

Gyan Bharatam Mission and Digital Libraries: A Pathway to Inclusive Knowledge

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ABSTRACT

In today's digital age, the Gyan Bharatam Mission is a forward-thinking plan that could change the way India thinks about knowledge. It has the power to redefine what libraries are and how they work. This study examines how the mission aligns with the growth of digital libraries as a means of making knowledge available to all parts of society. The goal of the Gyan Bharatam Mission is to close the knowledge gap, especially in rural and underserved areas, by leveraging technology to make resources more accessible. This mission brings into line with global efforts to improve digital literacy, make information more open and accessible, and ensure equal access to knowledge for everyone. Digital libraries can take knowledge and turn it into many different formats and languages, and share it with people of all literacy levels and preferences. The Gyan Bharatam Mission ensure that everyone has access to the knowledge and information they need to succeed. The mission's focus on digital libraries and technology-driven resources is particularly important for rural and underserved regions, where access to knowledge and information is often limited. Finally, the Gyan Bharatam Mission has the potential to transform India's knowledge landscape and promote a more informed and empowered society. The paper explores the digital infrastructure, content digitization, and dissemination strategies within the Gyan Bharatam Mission framework, highlighting new technologies and partnerships between the government, libraries, and professionals. Integrating digital platforms with physical spaces is seen as vital for engagement, ultimately nurturing an informed and empowered society.

Keywords: Gyan Bharatam Mission, Digital Libraries, Library and Information Science, Technology-Driven Resources, Knowledge Access and Dissemination.

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1. INTRODUCTION

The Gyan Bharatam Mission is a significant effort by the Government of India to safeguard, digitize and share the extensive body of traditional knowledge from India, including the manuscript heritage (PIB, 2025).

This is a national mission that recognizes the urgent need to preserve the intellectual heritage of

India, which is safe in millions of manuscripts covering field of philosophy, medicine, astronomy, mathematics, literature and governance (Sen, 2021). Many of these works are in classical languages like Sanskrit, Pali, Persian, Tamil, Arabic and in various formats and scripts (NMM, 2025). Digital libraries are essential to this aspect, because they allow access

to digitized resources, retrieval to be efficient, long-term preservation, and dissemination to be inclusive (MoE, 2023). The introduction of the National Digital Library of India (NDLI), Shodhganga and BharatVidya, all of which represent scalable, modern platforms to replace traditional learning systems, is illustrative of the use of ICT in the transformation of learning systems (INFLIBNET Centre, 2024; NDLI, 2021). Inclusive access is particularly important in India, where there is a wide variety of people, as it helps to eliminate geographical, linguistic, and socio-economic barriers. Programmes and initiatives such as Gyan Bharat facilitate the access of students, researchers, teachers, and citizens to India's cultural and intellectual heritage through digital libraries. These initiatives are in line with national initiatives focused on equitable education, digital empowerment and cultural preservation, and also support sustainable, knowledge-based development (MoE, 2020). Although several studies have examined manuscript preservation and the growth of digital libraries in India, limited scholarly attention has been paid to integrating the proposed Gyan Bharatam Mission with digital library ecosystems as a framework for inclusive knowledge dissemination. Existing literature often discusses manuscript conservation and digital repositories separately, without adequately exploring their combined role in bridging educational, linguistic, and socio-cultural divides. This chapter attempts to fill this gap by analyzing how the convergence of manuscript digitization initiatives and digital library infrastructures can contribute to equitable access to traditional knowledge. The study further contributes to the Library and Information Science (LIS) by highlighting the role of digital librarianship, metadata management, multilingual accessibility, and community engagement in preserving and disseminating indigenous knowledge systems.

2. INDIA'S MANUSCRIPT HERITAGE AND KNOWLEDGE SYSTEM

India has one of the world's largest collections of manuscripts, with the numbers estimated to be over five million in India's libraries, temples, monasteries, private collections and archives (NMM, 2025). These manuscripts cover a variety of fields

such as Ayurveda, Mathematics, Architecture (Vastu Shastra), Dramaturgy (Natyashastra), Grammar, Astronomy and Governance (Arthashastra) (Sen, 2021). The linguistic and scriptural diversity is indicative of the richness of Indian scholarly traditions, as evidenced by the presence of literary works in scriptures like Devanagari, Grantha, Sharada, Modi, Bengali, Kannada, and others (IGNCA, 2024). These manuscripts hold particular significance as they represent indigenous knowledge systems, which are not only historical records but also a testament to centuries of intellectual inquiry, ecological insight, and social practices that continue to hold relevance. Classical texts on Ayurveda, for instance, still contribute to the fields of wellness and medicine, while ancient astronomical texts offer a glimpse into the scientific achievements of early Indian civilizations (Subrahmanyam, 2018). While they are useful, they are not widely accessible because of their aging, the quality of storage, lack of infrastructure, and the use of outdated scripts and languages. Furthermore, the majority of manuscripts is kept in private collections and therefore not available for study by scholars. To tackle these challenges, coordinated initiatives are needed in digitization, conservation, translation and the promotion of open access (NMM, 2025; IGNCA, 2024).

3. OBJECTIVES AND SCOPE OF THE STUDY

The Gyan Bharatam Mission aims to enhance the Indian Manuscripts and Indian traditional knowledge system in a comprehensive manner. It has the main goals of:

- (i) Identification and documentation of the huge number of manuscripts in India and their digitization.
- (ii) Connecting digitized manuscripts to national digital platforms for universal access.
- (iii) Encouragement of research and translation in regional and international languages.
- (iv) Earning and spreading awareness and knowledge to integrate TK in the modern curriculum.
- (v) Enabling effective management and retrieval using digital tools and metadata standards.

(vi) Working with international organizations, institutions and stakeholders to encourage cultural exchange and technological assistance.

The mission reaches beyond the academic world to embrace school students, informal learners, artisans, professionals and rural communities. It makes use of the collaborations it has with institutions like IGNCA, NMM, and so on state archives. The mission aligns with the convergence aspects of programmes such as Digital India and National Education Policy (NEP) 2020, where the preservation of heritage is harmonized with the modern education and technology system.

4. METHODOLOGY

The existing literature, government reports, policy documents and scholarly discussions on the issues of manuscript preservation, traditional knowledge systems and digital libraries have been synthesized using a narrative review method. Apart from this policy analysis has been done to understand the National programs like the NDLI and Digital India, Shodhganga and the proposed Gyan Bharatam Mission in the context of cultural preservation and digital inclusion.

The major source is secondary sources such as Government publications, institutional reports, academic articles and the official digital library platforms. The methodology allows for a conceptual understanding of the role of digital infrastructures in the preservation, dissemination and democratization of the intellectual heritage of India. In addition, opportunities, challenges and social issues of integration of manuscript digitization in digital library ecosystems are critically discussed.

5. EMERGENCE AND ROLE OF DIGITAL LIBRARIES IN INDIA

5.1 Historical Development and Technological Advancements

Digital libraries in India arose from the early 2000s when efforts were made to take advantage of Information and Communication Technology (ICT) to close educational gaps (MeitY, 2022). The Indian Institute of Science (IIS) started the Digital Library

of India (DLI) with the support of the Ministry of Electronics and Information Technology (MeitY) (Madalli, 2023). It paved the way for further progress, most prominently the NDLI started in 2016 by the Ministry of Education that is a digital repository of academic resources. (MoE, 2023). Digital libraries have revolutionized in terms of size and capability due to the rapid development of digital technologies: high-speed Internet connections, cloud computing, and retrieval systems based on artificial intelligence. Today such platforms provide for multilingual search, metadata tagging, Optical Character Recognition (OCR), and user personalized content delivery (NDLI, 2021).

5.2 Major Digital Library Initiatives

The NDLI has one of the largest repositories of Indian digital resources, which includes access to more than 80 million resources such as books, research papers, theses and multimedia materials (MoE, 2023). The aim of the NDLI is to serve a variety of user groups with school students to post-graduate researchers, language content in multiple Indian languages to make it more inclusive (NDLI, 2025). The eGranthalaya project is an initiative by the National Informatics Centre (NIC) to provide library automation and networking services to government and academic institutions in India (NIC, 2023). Moreover, the theses and dissertations of Indian universities are submitted and preserved in institutional repositories like Shodhganga, maintained by INFLIBNET Centre, which are publicly accessible for scholarly communication (INFLIBNET, 2024). Together, these platforms support India's digital knowledge infrastructure by fostering access to academic and research papers, making them more accessible.

5.3 Enhancing Accessibility, Inclusivity and Outreach

Digital libraries are a key tool for promoting the democratization of knowledge by offering continuous access to educational products and services, with a 24/7 availability, which will enable learners from remote areas and from underprivileged situations to access knowledge resources (MoE, 2023). The use of accessibility features such as text-to-speech, screen reader and the simplicity of the user

interface further ensures that the products are accessible for persons with disabilities, consistent with the principles of the Rights of Persons with Disabilities Act (2016). These platforms gained greater importance during the COVID-19 lockdowns when they facilitated the continuity of education, for example, the National Programme on Technology-Enhanced Learning (NPTEL) and NDLI (NPTEL, 2024; NDLI, 2021). The examples show how the use of digital libraries can help overcome disruptions of the traditional learning environment and promote educational resilience and equity.

5.4 Contribution to the Preservation and Dissemination of Traditional Knowledge

Digital libraries are crucial in protecting TK and TK systems as they involve in digitizing the manuscripts, folk literature, classical texts, and oral histories. The integration not only helps to preserve the cultural heritage, but also allows for continuous research, re-interpretation, and sharing of knowledge (Mishra, 2020). The IGNCA has launched the Digital Library of Tribal Literature, while the Sahapedia platform has compiled tribal languages, songs, rituals and customs, which can be lost in time if not recorded. (PIB, 2025) These digital platforms are part of the Gyan Bharatam Mission, which aims to complement the efforts of the manuscript digitization by providing a structured access and also encourages academic engagement and cultural revival (Ministry of Culture, 2023).

6. COLLABORATION BETWEEN GYAN BHARATAM MISSION AND DIGITAL LIBRARIES

(i) Integration of Digitized Manuscripts into National Digital Repositories

The mission of Gyan Bharat is to contribute to the national digital initiatives like NDLI and BharatVidya, thereby strengthening the accessibility and scholarly engagement. As part of this collaborative approach, the digitized manuscripts are being cataloged systematically and have been made searchable with metadata standards and OCR technologies and linked data frameworks (Ministry of Education, 2020). This type of integration facilitates multi-disciplinary research and reading of ancient texts by scholars

and readers alike. For example, while the digitized version of Sushruta Samhita is made available to promote comparative and interdisciplinary studies within NDLI, the medical research continues in the modern era (MHRD, 2020).

(ii) Institutional Collaborations and Capacity Building

Good institutional connections play a crucial role in the success of Gyan Bharatam Mission. The program actively invites manuscripts from universities, libraries, museums, and private collectors, and welcomes domain knowledge. The Mission also emphasizes on the need to build capacity through training workshops for the manuscriptologists, conservators and digital librarians, which will improve their skills in the field of Preservation and Digitization. Digitalising and annotating the collections with scholarly commentaries and contextual information are vital for enhancing the academic and cultural value of the digitized collections and the partnerships with institutions like Sahitya Akademi and IGNCA help in this regard. (IGNCA, 2023; Sahitya Akademi, 2022).

(iii) Technological and Infrastructural Support

Digital libraries provide the technology that enables the large-scale digitization projects by providing the necessary tools for high-resolution scanning, OCR, secure data storage and retrieval, as well as user-friendly retrieval interfaces. Cloud-based archival infrastructures complement open-source library management systems (OSS-LMS) like eGyanKosh and DSpace to ensure the scalability and sustainability of a nationwide digitization initiative. These platforms help preserve materials and also enable the effective sharing of knowledge resources with a variety of different user groups (MeitY, 2024).

7. INCLUSIVE KNOWLEDGE ACCESS AND SOCIAL IMPACT

(i) Bridging the Urban-Rural Digital Divide

By providing online access to digitized knowledge resources, the Gyan Bharatam–Digital Library collaboration effectively

overcomes geographical and infrastructural barriers. Learners in rural areas can use mobile-enabled digital library platforms to explore manuscripts that contain ancient agricultural techniques, environmental knowledge, and other traditional wisdom (Ministry of Culture, 2023). Programs such as Common Service Centres (CSCs) further facilitate last-mile connectivity, ensuring that digital resources reach remote communities and support inclusive learning (Digital India, 2022).

(ii) Empowering Marginalized and Linguistic Communities

The initiative promotes content in multiple Indian languages and regional scripts, fostering linguistic inclusivity. This approach is particularly significant for tribal and underrepresented communities, whose oral traditions and indigenous knowledge systems are being documented and digitized for the first time (IGNCA, 2025). For instance, *Sahapedia's Tribal Literature Project* makes Gond and Santhali narratives accessible in the public domain, thereby preserving and sharing cultural heritage with a broader audience (Sahapedia, 2022).

(iii) Role in Lifelong and Non-Formal Education

Digital libraries, enhanced through the digitization of traditional knowledge under the Gyan Bharatam Mission, can serve as open educational resources that support lifelong learning. Farmers, artisans, healers, and homemakers can access contextually relevant content, thereby promoting the revival of community-based learning models (Ministry of Culture, 2023). Platforms such as DIKSHA and SWAYAM can host culturally grounded, vocationally pertinent content derived from ancient manuscripts, facilitating practical learning and skill development (MoE, 2023).

8. CHALLENGES AND STRATEGIC RECOMMENDATIONS

(i) Technical, Linguistic, and Infrastructural Barriers

The variety of scripts, including Grantha, Sharada, and Modi, poses substantial challenges

for OCR and digitization. Additionally, limited internet connectivity in rural regions restricts access to these resources, making cross-platform compatibility and enhancing data storage infrastructure critical (National Mission for Manuscripts, 2023).

(ii) Policy and Funding Constraints

Although central budgetary support exists, consistent funding and well-defined policy guidelines remain crucial. Bureaucratic delays and fragmented efforts can hinder the mission's progress. Effective implementation requires strategic planning, decentralized authority, and timely audits (Ministry of Culture, 2025).

(iii) Sustainability and Public Engagement Strategies

In addition to digitization, community engagement and awareness initiatives are essential for the mission's success. Encouraging crowdsourced annotations, engaging citizen archivists, and implementing open-access policies can enhance the long-term value and relevance of digital assets. Collaborations with civil society and educational institutions can significantly expand outreach and impact (UNESCO, 2021).

9. CONCLUSION

The Gyan Bharatam project, alongside the growth of the digital library ecosystem in India, constitutes a revolutionary initiative for the conservation and sharing of traditional knowledge at a higher level (Ministry of Culture, 2023; Ministry of Education, 2023). Being one of the oldest civilizational centers with the abundance of manuscript legacy, India has made great strides towards preserving and disseminating its intellectual wealth to the next generations (Sen, 2021). Digital libraries such as the NDLI, Shodhganga, and BharatVidya have helped to open up access to unique intellectual resources stored within archives or at risk of destruction (INFLIBNET, 2024; NDLI, 2021; BharatVidya, 2025). With the inclusion of aspects of heritage preservation, equal educational opportunities, and modern technologies, the mission offers a viable model of action that can be used by

other countries with rich, yet untapped knowledge systems. More importantly, such initiatives greatly empower marginal groups, students, and individuals who wish to study independently by providing access to the country's intellectual wealth, thereby promoting innovation in disciplines such as medicine, linguistics, politics, and philosophy. Continuous funding, policy coherence, community involvement, infrastructural development, linguistic plurality, open access models, and digital literacy programs are some of the key factors that will ensure the success of the mission (MHRD, 2020).

In the context of LIS, the mission opens up many areas of opportunity for practitioners and scholars alike. Libraries and information science professionals will need to acquire skills in digital archiving, metadata standards, digitization of manuscripts, knowledge organization, and multilingual information retrieval systems. From the perspective of the research fraternity, the initiative paves the way for interdisciplinary research in the areas of digital humanities, indigenous knowledge systems, archival studies, machine intelligence manuscript search systems, and user access models. Moreover, the incorporation of indigenous knowledge in digital environments provides ample room for innovation in both research methods and scholarly communications. Conclusively, the joint effort by the Gyan Bharatam Mission and digital libraries may well be a harbinger of the future in terms of learning and knowledge transfer.

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