

## Role of Digital Libraries in Supporting Scholarly Writing

Gaurav\*

*\*Research Scholar, DLIS, University of Delhi, Delhi-110007, India*

*Email: mrgaurav46@gmail.com*

ORCID ID - 0009-0008-0685-090X

### ABSTRACT

This paper examines the role and impact of digital libraries on scholarly writing across different stages of the research lifecycle. It analyses how digital libraries support essential academic activities, including literature discovery, access to full-text scholarly resources, reference management, data collection and organization, dissemination of research through repositories, and long-term digital preservation. Drawing upon recent scholarly literature and major Indian initiatives such as the National Digital Library of India, e-ShodhSindhu, and Shodhganga, the study highlights the key services and technological features of digital libraries that enhance research productivity, improve academic writing practices, and support scholarly communication standards. The paper also identifies an important research gap concerning the limited analysis of how digital library resources specifically influence the processes involved in scholarly writing. The findings reveal that digital libraries function not only as repositories of knowledge but also as active collaborators in the research ecosystem, providing critical support to librarians, researchers, and policymakers in the creation, management, dissemination, and preservation of scholarly work.

**Keywords:** Scholarly Writing, National Digital Libraries, One Nation One Subscription, Shodhganga, India.

\*Corresponding Author

## 1. INTRODUCTION

Scholarly writing encompasses key operations involved in academic research and the production of information, including the creation of various forms of literature such as articles, books, theses, conference proceedings, and other publications. It requires timely access to relevant research articles, proper organization of this information, and appropriate use in one's studies, all while ensuring accurate citations and references according to the chosen standards. Additionally, scholarly writing must adhere to ethical guidelines, avoiding plagiarism and following proper dissemination procedures.

Beyond cognitive accuracy, scholarly writing involves effectively conveying the researcher's steps. In recent decades, the rapid advancement of digital

technologies has fundamentally transformed how scholars search for, access, organize, manage, and communicate scholarly information. In this evolving research landscape, digital libraries have become essential resources that support scholarly writing throughout the academic research process.

Traditionally, libraries were regarded mainly as physical repositories of printed resources and centres for reference services. With the growth of networked information systems, institutional repositories, open-access publishing, and research data platforms, libraries have evolved into interactive and service-driven digital environments. Modern digital libraries now provide sophisticated discovery tools, extensive full-text access to scholarly resources, enriched metadata, citation management features, repository-

based dissemination, and long-term digital preservation services. These developments play a crucial role in enhancing the efficiency, quality, accessibility, and reproducibility of scholarly writing and research activities (Ince & Hoadley, 2014; Tenopir et al., 2014).

During the COVID-19 pandemic, when access to physical libraries was highly restricted, the importance of digital libraries in supporting scholarly writing became particularly evident. Academic libraries worldwide rapidly expanded their digital collections, remote research assistance, and virtual reference services, enabling scholars to continue writing and publishing their work despite organizational shutdowns (Ashiq et al., 2022; Singh, 2022). These innovations underscore the role of digital libraries as collaborative partners in scholarly writing, transforming how researchers engage with traditional library resources.

With the growing trend of open science, research data management, and adherence to sponsor directives, the reliability of digital libraries has significantly increased. In the scholarly writing process, platforms such as national digital libraries, organizational repositories, and consortial-based facilities play several important roles. These include distributing preprints, managing editions, facilitating reference management, and ensuring the long-term preservation of materials (Sandy et al., 2020; Zareef & Jabeen, 2025).

Despite recent advancements, current literature on digital libraries primarily emphasizes technology, accessibility, and user satisfaction. This narrow focus is seen as a halfway approach because it only addresses the fundamental aspects of digital libraries. It overlooks their integrative role and the important contributions they can make to researchers' scholarly writing.

In this context, this study conceptually examines the role of digital libraries in supporting scholarly writing throughout the research process. Specifically, it highlights Indian digital library initiatives such as the National Digital Library of India (NDLI), Shodhganga, and e-ShodhSindhu, demonstrating how their services enhance literature discovery,

improve writing efficiency, ensure compliance, and contribute to the long-term impact of scholarly work.

For this research paper, a digital library is defined as an organized online system or service that supports the discovery, access, preservation, and management of scholarly resources, including text, datasets, multimedia content, and metadata. It also includes associated services such as advanced search functions, analytical tools, institutional repositories, link resolvers, and application programming interfaces (APIs) (Ince & Hoadley, 2014). Digital libraries encompass national knowledge platforms, institutional repositories, publisher databases, and consortium-based services. Their most significant feature in the context of scholarly writing is their ability to connect researchers with relevant resources and digital tools across every stage of the research workflow: discovery → reading → note-taking and information management → drafting → citation → dissemination → preservation.

### 1.1 Research Gap

Current studies have focused on digital libraries with respect to access, preservation, and information services. However, there has been limited attention to how these libraries support the entire scholarly writing workflow, including literature discovery, citation management, data management, and dissemination. Earlier research has either emphasized technological infrastructure or user satisfaction, rather than examining how digital library services impact writing practices and the production of research. This study aims to fill this gap by synthesizing the role of digital library services within the context of scholarly writing, specifically looking at national and institutional digital library initiatives in India.

## 2. REVIEW OF LITERATURE

Academic libraries and digital libraries have undergone significant changes in recent years, reshaping their roles in supporting scholarly communication and research processes. With the adoption of digital technologies, libraries have transformed from mere collection management systems into inclusive digital assistants that facilitate document search, access, and retrieval. This

evolution has enhanced library operations (Pambayun, 2021).

During the COVID-19 pandemic, digital libraries played a crucial role in supporting scholarly communication. They extended their services globally, provided remote access to resources, and offered virtual reference assistance along with the latest communication tools. Conventional libraries faced physical constraints that hindered their operations, making the contributions of digital libraries particularly vital during this period (Ashiq et al., 2022; Pambayun, 2021).

A bibliometric study indicates that reliance on digital libraries increased during the pandemic, leading to a rise in scholarly publications. Digital libraries served as a crucial link between researchers and their data. Another significant issue among researchers is how digital libraries provided access to information and facilitated global communication during this time (Pambayun, 2021).

In recent years, academic and digital libraries have undergone major changes, redesigning their roles in supporting scholarly communication and research processes. With the adoption of digital technologies, libraries have transformed not only the way they operate but also how users perceive and engage with them in their scholarly writing. This shift has turned libraries from mere collection management systems into inclusive digital assistant libraries that aid in document search, access, and retrieval, enhancing overall library operations (Pambayun, 2021).

During the COVID-19 outbreak, digital libraries played a crucial role in supporting scholarly communication by extending services globally, providing remote access to resources, and offering virtual reference assistance along with the latest communication tools. This was particularly important, as traditional libraries could not perform these functions due to physical restrictions at the time (Ashiq et al., 2022; Pambayun, 2021). The bibliometric study highlights that the increased reliance on digital libraries during the pandemic contributed to the rise in scholarly publications,

acting as an essential bridge between researchers and vital information.

In the modern era, digital libraries play a crucial role in scholarly communication and the preservation of their content. They not only provide open access dissemination but also enhance research visibility. Digital libraries improve information management processes, facilitate the circulation of institutional work within academic environments, and help establish relationships with other institutions. For an organization, they serve as a repository of institutional knowledge (Kumar et al., 2026; Zareef & Jabeen, 2025).

A key component of digital library services is research data management (RDM), in which librarians assist researchers through frameworks for data sharing, digital preservation, and adherence to metadata standards and practices. Librarians support researchers in managing their research information and navigating the scholarly communication process.

Although many institutions have successfully adopted these technologies, certain challenges have emerged. Recent literature highlights a persistent gap in the infrastructure, professional competencies, and policy planning required for effective management of digital library services. This issue is particularly pronounced in developing countries (Zareef & Jabeen, 2025). There is a significant difference between having digital literacy and lacking it. Moreover, equitable access to digital repositories worldwide plays a vital role in how these resources are utilized and impacts the effectiveness of research support for scholarly communication (Ashiq et al., 2022). Overall, the literature suggests that an unequal environment and inconsistent adoption of digital library services can influence the effectiveness of scholarly communication and the quality of research output.

### **3. CORE DIGITAL LIBRARY SERVICES SUPPORTING SCHOLARLY WRITING**

Digital libraries play essential roles in helping authors produce better, faster, and more reliable scholarship.

### 3.1. Discovery and comprehensive access

Digital libraries aggregate content from various publishers, repositories, and data sources, enabling focused searches across journals, books, theses, and grey literature. While these targeted searches streamline the literature review process, they may overlook some resources. Collection services can also highlight non-English and local content that is often missed in commercial indexes, which is especially beneficial for research studies based in specific regions (Panda et al., 2025). Additionally, national platforms are increasingly emphasizing the importance of filtered and federated searches, as well as multilingual support systems. For instance, India's National Digital Library of India (NDLI) offers a single-window portal to a wide range of educational and scholarly resources, facilitating both filtered searches and multilingual access.

### 3.2. Full-text and open access resources

Access to full text is the most immediate way a digital library supports writers. Institutional repositories, national electronic theses and dissertations (ETD) portals, and consortium e-journal packages help eliminate barriers to obtaining the documents that writers need. Open access is crucial for reducing costs and simplifying legal procedures, making it easier to reuse and cite materials (Singh, 2022). Shodhganga, which is INFLIBNET's ETD repository, provides open access to a vast collection of Indian theses and related materials, including doctoral dissertations from various universities. This resource makes it easy for writers to access citations, methodological models, and literature compilations.

### 3.3. Institutional repositories and versions

Digital libraries frequently support institutional repositories (IRs), which serve as digital archives for preserving scholarly outputs such as preprints, postprints, theses, dissertations, and research datasets. These repositories play a significant role in supporting academic writing and research communication in several ways. First, they provide authors with a reliable platform for depositing research outputs in accordance with institutional or funding agency requirements. Second,

IRs enable researchers to share working papers and preprints at an early stage, encouraging scholarly discussion and constructive feedback before formal publication. Third, they help maintain a permanent and organized scholarly record by assigning stable identifiers and preserving different versions of research outputs, thereby improving accessibility, citation, and long-term preservation of academic work. These features play a crucial role during the drafting and dissemination phases. Authors can link to their repository records, include persistent citations, and meet the open-access requirements set by funders (Singh, 2017).

### 3.4. Metadata, discovery layers, and research mapping

High-quality metadata, including author affiliations, keywords, abstracts, and subject headings, along with enhanced discovery tools like recommendation engines and citation maps, significantly reduce the time writers spend searching for related documents (Sandy et al., 2020). Tools that visualize citation networks or recommend relevant works help authors identify important literature, pinpoint potential research gaps, and place their work within ongoing discussions. Digital libraries have evolved beyond being simple storage systems; they now actively assist writers in developing their literary strategies.

### 3.5. Tools for management: linking discovery to writing operations

Digital libraries provide a comprehensive set of export functions for bibliography management tools, such as RIS, BibTeX, EndNote, and XML. This allows users to easily transfer citations to various reference management software, including Zotero, Mendeley, EndNote, or BibTeX, with just a single click. This functionality helps eliminate entry errors that often occur with manual input and ensures a consistent bibliographic style throughout the research writing process. Additionally, it supports the operational framework of scholarly communication (Ashiq et al., 2022). Institutional platforms may also offer APIs for programmatic exports or integration with authoring platforms, further streamlining the transition from finding resources to writing.

### 3.6. Data and code curation services

Modern scholarship increasingly relies on datasets and code. Digital libraries and connected research data services (RDS) support authors by offering guidance on data management plans, providing managed data repositories, and ensuring that datasets are searchable and citable through DOIs and metadata (Singh, 2017). Systematic reviews of digital collection services in academic libraries from 2001 to 2023 demonstrate that digital curation services (DCS) are essential for facilitating reproducible research and compliant data sharing. However, these reviews also highlight existing gaps in training and infrastructure that need to be addressed.

### 3.7. Researcher support services (training, writing clinics, consultations)

Many digital libraries enhance their technical services by providing human support, such as reference consultations, assistance with literature searches, consultations on data management, and workshops on publishing and copyright. These services are especially beneficial for early-career researchers and authors who may be unfamiliar with submission guidelines or citation standards (Singh, 2022). During crises, such as the COVID-19 pandemic, libraries that offered remote assistance and virtual reference services became vital for researchers working from home. This highlights the importance of offering flexible services alongside digital collections.

## 4. DIGITAL LIBRARIES ACROSS STAGES OF SCHOLARLY WRITING

In this article, we align digital libraries with the recognized phases of the writing process.

### 4.1. Planning and literature review

- Breadth & discoverability: Aggregated search and recommendation systems help quickly map the field.
- Thesis and grey literature: ETD repositories (such as Shodhganga) provide direct access to thesis methods and literature reviews, which

are invaluable for doctoral and graduate students.

### 4.2. Source collection and reading

- Full-text availability and compatibility: Through open URL resolvers and consortia access (e.g., e-ShodhSindhu in India), students can access full text even outside the campus. This platform helps reduce the risk of subscription barriers caused by holdups. This also reduced the risk of administrative access restrictions.
- Personal collections & comments: Some interfaces enable users to store and download materials, comment online, and export notes—features that transform discovery into a usable personal information core.

### 4.3. Writing and citation management

- Export to reference managers: Digital libraries' "export citation" features are easy but high-leverage: they clear friction from keeping exact bibliographies.
- Persistent identifiers & versioning: When writers cite a DOI or a repository handle, their references remain stable and usable over time, enhancing reproducibility.

### 4.4. Submission, compliance, and dissemination

- Deposit services & funder mandates: Institutional and national repositories streamline compliance with funder directives for open access and data management.
- Preprint support & rapid dissemination: Repositories for preprints or institutional working papers enable authors to share findings earlier and to collect feedback before formal publication.

### 4.5. Preservation and long-term impact

- Archival curation: Libraries' preservation operations ensure that datasets, code, and supplementary materials persist, remain available, and are usable for future researchers, a necessity for papers whose claims are based on archived data.

## 5. EVIDENCE FROM RECENT STUDIES

Recent reviews and empirical studies highlight three consistent findings relevant to writers:

**(i) Digital Libraries during the Pandemic:** A systematic review of academic library responses during COVID-19 reveals that libraries pivoted to remote services, such as virtual reference, extended digital access, and outreach. These changes have lasting implications for how libraries support research that is geographically distributed and digitally mediated (Singh, 2022). As a result, researchers could perform literature searches, access essential resources, and receive remote consultations while working from home.

**(ii) Digital Curation and Data Services :** A global systematic review of digital collection services in academic libraries (covering literature up to 2023) emphasizes that, while many libraries now support institutional repositories, research data management (RDM), and data curation, the implementation of these services is inconsistent (Sandy et al., 2020). Key barriers include a lack of staff training, unclear policies, and inadequate infrastructure. For authors, this means that although curation services are available, the level and quality of assistance for managing and publishing research data can vary significantly across institutions and regions (Sandy et al., 2020).

**(iii) Scholarly Communication and Research Support:** Analyses of academic library practices show that libraries are increasingly responsible for offering publishing support, copyright advice, data management, and altmetrics. These services are particularly relevant for authors preparing manuscripts for publication (Ince & Hoadley, 2014). The integration of these scholarly communication functions within library units' benefits writers who need guidance on contemporary publication procedures (Ince & Hoadley, 2014).

Together, these studies indicate that digital libraries are no longer passive collections; they are now active collaborators in the generation and stewardship of scholarship.

## 6. INDIAN DIGITAL LIBRARY INITIATIVES AND SCHOLARLY WRITING

India has developed a comprehensive digital library infrastructure that demonstrates how national and consortium platforms can significantly assist writers.

### 6.1. National Digital Library of India (NDLI)

The NDLI is a national initiative that aggregates educational and scholarly content into a single portal, enabling filtered and federated searches. It also offers services such as the NDLI Club, which promotes engagement and outreach at the institutional level. By providing a unified access point to books, course materials, and multimedia resources—often available in multiple languages—NDLI helps researchers and students discover background literature and teaching materials that inform their research questions and writing (Singh, 2022). The focus on discoverability and institutional outreach, through initiatives such as workshops and clubs, demonstrates how a national aggregator can effectively support writers at all educational levels.

### 6.2. Shodhganga (INFLIBNET) — Theses and Dissertations Repository

Shodhganga, managed by INFLIBNET, is a significant repository of Indian doctoral research. For graduate students and their supervisors, Shodhganga is often the first place to seek country-specific literature reviews, methodology examples, and bibliographies—resources that are invaluable for drafting theses and positioning current research within regional scholarly discussions (Panda et al., 2025). The repository's extensive scale and open-access policy enhance the visibility of Indian scholarship, enabling writers to reference and learn from previously completed doctoral work.

### 6.3. Consortia Packages

One Nation One Subscription (ONOS) (formerly known as e-ShodhSindhu) is a consortium that provides member institutions with affordable access to thousands of journals, bibliographic databases, and e-books (Singh, 2017). This consortia approach removes cost barriers for writers at smaller

institutions or colleges without individual subscriptions, ensuring equitable access to current literature and a practical contribution to scholarly writing.

#### 6.4. Institutional Practices

Indian universities are progressively integrating these national services with local institutional repositories, plagiarism-checking services (such as ShodhShuddhi), and workshops on thesis submission (Singh, 2017). These initiatives support authors in producing work that meets national and institutional quality standards, adheres to citation and ethical guidelines, and complies with submission regulations.

### 7. AUTHOR WORKFLOWS

To improve writing outcomes by enhancing the accessibility of digital library resources, authors should adopt practical practices that link discovery tools to authoring tools.

**(i) Plan search strategy using aggregated portals:** Start by exploring a broad aggregator, whether national or discipline-specific, to identify significant themes and major works. Once you have a general understanding, narrow your search to discipline-specific databases for more focused results. For projects centred on India, begin with NDLI (National Digital Library of India) and Shodhganga to access local scholarship.

**(ii) Use consistent metadata exports in reference managers:** When you find a relevant record, export the citation metadata (in RIS or BibTeX format) into reference managers like Zotero, EndNote, or Mendeley. Ensure that you keep PDF copies linked in your reference manager to maintain a unified system for annotations and retrieval (Singh, 2017).

**(iii) Deposit working papers and datasets:** Share preprints and datasets using institutional or subject-specific repositories. Opt for persistent identifiers, such as DOIs or handles that can be referenced in drafts and later versions of your published work.

**(iv) Leverage librarian expertise:** Schedule consultations for complex searches, systematic literature reviews, and data management plans. Librarians can recommend various open-access channels for your research and guide on licensing and copyright issues (Singh, 2017).

### 8. CHALLENGES AND LIMITATIONS

Institutions often lack adequate resources, as evidenced by their limited research output. Systematic reviews reveal that the implementation of digital collection systems varies significantly worldwide, with training and funding shortages frequently identified as major obstacles (Panda et al., 2025). Furthermore, poor metadata limits discoverability, leading to regional or non-English content being under-indexed in major search engines.

Sustainability and preservation pose additional challenges. Small digital projects, which are often ad hoc or staged, can be discontinued due to insufficient funding. This situation can be especially problematic for authors who rely on the resources these projects provide (Sandy et al., 2020).

Legal and licensing complexities also hinder access to content. Content access is often contingent on licenses; paywalls and restrictive licensing practices can prevent users from accessing necessary materials, particularly when institutions lack consortia agreements (Zareef & Jabeen, 2025).

Finally, there is a notable skills gap among authors, many of whom lack training in advanced search techniques, data citation, or repository deposit. Concentrated library instruction can significantly bridge these gaps

### 9. FUTURE DIRECTIONS

Looking ahead, several trends will influence how digital libraries support writing:

**(i) Increased Integration of Scholarly Communication Services:** Libraries will provide comprehensive assistance that includes discovery, data curation, open-access publishing, and metrics. This will create a centralized resource for authors,

and evidence suggests that this integration is already occurring (Zareef & Jabeen, 2025).

**(ii) Enhanced Compatibility with Authoring and AI Tools:** As authoring platforms and AI assistants (for drafting, summarization, and literature synthesis) evolve, digital libraries will need to offer APIs and structured metadata. This will allow these tools to integrate efficiently and ethically with library resources.

**(iii) Strengthened National and Regional Infrastructure:** National aggregators and consortia, such as NDLI and e-ShodhSindhu, will play a more significant role in ensuring balanced access, especially in countries with many small organisations (Sandy et al., 2020).

**(iv) Emphasis on Skills and Training:** To address the skills gap, libraries will enhance training programs in digital literacy, data collection, and ethical authorship. These changes have been accelerated by the COVID-19 pandemic (Sandy et al., 2020; Zareef & Jabeen, 2025).

## 10. CONCLUSION

In conclusion, digital libraries have emerged as indispensable partners in scholarly writing by supporting researchers at every stage of the research lifecycle. They enhance literature discovery, improve access to full-text and localized scholarly resources, facilitate repository deposit and data citation, and provide expert guidance for publishing and compliance requirements. The study highlights that institutional repositories and national digital platforms significantly promote equitable access to knowledge, while high-quality metadata and citation management tools improve research efficiency and writing accuracy. However, disparities in digital collections, infrastructure, and researcher training persist across institutions.

The rapid adaptation of libraries during the pandemic further demonstrated their evolving role in providing remote research assistance, while also revealing the need for greater investment in digital curation and professional development. For

researchers and students alike, digital libraries should be viewed not merely as information repositories but as active collaborators that strengthen the quality, visibility, preservation, and ethical standards of scholarly work. Indian initiatives such as the National Digital Library of India, ONOS, and Shodhganga effectively demonstrate scalable and inclusive models of digital research support that can inspire similar initiatives globally.

## REFERENCES

- Ashiq, M., Jabeen, F., & Mahmood, K. (2022). Transformation of libraries during the COVID-19 pandemic: A systematic review. *Journal of Academic Librarianship*, 48(4), Article 102534.
- Dube, T. V. (2025). Research data management in academic libraries: institutional repositories as a reservoir for research data. *Library Management*, 46(5), 319-331.
- Gee, B. M. (2025). The hunt for research data: Development of an open-source workflow for tracking institutionally-affiliated research data publications. *arXiv preprint arXiv:2507.01228*.
- Ho, R. C. Y., Wong, S. N., Chia, P., Tang, C., & Ng, M. T. T. (2025). Research data management services in academic libraries to support the research data life cycle: a systematic review. *Journal of the Association for Information Science and Technology*.
- Ince, S., & Hoadley, C. (2014). The changing role of digital tools and academic libraries in scholarly workflows: A review. *Nordic Journal of Information Literacy in Higher Education*, 6(1), 6-22.
- Kumar, S., Kaur, A., Tiwari, K. B., Sinha, D., & Dhanoa, M. K. (2026). Digital Repositories and Knowledge Management Practices in Higher Education Libraries. *International Journal of Scientific Research in Humanities and Social Sciences*, 3(1), 01-08.
- Lihitkar, S. R., Lihitkar, R. S., & Agashe, A. T. (2009, June). A study of major institutional

- repositories in India. In *12th International Conference on Electronic Theses and Dissertations*. Pittsburgh, PA.
- Myers, K. L. (2016). Libraries' response to scholarly communication in the digital era.
- Pambayun, K. G. (2021). Digital libraries during Covid-19 pandemic: a bibliometric analysis and information mapping. *Indonesian Journal of Librarianship*, 17-30.
- Panda, S. K., Dey, S., Bhatt, A., & Satapathy, A. (2025). Evaluating the progress and impact of Shodhganga: enhancements, challenges and future directions for India's centralized ETD repository. *Digital Library Perspectives*, 41(1), 5-20.
- Sandy, H. M., Million, A. J., & Hudson-Vitale, C. (2020). Innovating support for research: the coalescence of scholarly communication? *College & Research Libraries*, 81(2), 193.
- Singh, K. (2017). E-ShodhSindhu: Consortium for Higher Education Electronic Resources for Scholarly Content: An overview. *International Journal of Advanced Multidisciplinary Research*, 4(3), 43-50.
- Singh, P. (2016). Open access repositories in India: Characteristics and future potential. *IFLA journal*, 42(1), 16-24.
- Singh, S. (2022). Role of National Digital Library of India (NDLI) for facilitating open access resources (OARs): an investigation on COVID-19 research repository. *Digital Library Perspectives*, 38(4), 493-507.
- Zareef, M., & Jabeen, M. (2025). Systematic literature review of digital curation services in academic libraries (2001–2023): A global perspective. *Journal of Information Science*, 01655515241305348.

## Citation

Gaurav. (2026). Role of digital libraries in supporting scholarly writing. *Journal of Library and Information Science*, 51(1), 72–80.