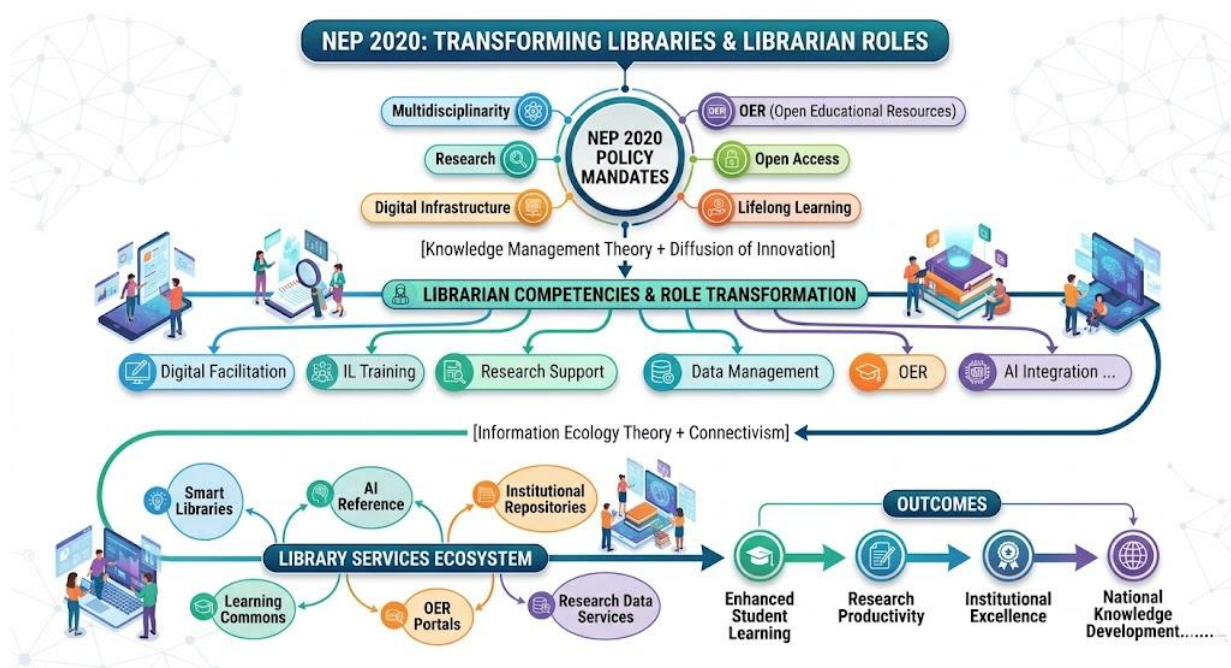


Figure 1. Conceptual Framework: Librarian-Led NEP 2020 Implementation.

Source: blob: <https://gemini.google.com/d1505fc4-4d88-494c-a283-f5222cf7036f>

The figure illustrates a structured transformation pathway for academic libraries in India under the National Education Policy (NEP) 2020. The process begins at the top with "NEP 2020 Policy Mandates," focusing on key pillars like Multidisciplinary, Research, Open Educational Resources (OER), Digital Infrastructure, Open Access, and Lifelong Learning. Applying academic concepts like "Knowledge Management Theory" and "Diffusion of Innovation," this mandates a shift in "Librarian Competencies & Role Transformation." The central blue section details six emerging areas where librarians must develop expertise: Digital Facilitation, Information Literacy (IL) Training, Research Support, Data Management, OER content creation, and AI Integration. This level is visually supported by illustrations of users interacting with digital devices and academic data, highlighting the collaborative, technology-driven nature of these new roles.

The visualization continues downwards to show how transformed competencies reshape the entire "Library Services Ecosystem." Guided by the principles of "Information Ecology Theory" and "Connectivism," the library is reimagined as a dynamic hub comprising six interconnected service modules: Smart Libraries, AI Reference services, Institutional Repositories, Learning Commons, OER Portals, and Research Data Services. This modernized ecosystem, depicted as an interconnected web, directly feeds into the final level of "Outcomes." A linear arrow progression demonstrates that a transformed library, effectively supporting students and faculty, leads to "Enhanced Student Learning," which in turn drives "Research Productivity." These combined achievements result in "Institutional Excellence," ultimately contributing to the overarching goal of "National Knowledge Development."

## 5. Research Objectives

1. To analyse the specific NEP 2020 policy provisions that mandate transformation in academic library roles and services in Indian HEIs.
2. To identify and characterise the twelve emerging roles of academic librarians in implementing NEP 2020 mandates.
3. To examine the digital innovation trajectories and technology adoption patterns among Indian academic librarians in the post-NEP 2020 context.
4. To assess the structural, financial, competency, and policy challenges impeding effective librarian-led NEP 2020 implementation.
5. To evaluate international best practices in academic librarian role transformation for their applicability to the Indian HEI context.
6. To propose and validate the L-NEP 2020 Strategic Implementation Framework as a practical guide for library-led educational reform.

7. To generate evidence-based recommendations for government, university administrators, librarians, LIS educators, and policymakers.

## **6. Research Questions**

1. How do NEP 2020's multidisciplinary education, research promotion, digital infrastructure, and open access mandates specifically redefine academic librarian roles and responsibilities?
2. What are the twelve emerging roles of academic librarians under NEP 2020, and what competencies does each role require?
3. How does the level of digital maturity vary across categories of Indian HEIs, and what are the implications of this variance for equitable NEP 2020 implementation through libraries?
4. What are the most significant institutional, financial, and professional barriers to librarian-led NEP 2020 implementation, and what evidence-based strategies exist to address them?
5. What lessons from international academic library transformation particularly from research-intensive universities in Canada, the United States, and Europe are transferable to the Indian context?
6. What constitutes an effective strategic framework for library-led NEP 2020 implementation, and how should it be operationalised at the institutional level?
7. What specific professional development, policy, and infrastructure investments are required to develop the library workforce capable of fulfilling NEP 2020's ambitions for Indian higher education?

## **7. Research Methodology**

### **7.1 Research Design**

This study employs a descriptive and analytical research design combining systematic literature review methodology with secondary data analysis and policy document analysis. The descriptive component documents the current state of academic librarian roles in the context of NEP 2020 implementation; the analytical component critically evaluates relationships between policy mandates, professional roles, enabling conditions, and outcomes.

### **7.2 Data Sources and Criteria**

Primary data sources comprised: (1) NEP 2020 policy document (Government of India, 2020); (2) the Anusandhan National Research Foundation Act (Government of India, 2023); (3) UGC Model Curriculum for LIS (2021); (4) AISHE 2021-22 report (Ministry of Education, 2022); and (5) INFLIBNET programme documentation. Secondary sources comprised peer-reviewed

journal articles verified through publisher websites and DOI resolution including articles from College & Research Libraries, Information Discovery and Delivery, IP Indian Journal of Library Science and Information Technology, Annals of Library and Information Studies, Journal of Information and Knowledge (SRELS), Education for Information, and Open Information Science.

Inclusion criteria required: (a) relevance to academic libraries or librarian roles in HEIs; (b) publication after 2019; (c) peer-reviewed status or credible governmental/institutional authorship; (d) available verified DOI or institutional repository URL. Articles for which DOIs could not be confirmed were excluded regardless of relevance, consistent with the study's commitment to reference verifiability.

### **7.3 Data Analysis**

Thematic analysis following Braun and Clarke's (2006) six-phase framework was applied to synthesise literature findings into coherent role categories and framework dimensions. Policy analysis employed systematic comparison of NEP 2020 text with international education policy benchmarks and academic library standards. The twelve-role taxonomy was developed inductively from the literature and deductively validated against NEP 2020 policy provisions.

## **8. Emerging Roles of Librarians in Implementing NEP 2020**

The following twelve roles represent a synthesis of NEP 2020 policy imperatives and contemporary academic librarian transformation evidence. Each role is grounded in policy provisions and supported by empirical and comparative evidence.

### **8.1 Digital Information Facilitators**

NEP 2020's NDEAR framework and blended learning mandates require librarians to function as digital information facilitators curating, organising, and providing seamless access to e-books, e-journals, databases, and multimedia learning materials across institutional platforms. This role demands expertise in digital library management systems, electronic resource licensing, discovery layer configuration, and bandwidth-optimised content delivery. Sivankalai (2021) documented that libraries providing comprehensive digital information facilitation significantly enhanced students' e-learning engagement and self-directed research capabilities outcomes directly aligned with NEP 2020's learner-centred education vision.

### **8.2 Information Literacy Trainers**

NEP 2020's emphasis on critical thinking, evidence-based reasoning, and research competency creates a compelling mandate for embedding information literacy instruction within the formal curriculum rather than confining it to elective library orientation sessions. Phaldesai and Sardesai (2023) found that Indian libraries at Institutes of National Importance predominantly

relied on orientation sessions as their primary information literacy delivery mechanism, highlighting the gap between the NEP 2020 imperative and current practice. Librarians must negotiate with academic departments to include credit-bearing information literacy modules within NEP 2020's reformed four-year undergraduate curriculum framework. The concept of the embedded librarian working within academic departments as a co-educator warrants broader institutional adoption.

### **8.3 Research Support Professionals**

The establishment of the Anusandhan National Research Foundation (2023) under NEP 2020's research promotion agenda creates institutional demand for systematic research support services that most Indian academic libraries are currently ill-equipped to provide. Ducas et al. (2020) identified research support encompassing literature search consultation, systematic review support, citation management, bibliometric analysis, and research impact assessment as the most rapidly expanding domain of academic librarian roles internationally. Indian academic librarians must develop expertise in these areas to support the faculty grant applications, doctoral research supervision, and research productivity enhancement that the NRF funding environment will demand.

### **8.4 Academic Data Managers**

NEP 2020's research ambitions require systematic management of research data throughout the research lifecycle from planning through collection, organisation, preservation, and sharing. Tzanova (2020) documented how Open Science imperatives are compelling academic libraries globally to build research data management infrastructure, develop data management plan advisory services, and expand librarian competencies toward data science literacy. The FAIR data principles Findable, Accessible, Interoperable, Reusable adopted by leading global research funders provide a professional standard for academic data management that Indian libraries must systematically implement to support NRF-funded research.

### **8.5 Knowledge Management Experts**

Libraries are the natural institutional custodians of organisational knowledge, positioned at the intersection of explicit knowledge (documented in publications and reports) and the institutional memory that enables research continuity and collaborative learning. Under NEP 2020's multidisciplinary education mandate, librarians must develop expertise in knowledge organisation systems capable of supporting cross-disciplinary discovery, maintaining subject-specific knowledge pathways, and enabling the knowledge network formation that Siemens' Connectivism theory identifies as the foundation of 21st century learning.

### **8.6 Open Educational Resources (OER) Coordinators**

NEP 2020 explicitly endorses the development and distribution of OER in all Indian languages, creating a distinctive mandate for library involvement in OER curation, quality assurance, metadata creation, and discoverability. Wiley and Hilton (2018) established that OER-enabled pedagogy exploiting the 5R permissions of retain, reuse, revise, remix, and redistribute creates qualitatively different instructional design possibilities that extend far beyond cost savings. Libraries must position themselves as institutional OER coordinators, maintaining quality-assured OER repositories, providing faculty with OER creation and licensing guidance, and integrating OER discovery into library portals.

### **8.7 Institutional Repository Managers**

Institutional repositories (IRs) serve as the primary open access infrastructure through which universities fulfil their research dissemination obligations under NEP 2020. INFLIBNET's Shodhganga repository, hosting 5.31 lakh doctoral theses from 770 contributing universities as of April 2024 (INFLIBNET Centre, 2024), represents the most significant achievement of Indian academic librarianship in this domain. Librarians must develop repository management expertise encompassing deposit policy development, metadata quality assurance, copyright compliance monitoring, usage analytics, and integration with global repository networks and current research information systems (CRIS).

### **8.8 Scholarly Communication Advisors**

The explosion of predatory publishing in India's HEI landscape exploiting faculty publication pressure created by academic promotion criteria creates an urgent need for librarians to function as scholarly communication advisors. This role encompasses educating faculty and students about predatory journals and publishers, advising on legitimate open access publishing options, providing journal impact factor and citation metric guidance, managing researcher profile systems (such as ORCID and IRINS), and supporting compliant scholarly communication across institutional, national, and international platforms.

### **8.9 AI and Digital Technology Integrators**

NEP 2020's technology integration mandate creates both an imperative and an opportunity for librarians to position themselves as expert navigators of emerging technologies AI-enabled discovery systems, chatbot-based reference services, machine learning-assisted cataloguing, and learning analytics platforms. Subaveerapandiyam and Gozali (2024) found that Indian library professionals were generally aware of AI's potential but that adoption remained concentrated in elite institutions. Librarians must develop sufficient AI literacy not merely to

use AI tools but to evaluate them critically, configure them appropriately for local contexts, and protect users from algorithmic bias and privacy risks.

### **8.10 Lifelong Learning Facilitators**

NEP 2020's commitment to lifelong learning extending educational access beyond formal degree programmes to include continuing education, vocational training, and community learning creates a mandate for academic libraries to serve populations beyond enrolled students. Libraries must design services accessible to alumni, working professionals, community members, and educators through flexible physical spaces, mobile-optimised digital resources, multilingual interfaces, and outreach programmes that extend the institution's knowledge footprint into surrounding communities.

### **8.11 Innovation and Entrepreneurship Support Providers**

NEP 2020's innovation and entrepreneurship agenda expressed through Technology Innovation Hubs, incubation centres, and encouragement of start-up culture in HEIs positions libraries as potential knowledge infrastructure partners for innovation ecosystems. Libraries can support innovation through makerspaces equipped with 3D printing, digital fabrication, and prototyping tools; patent information services; technology watch and competitive intelligence; access to standards, technical specifications, and market research databases; and connections to global innovation networks and open innovation platforms.

### **8.12 Academic Collaboration Coordinators**

NEP 2020 explicitly encourages inter-institutional collaboration, international academic partnerships, and industry-academia linkages. Libraries are uniquely positioned to facilitate academic collaboration through consortium resource sharing, inter-library loan networks, collaborative collection development, co-authorship data analysis, and researcher networking platforms. Ducas et al. (2020) identified collaborative engagement with faculty and institutional leadership as a critical enabler of all other emerging librarian roles suggesting that relational competencies are as fundamental to the NEP 2020 library agenda as technical skills.

***Table 1: Emerging Competencies Required for Librarians under NEP 2020***

<b>Competency Domain</b>	<b>Core Skills Required</b>	<b>NEP 2020 Policy Linkage</b>
Digital Literacy	Cloud LMS, AI discovery, e-resource management, digital preservation	Section 23-24: Digital Education & NDEAR
Research Support	Systematic review, bibliometrics, RDM, FAIR data, ORCID/IRINS	Section 27-28: Research & Innovation; NRF Act 2023
Information Literacy Instruction	Curriculum design, embedded librarianship, learning outcomes assessment	Section 11: Multidisciplinary undergraduate education

Competency Domain	Core Skills Required	NEP 2020 Policy Linkage
Scholarly Communication	OA publishing advisory, predatory journal detection, citation metrics	Section 27: Research culture and publication ethics
Data Science Literacy	Research data management, data curation, FAIR principles	NRF Act 2023; Open Science commitments
OER & Open Access	Creative Commons licensing, OER quality assurance, IR management	Digital education provisions; open access mandate
AI & Emerging Technology	AI tool evaluation, chatbot configuration, learning analytics	Technology integration throughout HEIs
Multilingual Services	Multilingual cataloguing, cross-language retrieval, regional collections	Section 4: Mother tongue instruction and multilingualism

## 9. Role of Libraries in Achieving NEP 2020 Goals

Libraries function as the institutional infrastructure through which multiple NEP 2020 goals are practically realised. For student-centred learning, the transformation of library spaces from linear stack arrangements to flexible learning commons incorporating collaborative workstations, quiet study areas, maker spaces, and technology access points directly supports NEP 2020's learner-centred educational philosophy. For multidisciplinary education, libraries serve as the primary institutional connectors of disciplinary silos, maintaining collections that span arts, sciences, social sciences, and professional domains and providing discovery systems capable of generating cross-disciplinary research results.

For skill development and digital inclusion, libraries serve as primary access points for technology infrastructure, digital literacy training, and internet connectivity for students who lack these resources at home a function that is particularly critical for first-generation university students from rural and semi-urban backgrounds, populations that NEP 2020 explicitly targets through its equity and inclusion agenda. For research culture development, libraries provide the foundational information infrastructure subscribed databases, open access repositories, systematic review support, and citation management tools without which sustained research engagement is not feasible for most Indian academic faculty and students.

## 10. Challenges Faced by Librarians in Implementing NEP 2020

### 10.1 Budgetary Inequity

The most pervasive challenge is extreme variance in library budgets across HEI categories. Central universities and elite private institutions invest substantially in library infrastructure, while state-funded institutions and affiliated colleges comprising the overwhelming majority of India's 42,343 colleges operate on minimal library budgets. NEP 2020 contains no explicit

minimum library funding mandate, creating a regulatory gap that perpetuates existing inequalities.

### **10.2 Digital Competency Gaps**

Aslam (2022) documented that library professionals globally are struggling to keep pace with the rapid evolution of required competencies, and Kumari and Mishra (2022) demonstrated that Indian library job advertisements increasingly demand digital and data science skills that LIS curricula have not consistently produced. This competency gap is particularly acute in research data management, AI system management, scholarly communication advisory services, and advanced bibliometric analysis.

### **10.3 Technology Adoption Barriers**

Subaveerapandiyam and Gozali (2024) found that AI adoption in Indian libraries remained nascent, with budgetary constraints, infrastructural limitations, and concerns about replacing human professional intelligence cited as primary barriers. Technology adoption barriers also include vendor dominance by English-language platform providers, limited multilingual interface options for regional language collections, and inadequate institutional policy frameworks for digital resource licensing and data privacy.

### **10.4 Policy Implementation Gap**

While NEP 2020 provides visionary direction for library development, it lacks operational specificity a 'vision-to-implementation' gap that places the burden of interpretation on institutional leadership. Without explicit UGC library development standards tied to NAAC accreditation criteria, many institutions deprioritise library investment relative to other NEP 2020 compliance requirements such as curriculum reform, faculty development, and examination system changes.

### **10.5 Professional Identity Challenges**

The transformation from custodial to facilitative to collaborative professional roles demands not only new skills but a fundamental shift in professional identity one that established library professionals, socialised into traditional service models, may find psychologically and institutionally difficult. Ducas et al. (2020) found that Canadian academic librarians reported variable confidence in performing new roles even when training support was provided, suggesting that professional identity transformation is as significant a challenge as technical skill acquisition.

## 11. L-NEP 2020 Strategic Implementation Framework

Based on the theoretical framework, literature synthesis, and policy analysis presented in this study, an original eight-dimensional strategic implementation framework the L-NEP 2020 Strategic Implementation Framework is proposed. The model positions the librarian as a strategic institutional agent, operating simultaneously across eight interacting dimensions to deliver NEP 2020's educational ambitions.

**Table 2: L-NEP 2020 Strategic Implementation Framework (Eight Dimensions).**

Dimension	Core Focus	Key Actions	Success Indicators
Leadership	Professional advocacy & institutional positioning	Join NEP committees; develop library policy; advocate for budgets	Library representation in governance; policy documents adopted
Technology	Digital infrastructure & AI integration	Deploy cloud LMS; implement AI discovery; adopt open-source platforms	Digital service uptake; system uptime; user satisfaction scores
Research Support	Research lifecycle services	Launch RDM programme; bibliometrics advisory; systematic review desk	Faculty research output; NRF proposals supported; data repository deposits
Digital Literacy	Information literacy embedded in curriculum	Embedded librarian programme; credit modules; faculty collaboration	Information literacy assessment scores; student research skills
Knowledge Services	OER, IR, and open access	OER curation portal; Shodhganga deposits; scholarly communication advisory	OER downloads; IR deposit rates; predatory publication incidents
Collaboration	Inter-institutional and faculty partnerships	Consortium membership; embedded librarianship; international MoUs	Consortium loans; co-authored publications; partnership agreements
Innovation	Makerspaces, digital scholarship, entrepreneurship	Establish makerspace; launch research intelligence service; patent advisory	Makerspace usage; start-up support cases; patent searches
Assessment	Continuous evaluation and impact measurement	Library analytics dashboard; user surveys; NAAC compliance reporting	Library value metrics; institutional accreditation scores

## 12. Findings and Discussion

This study yields six major findings that collectively advance understanding of librarian roles in the context of NEP 2020.

First, NEP 2020 implicitly mandates a fundamental redefinition of academic librarian roles but lacks the operational specificity required to drive implementation at scale. This policy architecture gap requires UGC and NAAC to develop explicit library standards, competency frameworks, and accreditation criteria that translate the policy's vision into institutional action.

Bapte (2022) and Vagdal and Acharya (2023) both noted this implementation ambiguity, and the present study confirms it as the foundational challenge for library-led NEP 2020 implementation.

Second, the twelve-role taxonomy proposed in this study extends and contextualises the five-domain framework developed by Ducas et al. (2020) for the Canadian context, adding dimensions specifically responsive to NEP 2020 mandates including OER coordination, multilingual services, AI integration, and innovation support that reflect the distinctive policy priorities of Indian higher education.

Third, the professional identity dimension of librarian transformation the shift from custodial to facilitative to collaborative professional roles emerges as at least as significant a challenge as technical skill acquisition. Aslam (2022) identified this pattern globally, and the present study's analysis of the Indian HEI context suggests that professional identity transformation requires sustained, institutionally supported processes of reflective practice, peer learning, and leadership development, not merely training provision.

Fourth, AI integration in Indian academic libraries remains highly concentrated in elite central and private institutions, with state-funded libraries and affiliated colleges largely excluded from AI-enabled service development. Subaveerapandiyam and Gozali (2024) documented this concentration empirically, and the present study situates it within a broader pattern of digital inequality that fundamentally compromises NEP 2020's equity agenda if not addressed through targeted policy intervention.

Fifth, the research data management dimension of librarian transformation represents the most urgent gap between NEP 2020's research ambitions expressed through the NRF and current library capabilities. The FAIR data principles provide a professional standard that Indian libraries must systematically implement, but this requires both competency development investment and institutional policy mandates for data management planning in all funded research.

Sixth, the proposed L-NEP 2020 Strategic Implementation Framework offers the first comprehensive, evidence-based model for library-led NEP 2020 implementation. Unlike previously proposed models, the L-NEP 2020 Framework integrates all dimensions of library transformation leadership, technology, research support, digital literacy, knowledge services, collaboration, innovation, and assessment into a single coherent operational architecture that accommodates the institutional heterogeneity of India's HEI landscape.

### **13. Practical Recommendations**

#### **For Government and UGC**

8. Develop a National Academic Library Standards Framework specifying minimum staffing ratios, budget allocations, digital infrastructure standards, and service requirements for each category of HEI, with NAAC accreditation compliance criteria.
9. Establish a dedicated NEP 2020 Library Development Fund providing targeted grants to state-funded and rural HEI libraries for digital infrastructure, AI platform adoption, and professional development.
10. Issue clarifying guidelines on educational fair dealing in digital environments under the Copyright Act, providing legal certainty for OER creation, institutional repository deposit, and e-content sharing.
11. Mandate FAIR-compliant research data management plans for all NRF-funded projects, with library-based data management support designated as an eligible funded activity.

#### **For University Administrators**

12. Increase library budget allocation to a minimum of 3% of institutional expenditure, with specific line items for digital resource subscriptions, technology infrastructure, and professional development.
13. Appoint university librarians to NEP 2020 implementation task forces and academic councils to ensure library perspectives are integrated into curriculum reform and research strategy decisions.
14. Establish formal embedded librarian programmes across academic departments, beginning with research-intensive faculties, as part of NEP 2020 implementation plans.
15. Adopt the L-NEP 2020 Strategic Implementation Framework as an institutional planning tool for library transformation, with annual progress reviews against defined success indicators.

#### **For Library Professionals**

16. Develop individual professional development plans aligned with the eight competency domains identified in this study, prioritising research data management, AI literacy, and scholarly communication advisory skills.
17. Initiate faculty partnership conversations with department heads to identify opportunities for embedding information literacy instruction within NEP 2020's revised four-year undergraduate curriculum.

18. Ensure institutional repository deposits through active self-archiving mandates, metadata quality assurance, and regular community outreach to faculty and doctoral students.
19. Engage with national professional associations ILA, IASLIC, IATLIS to contribute to national competency framework development and knowledge sharing about successful NEP 2020 library initiatives.

#### **For LIS Educators and Policymakers**

20. Urgently revise UGC Model LIS Curriculum to incorporate research data management, AI and digital technology integration, scholarly communication, OER pedagogy, and embedded librarianship as core modules.
21. Develop national CPD programmes for the existing library workforce, delivered through INFLIBNET, UGC-HRDC, and state library councils, covering the competency domains identified in this study.
22. Establish a national library transformation knowledge common a curated platform documenting successful NEP 2020 library initiatives from Indian HEIs to accelerate peer learning and adoption across institutional categories.

#### **14. Future Research Directions**

This study opens several avenues for future research that would strengthen the evidence base for library-led NEP 2020 implementation. Longitudinal outcome studies examining the relationship between specific library transformation interventions and student learning outcomes, research productivity, and institutional accreditation performance would provide the most valuable evidence for policy advocacy. Comparative institutional studies examining transformation pathways in high-performing versus resource-constrained libraries within similar institutional categories would yield actionable insights for libraries navigating implementation under financial constraints.

The AI and smart library dimensions of NEP 2020 implementation warrant dedicated empirical investigation particularly studies examining AI adoption readiness across state-funded libraries, the effectiveness of open-source AI alternatives for resource-constrained institutions, and the ethical implications of algorithmic library services for equity and inclusion. Learning analytics represent an emerging intersection between library services and pedagogical innovation that warrants exploration in the NEP 2020 context. Finally, empirical validation of the L-NEP 2020 Strategic Implementation Framework across diverse institutional contexts would strengthen its prescriptive utility and identify contextual adaptations required for different HEI categories.

## 15. Conclusion

This paper has demonstrated that NEP 2020 presents academic librarians with their most consequential professional opportunity in decades and their most demanding implementation challenge. The twelve-role taxonomy developed in this study spanning digital information facilitation, information literacy training, research support, data management, knowledge management, OER coordination, institutional repository management, scholarly communication advisory, AI integration, lifelong learning facilitation, innovation support, and academic collaboration coordination represents a comprehensive map of the professional transformation that NEP 2020 demands.

The evidence reviewed in this study confirms that the transformation of academic librarian roles is a global phenomenon, documented extensively in research-intensive university contexts by Ducas et al. (2020), Aslam (2022), Tzanova (2020), and others. NEP 2020 provides Indian academic librarians with a policy mandate to engage in this transformation and positions them as active agents of educational reform rather than passive recipients of institutional change. The strategic importance of this positioning should not be underestimated libraries that successfully implement the L-NEP 2020 Framework will not only fulfil policy compliance requirements but will demonstrably enhance student learning, research productivity, and institutional excellence.

The realisation of this potential requires sustained commitment from multiple stakeholders. Government and UGC must provide regulatory clarity, minimum standards, and targeted funding. University administrators must invest in library infrastructure and position librarians as institutional leaders. Library professionals must commit to continuous competency development and proactive partnership-building. LIS educators must urgently reform curricula to produce graduates equipped for these emerging roles. And policymakers must recognise that NEP 2020's vision of India as a knowledge society cannot be achieved without a transformed, adequately resourced, professionally empowered academic library workforce.

The door that NEP 2020 has opened for Indian academic libraries is historically unprecedented. The library profession must walk through it with conviction, strategic clarity, and the collaborative spirit that the knowledge society demands.

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