

Public Libraries in the Digital Age: An Indian Perspective

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Abstract: This paper examines the state and challenges of public libraries in India amid the ongoing digital transformation. With over 75,000 rural and nearly 5,000 urban libraries, India's public library network plays a crucial role in democratizing information access but faces significant issues, including funding disparities, staffing shortages, uneven ICT adoption, and limited digital resources, particularly in rural and underserved areas. The study examines staffing patterns, budgeting, collection development, ICT integration, and national policy frameworks, utilizing government reports and relevant literature. Findings highlight critical gaps in infrastructure, professional capacity, and policy implementation that hinder efforts to modernize. The paper recommends targeted investments in digital infrastructure, professional training, stable funding mechanisms, policy reform, and the development of multilingual resources to bridge the digital divide and enhance library services for inclusive lifelong learning.

Keywords: Public Libraries, ICT Integration, Policy Frameworks, Library Staff, Budgeting, Collection Development, Library Management.

1 INTRODUCTION

Public libraries have long been foundational institutions in democratizing access to information, education, and cultural resources. In India, the public library network is one of the largest in the world, encompassing an estimated 70,817 rural and 4,580 urban libraries as of the 2011 census [1]. These libraries, ranging from small village reading rooms to state central libraries, serve diverse populations and play a critical role in supporting literacy, lifelong learning, and social integration. However, this vast network faces considerable challenges in an era increasingly defined by digital technologies and evolving user expectations [2].

The digital transformation of public libraries in India has emerged as both a vital opportunity and a formidable challenge. As of 2025, approximately 75 percent of libraries are engaged in some form of digitization to enhance accessibility and preservation, reflecting global trends in library science. Despite these advancements, substantial disparities remain, particularly between urban and rural areas. Public libraries frequently struggle with inadequate funding, outdated infrastructure, and substantial gaps in digital literacy among both staff and users. Compared to academic and private libraries, which have progressed rapidly in adopting sophisticated digital services, many public libraries lag, hindering equitable access to information in digitally underserved communities.

This transition towards digital libraries involves multifaceted changes, including the implementation of integrated library systems (ILS), the development of digital repositories, and the leveraging of emerging technologies such as artificial intelligence and cloud computing. Government initiatives such as the National Mission on Libraries and programs by the Raja Rammohun Roy Library Foundation have aimed to modernize Indian libraries by providing funding, training, and digital infrastructure. Nevertheless, the pace and uniformity of digital adoption remain uneven, constrained by bureaucratic challenges and regional inequalities.

This research paper aims to examine the current state of public libraries in India within the context of digital transformation. It focuses on the management of human resources, budgeting strategies, collection development, and the integration of Information and Communication Technologies (ICT). Furthermore, the study evaluates the effectiveness of national and state-level policies and initiatives in promoting digital modernization and narrowing the digital divide. Through this comprehensive analysis, the paper aims to highlight gaps and recommend strategies to ensure that public libraries in India can evolve into inclusive, digitally empowered institutions that meet the needs of all citizens in the 21st century.

2 LITERATURE REVIEW

B. M. Alajmi and D. Albudaiwi analyzed 9,450 tweets from public libraries in the first months of the COVID-19 period to reveal that libraries were successful in using Twitter to sustain their presence, provide information, and maintain continuity of service [3]. J. Smith investigated the impact of the pandemic on Australian library services [4]. This study proposes that the library must re-establish its purpose as a resilient, digitally flexible, and community-based institution.

It emphasizes the demand for people-oriented, leading-edge digital plans and active interactions, making libraries the central point in societal recuperation and sustainability after the pandemic period. J. Garner et al. conducted a survey of Australian public libraries to gauge the reactions to the pandemic-induced closure of physical spaces [5]. The study concluded that libraries were rapidly adopting digital services, reinventing existing programs, and developing new ways to engage with users. Libraries were said to be the same old faithful, using the term steady ships. The study highlights the concept of institutional adaptability and innovation, showing how libraries acquired resilience and stability during such rampant dislocations.

N. Dalmer and M. Griffin evaluated 218 newspaper articles published in Canada to discuss the media coverage of libraries in response to COVID-19 [6]. They describe three frames: negotiating space, redefining roles, and reconstructing relationships with patrons. These findings demonstrate that libraries were perceived as flexible and adaptive institutions, as well as community-focused. The present research focuses on the influence of media on general opinion. S. Strover devoted his article to the question of how public libraries can contribute to creating digital equity as primary suppliers of universal access to technology and information [7]. Although the study predates the COVID-19 pandemic, its results align well with the pandemic's reality, as Strover highlights the fact that libraries.

D. Mehta and X. Wang conducted a case study of a university library communication strategy during the COVID-19 pandemic [8]. This work describes initiatives that support online teaching, remote access, and user engagement. This study highlights the role of flexibility and innovation in academic library services, providing insightful and practical guidelines for other institutions facing similar challenges. S. Jones outlined how the COVID-19 pandemic has affected public libraries in a manner similar to research on sustainability [9]. From the perspective of both opportunity and challenge, Jones outlines how libraries can work to ensure they remain relevant during periods of recovery.

S. Temiz and L.P. Salelkar considered the digital responses of 39 Swedish university libraries during the pandemic [10]. Their results identified four key themes: information accessibility, collaboration, extensive online services, and emotional support programs. Libraries not only ensured academic continuity but also acted as a source of psychological and social support for the communities. This work examines the flexibility of libraries and their capacity to extend beyond traditional academic functions during times of global crisis. K. Martzoukou discussed possible changes in the role of academic libraries in promoting digital literacy during the transformation towards greater accessibility, pedagogy, and strategic collaboration in higher education [11]. The study examines the crucial role libraries play in promoting equitable access and fostering sustainable online learning environments.

The study by Otega-Martinez et al. is a mixed-methods review of Mexican digital services during the COVID period [12]. Innovation was documented in the study through online training programs and the acquisition of new digital competencies among professionals, as well as challenges related to equity and sustainability. This article adds value to the community during the COVID-19 pandemic. By examining the perspectives of European libraries on their contributions to distance learning during the COVID-19 pandemic, J. Zhou considered how to provide off-campus information services [13]. The research indicates that the essential role of libraries in continuing education is to ensure digital access, expand resources, and provide user support. It reveals the strengths and weaknesses of service provision and the growing importance of libraries as indispensable partners in distance education.

The reviewed literature highlights the multidimensional challenges and opportunities associated with the digital transformation of public libraries, particularly in the Indian context. Studies emphasize issues such as digital equity, ICT integration, staffing constraints, and policy implementation, while also documenting the adaptive strategies undertaken globally during crises, including the COVID-19 pandemic. Despite these valuable insights, a comprehensive understanding of the status of Indian public libraries—especially regarding their operational, financial, and technological frameworks—remains fragmented. Furthermore, the effectiveness of national initiatives and policies aimed at bridging the digital divide and modernizing library infrastructure requires focused examination.

Building on this foundational knowledge and identifying the prevailing gaps, the present study aims to provide a systematic evaluation of the management, budgeting, and digitalization processes within Indian public libraries. This investigation is guided by a set of specific objectives designed to assess staffing patterns, budgetary provisions, collection development strategies, and the adoption of ICT. Additionally, the study aims to critically evaluate the role of national and state-level policy frameworks in promoting library advancement and inclusivity. By addressing these objectives, the research aims to provide actionable recommendations that can support the transformation of Indian public libraries into digitally empowered, community-centric institutions. The objectives of the present study are:

1. To examine the situation of public libraries in India with reference to staffing, budgetary provisions, build-up of collection, and administration of governance.
2. To discuss the possibilities and problems of digitalization in Indian public libraries, especially the question of introducing ICT, automation, and digital resources.

3. To assess the contribution of national and state-level schemes/policies like the National Mission on Libraries (NML) and the Raja Rammohun Roy Library Foundation (RRRLF) in improving the infrastructural development of libraries and their services.
4. To demonstrate absenteeism in funding, personnel, particularly in rural and underserved areas.
5. To make recommendations for transforming public libraries into the future, ensuring they can bridge the digital divide, become more inclusive, and serve as hubs of lifelong learning.

3 STAFFING AND HUMAN RESOURCES

Staffing these libraries in the public sector is regulated by guidelines that focus on the professional qualifications of the staff. It recommends the use of qualified, efficient, and adequate staff in the systems, even suggesting that the profession is made more lucrative to attract better personnel. By this standard, there are three classes for library staff:

- 1) Professional staff, who should possess at least a bachelor's degree and a degree or diploma in library science.
- 2) Paraprofessional staff (typically post-secondary education plus a library certificate, and
- 3) Nonprofessional assistants.

Practically, a State Public Library may have a librarian (professional) or Deputy Librarians to assist a director in administration and services, and assistant librarians to assist librarians in technical and outreach. Regional and District libraries have fewer and less sophisticated staffing patterns, but are expected to always have full-time professional librarians on duty. Government standards may dictate that every branch of the public library must have a national librarian qualified to hold a university degree in Library and Information Science.

Despite these benchmarks, chronic staffing issues persist in public libraries in India. Recruitment of trained librarians to public service is difficult. There is a shortage of full-time faculty in many university LIS programs, which results in inadequate training and poor job prospects among graduates. Public libraries themselves are generally poor competitors with other sectors in attracting talent, as the institution's budget is often reduced, and librarians' salaries are low. As an illustration, the state of Bihar had library facilities owned and managed by librarians who earned a very meager salary of a few hundred rupees. This kind of condition makes it difficult to attract and maintain skilled employees. System or budgetary restrictions, as well as low staffing levels, are other factors contributing to staffing shortages.

Training and professional development are therefore vital. The Government of India has implemented training programs under the National Mission on Libraries (NML) and RRRLF, aiming to upgrade the skills of its staff. As another example, capacity-building workshops have been held to train public school librarians in Kerala on modern ICT skills, including those related to library automation using Koha. This is also reflected in the survey data, where librarians themselves identify staff training (including ICT and management training) as one of their top priorities. According to an RRRLF survey, nearly half of the libraries reported that procuring books was a top priority; however, librarians also expressed a need for computers and staff education. RRRLF and NML are regular funders of seminars, workshops, and scholarships in librarianship with the aim of developing the capacity of librarians.

Nevertheless, the number of workers in the field of public libraries is understaffed in most areas, as professional staff are typically concentrated in state capitals and big cities. In contrast, districts or village libraries often have fewer qualified specialists. Retention has been a particular concern in remote and impoverished areas, where there are limited career opportunities and advancement, as well as inadequate incentives for professionals. Therefore, the effective management of Indian libraries must always navigate between the theoretically optimum size of the staff and the reality of economic constraints in finding and retaining staff members.

4 BUDGETING AND FINANCE

The funding for public libraries in India is a combination of state funding, local taxes, and partial central grants. As mentioned, libraries are constitutionally a state subject, and state governments are their major financiers. State departments (typically Education, Culture, or a specialized Library Department) allocate an annual budget to fund salaries, utilities, new books, and maintenance. States have also granted power to local city governments and village councils to impose a small library cess (usually a property tax surcharge) dedicated to libraries. Nevertheless, a few states have library taxes. All others do not have such a levy or have weak provisions; thus, several observers indicate that most library laws lack the teeth to guarantee financial security.

The effect of this is that most of the necessary funding for libraries should be provided on a general budgetary allocation basis. At the national level, the Government of India partially funds centrally sponsored schemes. The Raja Rammohun Roy Library Foundation (RRRLF), an autonomous institution under the Ministry of Culture, has provided matching grants to public libraries. For example, RRRLF operates a scheme that funds state libraries on a matching basis for purposes such as building extensions or increasing book stock.

Under the National Mission on Libraries (NML) scheme, the central government co-shares the upgrading of one state central library and one District Library in each state. In this structure, there is a sharing of costs of renovations, infrastructure, and ICT projects, which are divided between the northeastern states (up to 90:10), most often between 25:75. In the previous Five-Year Plans, the central contributions were irregular; many states did not even apply them.

There is a small total central budget for public libraries; the per-capita expenditure on public libraries in India has been estimated to be very low, well below the levels in most developing nations. In conclusion, Indian public libraries are heavily dependent on state and local funding. RRRLF/NML grants supplement state budgets for specific projects (such as buildings, books, and training) but do not meet actual needs. Survey evidence supports this flow of funds: 55 percent of libraries received state government grants as a significant source of funds, with library membership fees (and small local taxes) as the other source. RRRLF grants are relatively uncommon. Other sources, including private donations and user fees, are less common and vary by region.

Table 1. Funding of the Indian public libraries

S. No.	Source	Role
1	State government grants	Principal funding for most libraries. It covers salaries, facilities, and book purchases.
2	Local library cess (tax)	Dedicated surcharge in a few states. Provides some revenue for libraries in those states.
3	Central (RRRLF/NML) grants	Matching grants for specific upgrades (buildings, books, automation). Received by a small proportion of libraries.
4	Membership fees & donations	Minor sources in some libraries (especially NGOs or large town libraries). Generally, it is small compared to government funding.

Generally, each state has a State Library Committee (or council) that conducts budget planning and development. NML recommended that individual states form State Library committees to draft annual library implementation plans. In theory, allocations are made based on the needs at various levels of the library system (state, district, taluka) according to a specific formula. However, in the real world, budgets are tight throughout the system. Small libraries (taluka, rural, and tribal) have limited funds, which are sufficient to maintain basic facilities, but this restricts their services. Therefore, many analysts caution that underinvestment has resulted in inadequate service to large sections of the population.

The cost factor, or its monetary situation, is working shakily. For example, 50 percent or less of the libraries reported having sufficient funds to procure e-resources or online materials. A comparative study on the digital transformation of libraries managed by the government and those managed privately found that the services of government-funded libraries underwent significantly less digital transformation than those managed privately, primarily due to a lack of funds and bureaucratic constraints. Some funds were allocated, although the budgets of Indian libraries are typically tight. The insecurity facing the budget, coupled with the absence of allocated financing (at least in all other states, excluding a few), is the single most significant problem that can determine the expansion and modernization of public library services.

5 COLLECTION DEVELOPMENT

The management of library collections (i.e., building and maintaining them) is a primary management activity of the library itself. The Development policies for collections in India should be able to meet user needs and be multilingual, eliminating obsolete content. In most cases, collection development in public libraries follows general standards and guidelines rather than relying on a mathematical formula. RRRLF also has a Central Selection of Books nationwide to stock the state central and district libraries with a core of Hindi and English titles. Need assessment exercises are becoming increasingly informal, yet increasingly data-driven. A survey found that approximately half of the libraries gave the highest priority to procuring books. The following popular goods were newspapers and access to computers: the need for daily information was high, as was the use of digital services. Librarians working in tribal libraries, for example, identified printers and scanners as their second most critical need after books. It is worth noting that only state central libraries consider e-resources a priority; smaller ones are usually oriented towards expanding print collections.

In practice, the issue of multiple languages in India is another challenge that the selections must address. In most cases, Indian books in the local language are the most dominant in a public library collection, with Hindi books being the second most common (in terms of occupancy). The titles given in English were also less common outside the libraries of the urban elite. This indicates not only the user group, but also the challenge of accessing books in fewer languages. This means that collections of minority languages are restricted. Library managers should thus pursue regional language publishing houses vigorously and consider translations, interlibrary book exchanges, or electronic purchases. To maintain the collection's current state, it is essential to continually purge (weed out or deselect) obsolete or worn-out materials. Unfortunately, formal weeding policies are often nonexistent in many public libraries in India. Hedging was a painstakingly practiced, almost uniform practice in well-run systems, such as Delhi Public Libraries, but was rarely practiced in tribal area libraries.

Collections that do not receive systematic weeding, therefore, end up with unusable materials (moldy books, old encyclopedias, and duplicate newspapers), which not only take up space and resources but also go to waste. Collecting management also includes cataloging and classification. A considerable number of public libraries continue to have bare-bones catalogs; only a third have catalogued their books, usually by the Dewey Decimal Classification. In state-central and most major district libraries, card catalogs/computerized catalogs are available. However, many community libraries in sub-districts and villages use very simple registers or none. Large libraries are significantly increasing the adoption of integrated library systems (ILS). Where ILS software (e.g., KOHA, SOUL, or MARG) is in place, it contributes significantly to the management of collections and OPAC access. Altogether, the development of collections in Indian public libraries should strike a balance between expanding major titles, meeting urgent demands for local-language materials, and gradually eliminating outdated materials.

6 DIGITAL SERVICES AND IT INTEGRATION

ICT is gradually being adopted in India to modernize public libraries by introducing both modern and traditional services [14]. However, this transition has not been uniform. The national commitment to digitization has borne some fruit: the National Mission on Libraries of the Ministry of Culture has established the National Virtual Library of India (NVLI), which features the Indian Culture Portal. This portal integrates digitized objects (rare books, archives, paintings, photographs, etc.) of participating organizations.

Similarly, the Digital Library Initiative of the Raja Rammohun Roy Library Foundation digitizes rare public-domain books and newspapers in libraries across the country, with the aim of creating a National Digital Repository. For example, millions of pages of rare materials that received technical assistance from C-DAC can be cited. Such national projects provide e-resources that enable use by public libraries; however, downloading and local distribution still rely on existing infrastructure.

On the local facet, state and city libraries have fitted automation programming and Internet-based catalogues (OPACs). Large libraries in Delhi, Mumbai, and Chennai now utilize ILS systems (typically KOHA) to manage their collections, and patrons can search for their catalogs online. Under NML training programs, librarians teach how to automate their libraries. State governments have also established their own state-based systems, such as the Uttar Pradesh e-Library facility, where members can register online to receive their membership card and browse a virtual reading room for books and e-resources.

Regarding Internet services, most public libraries today provide Internet access, but with issues related to speed and availability. Surveys indicate that only slightly over 30 percent of libraries have access to computers and the Internet. Libraries can offer free access to educational and government websites where internet access is available. Hotspots in buildings such as libraries are uncommon. E-books and access to digital ports are available in the libraries of certain cities, but not everywhere.

ICT integration is incomplete and lags. Only one-third of the libraries were said to have some e-resources. The difference in the adoption of digital transformations between private and government libraries is notable: 75 percent of corporate or privately owned libraries have undergone complete digital transformation, compared to 51 percent in government libraries. The key challenges facing this initiative are funding, the lack of reliable electricity and the Internet in rural regions, and a shortage of ICT staff training. On the brighter side, campaigns like Digital India have increased connectivity. Modernization grants have also been provided by the Ministry of Culture and RRRLF with a view to buying computers and automation software for libraries.

7 FINDINGS AND RECOMMENDATIONS

This study aimed to examine the management, budgeting, collection development, ICT integration, and policy frameworks that shape Indian public libraries during the digital transformation era. The findings reveal several critical challenges and opportunities that inform practical recommendations for strengthening the public library system.

7.1. Key Findings

1. **Staffing and Human Resources:** Chronic shortages of professionally trained librarians persist, especially in rural and underserved regions. Low salaries, limited career advancement opportunities, and competition from other sectors hinder recruitment and retention. Although national training programs exist, professional staff remain concentrated in urban centers, creating disparities in service quality.
2. **Budgetary Constraints:** Public libraries depend heavily on state and local funding, supplemented sporadically by central grants like those from the RRRLF and the National Mission on Libraries (NML). Overall funding is insufficient, irregular, and inequitable, with small rural libraries often lacking basic operational resources and digital capabilities. The absence of dedicated statutory funding further exacerbates instability.
3. **Collection Development:** Library collections struggle to meet diverse linguistic and informational needs. Local languages dominate regional collections, but minority languages and digital resources are underrepresented. Formal policies for weeding out obsolete materials are often absent, leading to cluttered and underutilized collections. Cataloging standards vary, with many small libraries lacking modern integrated library systems.

4. Digital Services and ICT Integration: While some large libraries in metropolitan areas have adopted automation and digital catalogues, overall ICT integration remains limited. Internet access is sporadic and slow, particularly in rural regions. Only about one-third of libraries provide e-resources, with private libraries generally more digitally advanced than government libraries. Key barriers include funding, infrastructure gaps, and limited ICT skills among staff.
5. Policy and Governance: Although numerous state-level library acts and national-level schemes exist, the lack of a unified national library policy and dedicated funding leads to fragmented governance. Coordination between central bodies, such as the RRRLF, and state committees is uneven, and institutional frameworks often lack transparency and effective implementation.

7.2. Recommendations

To address these challenges and harness digital opportunities, the following recommendations are proposed:

- Enhance Staffing and Training: Increase funding and incentives to attract and retain qualified librarians, particularly in rural areas. Expand regular capacity-building programs focusing on digital literacy, library automation, and management skills. Foster career development pathways and improve remuneration to enhance workforce stability.
- Secure, Stable, and Equitable Funding: Establish a dedicated national public library fund to supplement state budgets, ensuring reliable financing for operations, infrastructure, and digitization projects. Strengthen local library cess mechanisms and encourage private-public partnerships to diversify funding sources.
- Develop Multilingual Digital Collections: Promote collaboration with regional publishers and cultural institutions to expand collections in local and minority languages. Systematize de-selection processes to maintain relevant, up-to-date inventories. Facilitate the widespread adoption of integrated library systems and open-access repositories.
- Accelerate ICT Infrastructure and Services: Prioritize expanding reliable Internet connectivity and power supply in rural and underserved areas. Provide grants and technical support for the expansion of automation and digital services. Implement nationwide digital literacy campaigns targeting both library staff and users.
- Improve Policy Framework and Governance: Formulate and enact a comprehensive National Public Library Policy establishing clear governance structures, mandated funding, and data transparency. Enhance coordination between national and state agencies through a robust monitoring and evaluation framework. Encourage civil society engagement to advocate for library rights and inclusiveness.

7.3. Limitations

This study is primarily based on secondary data from government reports, surveys, and literature reviews, limiting direct empirical insights from field research. Geographic and linguistic diversity across India may mean some regional contexts and challenges are underrepresented. Additionally, the rapidly evolving digital environment may impact the applicability of findings over time. Future research incorporating primary data collection and longitudinal studies would strengthen understanding and inform adaptive policy responses.

8 CONCLUSIONS

Indian public libraries are indispensable centers for knowledge, literacy, and social integration; yet their ability to fulfill these roles is constrained by persistent challenges in staffing, funding, and digital infrastructure. While national initiatives have initiated progress, inconsistent implementation and resource gaps limit impact, especially in rural regions. Continued modernization requires dedicated funding, enhanced ICT training, comprehensive policy frameworks, and community engagement to realize the full potential of public libraries as inclusive digital hubs. Addressing these multifaceted challenges is crucial to bridging the digital divide and ensuring equitable access to information for India's diverse population.

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ETHICS STATEMENT

This study did not involve human or animal subjects and, therefore, did not require ethical approval.

STATEMENT OF CONFLICT OF INTERESTS

The authors declare that they have no conflicts of interest related to this study.

LICENSING

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