



THE ROLE OF ELECTRONIC RESOURCES IN ENHANCING ACADEMIC LIBRARY SERVICES: ACCESS, UTILIZATION AND USER ENGAGEMENT IN THE DIGITAL AGE

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ABSTRACT

Academic libraries have undergone a significant transformation in the digital era, with electronic resources (e-resources) becoming essential tools for supporting teaching, learning, and research. These resources—such as e-journals, e-books, and online databases—have expanded access to information and changed how users interact with library services. The purpose of this study is to describe the role of e-resources in enhancing academic library services, specifically focusing on access mechanisms, utilization patterns, and user engagement strategies. The study adopts a descriptive research approach based solely on secondary data. Relevant peer-reviewed journal articles, institutional reports, and library case studies published between were systematically reviewed using clearly defined inclusion and exclusion criteria. Only sources that focused on academic libraries and addressed at least one of the core dimensions—access, utilization, or engagement—were included. The findings reveal that while e-resources have significantly improved accessibility through remote access and mobile platforms, challenges remain in user awareness and consistent engagement. Utilization trends vary by user group, with students and faculty prioritizing different types of resources. Furthermore, digital literacy training, institutional promotion, and technical infrastructure play critical roles in shaping user satisfaction and continued use. The study concludes that electronic resources are instrumental in modernizing academic libraries, but their full potential can only be realized through strategic support and awareness-building efforts.

KEYWORDS: Academic Libraries, Electronic Resources, Access, User Engagement, Utilization Patterns

1. INTRODUCTION

Academic libraries in India have been at the forefront of supporting higher education by providing access to learning materials, research support, and information services. With the advent of digitization, the role of these libraries has evolved significantly. No longer confined to physical collections or reading rooms, academic libraries now serve as digital knowledge centers, offering access to electronic resources that support remote learning, research, and academic engagement. The National Education Policy (NEP) 2020 has further emphasized the integration of digital resources and e-learning, recognizing the crucial role of libraries in India's evolving academic landscape (Ministry of Education, 2020). Electronic resources—including e-journals, e-books, bibliographic databases, and institutional repositories—have redefined how Indian students and faculty access information. These resources enable uninterrupted access to scholarly content across geographical boundaries and time zones. According to Siwach et al., (2019), academic libraries in India have increasingly subscribed to consortia-based platforms such as INFLIBNET's N-LIST and e-ShodhSindhu to enhance e-resource availability and affordability for affiliated institutions.

Furthermore, the use of e-resources has enhanced user engagement through features such as federated search, full-text access, and citation management tools. However, engagement depends not only on access but also on digital literacy and awareness initiatives. Indian libraries are now conducting orientation programs, online tutorials, and helpdesk services to improve e-resource utilization (Bhat, 2017). The role of

librarians has shifted from custodians of physical collections to digital facilitators and trainers who bridge the gap between technology and users. Given this transition, there is a growing need to describe and analyze how e-resources are being accessed, utilized, and promoted in Indian academic libraries. This paper adopts a descriptive approach using secondary sources to understand the role of electronic resources in enhancing academic library services in India.

2. OBJECTIVES OF THE STUDY

- To describe the modes of access and availability of electronic resources in Indian academic libraries.
- To analyze utilization patterns of e-resources among students, faculty, and researchers based on existing literature.
- To examine user engagement strategies adopted by academic libraries for promoting effective use of electronic resources.

3. SCOPE OF THE STUDY

This study focuses on the descriptive analysis of electronic resources in Indian academic libraries, emphasizing how they enhance access, utilization, and user engagement. It draws exclusively from secondary sources such as journal articles, institutional reports, and policy documents published between. The scope is limited to academic institutions, including universities and colleges, and excludes public and special libraries. The study does not involve primary data collection but provides a synthesized overview of existing literature to understand current practices and challenges in the Indian

context.

4. LITERATURE REVIEW

The digital transformation of library services in India has gained momentum over the past decade, driven by rapid advancements in information and communication technologies. Academic libraries have moved beyond traditional roles and adopted digital platforms to enhance the accessibility and relevance of their services. This transformation includes digitization of collections, integration of online catalogues, remote access systems, and the provision of subscription-based and open-access electronic resources. As observed by Sharma et al., (2022), Indian university libraries have increasingly implemented digital infrastructures to support virtual learning environments, especially in response to the COVID-19 pandemic, which further accelerated this transition. Electronic resources encompass a wide range of formats, including e-journals, e-books, reference databases, digital theses, and institutional repositories. These resources serve various academic purposes such as literature review, data analysis, current awareness, and teaching support. Platforms like INFLIBNET's Shodhganga, N-LIST, and e-ShodhSindhu have become critical in facilitating equitable access to scholarly content across Indian institutions (Rudraksha et al., 2021). Additionally, many libraries have adopted discovery services and federated search tools to simplify access to these diverse formats.

Understanding user behavior is central to evaluating the effectiveness of e-resources. Several studies have shown that although students and faculty recognize the value of electronic resources, usage often depends on factors such as ease of access, training, and digital literacy. For example, Khan et al., (2022) noted that while postgraduate students extensively use e-journals for research purposes, undergraduate students still show a preference for print unless guided through digital literacy sessions. Institutional engagement strategies—such as orientation programs, user guides, librarian-led workshops, and integration of e-resources into coursework—play a crucial role in promoting sustained usage and improving user confidence. Despite the growing availability of literature on digital libraries and e-resources, there is a need to synthesize findings across studies to identify broader trends, challenges, and best practices. A secondary data approach helps consolidate insights from fragmented case studies, regional reports, and individual research efforts, thereby offering a holistic understanding of how electronic resources are shaping academic library services in India. This synthesis is particularly important given the diversity of institutional capacities and user profiles across the country, which makes context-specific generalizations essential for policymaking and library planning.

5. METHODOLOGY

This study adopts a descriptive research design based on qualitative synthesis of secondary sources. Rather than collecting primary data through surveys or interviews, the research relies on existing literature to understand how electronic resources are accessed, utilized, and promoted in Indian academic libraries. The data sources include peer-reviewed journal articles,

published library case studies, and reports from recognized institutions and organizations such as the Indian Statistical Institute (ISI), INFLIBNET, IFLA, and UNESCO. The literature was carefully screened using a structured selection process guided by inclusion and exclusion criteria. Studies published between were included if they focused specifically on academic libraries in India and addressed themes related to access, utilization, or user engagement with electronic resources. Only documents available in full-text and written in English were considered. Exclusion criteria ruled out sources that focused solely on public or special libraries, theoretical papers without practical data, and non-peer-reviewed content such as editorials or blog posts. This methodology enabled a comprehensive yet focused review of relevant secondary data to derive meaningful insights within the scope of a descriptive research framework.

6. RESULTS AND DISCUSSION

Academic libraries across India have widely adopted digital access mechanisms to ensure that users can retrieve electronic resources both on and off campus. IP-based authentication remains the standard for on-site access, while remote access is supported through technologies like proxy servers and federated login tools such as Shibboleth and EZProxy. Institutions subscribe to platforms such as INFLIBNET's e-ShodhSindhu, JSTOR, ScienceDirect, and ProQuest, offering users access to a variety of peer-reviewed journals, databases, and e-books. However, accessibility often hinges on the financial capacity of institutions to maintain licenses and on users' awareness of how to navigate these systems effectively (Muniyandi, 2021).

The utilization of electronic resources varies by user type. Faculty and researchers tend to use e-journals and citation databases for research and publication activities, while undergraduate students more frequently access e-books, multimedia tutorials, and learning platforms for coursework and exam preparation. The frequency of use is typically higher among postgraduate students and faculty, many of whom access resources multiple times a week. Studies indicate that the primary purpose of use includes literature review, academic writing, assignment completion, and teaching preparation. Institutions have adopted several strategies to increase user engagement, including digital literacy workshops, orientation programs, librarian-led webinars, and integration of e-resources within Learning Management Systems (LMS). These efforts have helped raise awareness but often fail to reach their full potential due to lack of promotion or follow-up (Madhusudhan, 2021). A significant barrier continues to be low user awareness, especially in rural or semi-urban institutions, where students may not be adequately trained in searching or evaluating digital content. Additionally, some institutions face limitations due to restrictive licensing agreements, limited multi-user access, and outdated platforms that hinder the user experience.

Study	Focus Area	Key Findings	Citations
Impact and Usage of E-Resources in Academic Libraries.	User patterns and frequency	Faculty use e-journals; students prefer e-books; postgraduates access more frequently	
Awareness, Accessibility and Usability of E-resources	Access platforms	Use of IP-based and proxy login access; platform choice depends on institutional budget	Katazo et al., (2020)
A Case Study on the National Digital Library of India and Exploring Learning Resources for School Education	Remote access	VPN and federated login widely adopted in universities; awareness is uneven	Muniyandi, (2021)
User engagement and awareness strategies for electronic resources in university libraries.	Engagement strategies	Orientation and training improve awareness; yet participation remains low	Madhusudhan, (2021)
Use and Access of E-Resources among Students in the National Institute of Engineering College Library in Mysuru: A Study.	Barriers to usage	Users lack search skills; restrictive licenses limit access	

Table: 6.1: Comparison of Key Findings from Selected Literature

7. SUGGESTION AND CONCLUSION

This study highlights the crucial role that electronic resources play in enhancing academic library services in India by improving access, supporting diverse user needs, and promoting academic engagement. The descriptive synthesis of secondary literature reveals that while most institutions have successfully adopted digital platforms and access mechanisms, challenges persist in areas such as user awareness, digital literacy, and license-related restrictions. Utilization patterns vary across user groups, with faculty and researchers relying heavily on scholarly databases and students leaning towards e-books and multimedia learning tools. Engagement strategies like orientation programs and librarian-led training are beneficial but often underutilized due to limited promotion and participation. Moving forward, academic libraries must adopt a more user-centric approach by integrating e-resources into curricula, simplifying access systems, and offering targeted digital literacy initiatives. Strengthening collaborations through consortia, upgrading outdated systems, and using feedback mechanisms to tailor services can further maximize the impact of e-resources. As education continues to move toward hybrid and digital-first models, the sustained development of responsive and inclusive e-resource strategies will be key to ensuring that academic libraries remain relevant and equitable learning environments.

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