

Exploring Digital Resources and Research Support Services in Academic Libraries of Central Universities in North India

DOI: 10.63880/jli.v2i1.79

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ABSTRACT

Purpose: This study examines the availability and use of digital resources and user support services in the Central University Libraries of North India. It focuses on how these libraries are developing digital resources, supporting users, facilitating research, and strengthening technology-based services for teaching and learning.

Methodology: The study uses documentary research and website content analysis based on a systematic checklist. Information available through the official websites of Central University Libraries in North India was examined to assess digital resource systems, user support services, research support facilities, and the development of digital library services.

Findings: The findings reveal differences in the level of digital library development among the Central Universities studied. Established universities such as the University of Delhi (DU), Jawaharlal Nehru University (JNU), and Aligarh Muslim University (AMU) have relatively well-developed digital resource systems and comprehensive user and research support services. In contrast, several newer universities have more limited digital resources and

Received: 06.05.2026

Revised: 21.05.2026

Accepted: 15.06.2026

Published: 30.06.2026

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basic support facilities. The study also identifies differences in access to digital resources, integration of services, user training, and research support across institutions.

Implications: The findings have practical implications for library managers, university administrators, and policymakers seeking to strengthen digital library services. Improving digital infrastructure, integrating services, expanding user training, and strengthening research support can help reduce institutional differences in digital service provision. The study contributes to the broader understanding of digital library development and the improvement of digital library services in Indian higher education institutions.

Keywords: Digital Resources; User Support Services; Central University Libraries; Documentary Analysis; Academic Libraries; North India

1. INTRODUCTION

The digital revolution has completely changed academic libraries all over the world. Once physical repositories of books and other printed material, academic libraries are now sophisticated digital knowledge centers that integrate technology to facilitate research, teaching and learning. Modern academic library systems demand electronic resources such as e-journals, online databases, institutional repositories, anti-plagiarism software, discovery services and research support platforms. Higher Education in India has been a major contributor to the development of the country. Such a country needs a great support system to achieve and sustain the development. University libraries, a support system, are considered the backbone of a university. It makes available the information to the users in both print & electronic media. It acts as a gateway to scholarly and research information.

1.1. Objectives of the Study

The study aims to:

1. To examine the availability of digital resources in the Central University Libraries of North India.
2. To analyze the range and effectiveness of user support services provided by these libraries.
3. To compare institutional digital service and research facilitation readiness.
4. To identify service gaps, infrastructural challenges and improvement opportunities.
5. To propose strategic recommendations for strengthening digital library services.

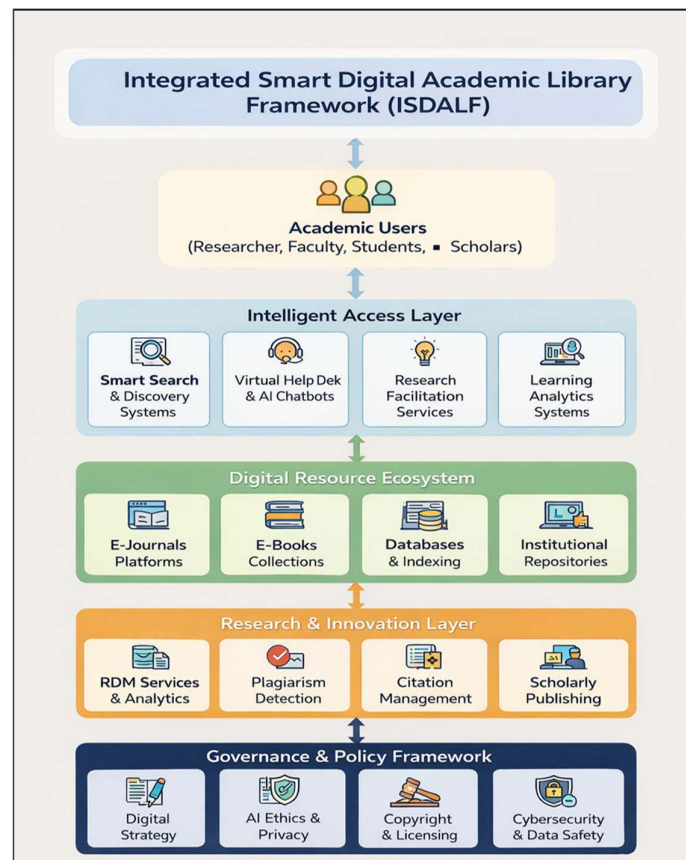


Figure 1: Integrated Smart Digital Academic Library Framework

The expansion of digital infrastructure has progressed rapidly, but institutional disparities continue to exist regarding resource accessibility and service delivery, technological development, and staff education. University libraries experience different levels of digital service development because their funding and policy focus areas, and administrative support and technical capabilities differ between institutions. The researchers of this study will examine the current digital resources and user support services at selected Central University Libraries located in North India. The documentary research method will be used to achieve this study.

2. REVIEW OF RELATED LITERATURE

Previous studies have conducted comprehensive investigations about how academic libraries have changed their functions to support digital scholarship and research productivity, and scholarly communication. Research shows that when digital resources are available and used properly, academic research becomes more accessible and efficient and collaborative efforts among scholars improve. Childress (2011) highlighted how academic reference management systems and citation tools function as essential elements for academic workflows; thus, he stressed the need for librarians to provide training so users can successfully implement these systems. Donner (2023) conducted a systematic review of research data management systems, which showed these systems provide institutional research capacity through their strategic value, while Maurya and Subaveerapandian (2022) found that academic libraries now offer advanced digital research services, which include data discovery, data preservation and data visualization although users still lack important skills. Hase et al. (2021) discovered that online databases and academic social media platforms improve research communication and

knowledge dissemination, while Ali et al. (2022) found that academic social networking sites increasingly help scholars connect with their peers and boost their research visibility. Rafiq, Ameen, and Jabeen (2020) researched how academic libraries evolved into digital knowledge centers and found that three factors determine library digital service success, which include institutional dedication, staff expertise and organized user education initiatives. Kumar and Singh (2021) discovered that Tenopir et al. (2020) identified a rising demand for librarian support to access research data services because structured data support frameworks enable better research engagement and institutional visibility. Similarly, Madhusudhan and Nagabhushanam (2019) demonstrated that digital collections, plagiarism detection tools and citation management software together enhance both the quality and efficiency of doctoral research work. Chigwada and Chiparausha (2021) showed that better access to electronic resources, together with proper user support services, leads to higher research productivity, especially in developing nations. The current study needs to investigate institutional digital service ecosystems because most research work fails to provide complete documentation and comparison of digital resources and user support services in Indian central university libraries.

3. RESEARCH METHODOLOGY

The study adopts a descriptive and analytical research design based on systematic documentary analysis and structured evaluation of the official library website content. Data were collected primarily from authentic and publicly accessible sources, including official university library websites, institutional repository portals, electronic resource access platforms, digital service policy documents, and online descriptions of user support services. To ensure uniformity and analytical rigour, a structured instrument titled the Digital Resource and User Support Service Checklist (DRUSSC) was developed, drawing upon established best practices, accreditation benchmarks, and internationally recognized digital library standards. The analytical framework incorporated four key dimensions, namely the Digital Resource Infrastructure Index (DRII), User Support Service Availability Matrix (USSAM), Research Facilitation Readiness Score (RFRS) and Central University Library Digital Excellence Ranking (CULDER). These dimensions enabled a comparative, systematic, and multidimensional assessment of digital readiness, service quality, and research support capacity across the Central University Libraries of North India.

3.1. Scope and Limitations of the Study

The present study examines the availability, accessibility, and utilization of digital resources and online services in Central University Libraries of North India. The scope of the study includes the analysis of digital collections, access platforms, user support services, research facilitation tools, and institutional digital readiness based on official library websites and publicly available documents. It aims to provide comparative insights into digital library development and technology adoption practices across these universities. However, this study is limited by its reliance on website-based documentary analysis, which may be affected by variations in website updating frequency, data completeness, and information transparency. The research does not incorporate primary data collection methods such as surveys, interviews, or usage analytics, thereby restricting the assessment of user perceptions, real-time service utilization, and operational challenges. Additionally, the geographical focus on Central Universities of North India limits the generalizability of the findings. Future studies may adopt mixed method approaches and broader institutional coverage to achieve more comprehensive and representative outcomes.

Table 1: Profile of Central University Libraries of North India

University Name	Central Library Name	Official Library Website	Year of Establishment
Banaras Hindu University (BHU), Varanasi	Sayaji Rao Gaekwad Central Library	https://bhu.ac.in/library	1916
University of Delhi (DU), New Delhi	Central Reference Library	https://crl.du.ac.in	1922
Jawaharlal Nehru University (JNU), New Delhi	Dr. B.R. Ambedkar Central Library	https://lib.jnu.ac.in	1969
Jamia Millia Islamia (JMI), New Delhi	Dr. Zakir Husain Library	https://jmi.ac.in/library	1920
Aligarh Muslim University (AMU), Aligarh	Maulana Azad Library	https://www.amu.ac.in/library	1875
Babasaheb Bhimrao Ambedkar University (BBAU), Lucknow	Gautam Buddha Central Library	https://www.bbau.ac.in/library	1996
Central University of Punjab (CUPB), Bathinda	Dr. S.R. Ranganathan Central Library	https://cup.edu.in/library	2009

4. RESULTS AND DISCUSSION

This section presents a comprehensive comparative evaluation of digital resources and user support services across seven major Central University Libraries of North India. The analysis is structured into four major components: comparative digital resource infrastructure, user support services matrix, institutional digital excellence ranking, and interpretative discussion.

4.1. Comparative Digital Resource Infrastructure

A systematic comparison of digital resource infrastructure across selected Central University Libraries is undertaken to assess resource diversity, technological preparedness, accessibility mechanisms, and institutional capacity for supporting advanced academic research and digital scholarship.

Table 2: Comparative Availability of Digital Resources

Digital Resources	BHU	DU	JNU	JMI	AMU	BBAU	CUPB
E-Journals Access	✓	✓	✓	✓	✓	✓	✓
E-Books Platforms	✓	✓	✓	✓	✓	✓	✓
Web of Science / Scopus	✓	✓	✓	✓	✓	✗	✗

UGC-INFONET / e-ShodhSindhu	✓	✓	✓	✓	✓	✓	✓
Institutional Repository (IR)	✓	✓	✓	✓	✓	✓	✓
Remote Access Facility	✓	✓	✓	✓	✓	✓	✓
Plagiarism Detection Tools	✓	✓	✓	✓	✓	✓	✓
Research Data Repositories	✓	✓	✓	✓	✓	✗	✗
Multimedia Databases	✓	✓	✓	✓	✓	✓	✓
Discovery Services (Single Search)	✓	✓	✓	✓	✓	✗	✓

In above Table 2, results reveal that BHU, DU, JNU, JMI, and AMU demonstrate robust digital resource infrastructure, offering extensive access to international scholarly databases, institutional repositories, and advanced research tools. In contrast, BBAU and CUPB show relatively moderate infrastructure, particularly in areas such as research data repositories, advanced discovery services, and premium indexing databases. The digital maturity gap reflects differences in institutional funding, technological readiness, and policy prioritization.

4.2. User Support Services Matrix

An evaluative framework is applied to examine the availability, effectiveness, and institutional integration of user support services, emphasizing research guidance, digital literacy initiatives, training programs, and scholarly communication facilitation.

Table 3: Comparative User Support Services Availability

User Support Services	BHU	DU	JNU	JMI	AMU	BBAU	CUPB
Online Reference Service	✓	✓	✓	✓	✓	✓	✓
Research Consultation	✓	✓	✓	✓	✓	✗	✓
Information Literacy Training	✓	✓	✓	✓	✓	✓	✓
Plagiarism Awareness Programs	✓	✓	✓	✓	✓	✓	✓
Citation & Reference Management Training	✓	✓	✓	✓	✓	✗	✓
Remote User Support	✓	✓	✓	✓	✓	✓	✓
Research Data Management Support	✓	✓	✓	✓	✓	✗	✗
Scholarly Publishing Guidance	✓	✓	✓	✓	✓	✗	✓
Virtual Helpdesk / Chat Support	✓	✓	✓	✓	✓	✗	✓

In above Table 3, represent those elite institutions (DU, JNU, BHU, JMI, and AMU) are provide highly comprehensive user support ecosystems, offering integrated academic assistance across research, publishing, and digital literacy. Conversely, BBAU and CUPB lag in specialized research support services, particularly research data management, citation training, and scholarly publishing consultation, indicating scope for strategic enhancement.

4.3. Central University Library Digital Excellence Ranking (CULDER)

An integrated performance-based ranking model is employed to benchmark institutional digital readiness, combining indicators of infrastructure strength, service efficiency, and research facilitation capacity to generate a comprehensive digital excellence index.

Table 4: Institutional Digital Excellence Ranking

Rank	University	DRII	USSAM	RFRS	Total Score (/100)
1.	University of Delhi (DU)	25	24	23	72
2.	Jawaharlal Nehru University (JNU)	24	23	22	69
3.	Banaras Hindu University (BHU)	23	22	21	66
4.	Jamia Millia Islamia (JMI)	22	21	21	64
5.	Aligarh Muslim University (AMU)	22	21	20	63
6.	Central University of Punjab (CUPB)	18	18	17	53
7.	Babasaheb Bhimrao Ambedkar University (BBAU)	17	17	16	50

In the above Table 4, reveals that DU, JNU, and BHU exhibit superior digital readiness and service excellence, driven by advanced infrastructure, user-oriented services, and research facilitation mechanisms. JMI and AMU demonstrate competitive digital development, though scope exists for strengthening advanced research services. BBAU and CUPB occupy lower ranks, primarily due to limited advanced tools, restricted scholarly publishing support, and comparatively weaker digital ecosystems.

4.4. Integrated Evaluation of Bibliographical Databases, Automation Systems, and Web-Based Learning Resources

Table 5 below systematically evaluates digital infrastructure components, bibliographical database coverage, automation platforms, and web-enabled learning support services across seven major Central University Libraries.

Table 5: Integrated Digital Infrastructure and Web-Based Learning Support Systems

University Name	Bibliographic al Databases	No. of Databases	Web OPAC	Library Automation Software	Web Pages / Videos / PDFs / Flash Tutorials
Banaras Hindu University (BHU) (<i>Sayaji Rao Gaekwad Central Library</i>)	Yes	80+	Yes	SOUL	Yes
University of Delhi (DU) (<i>Central Reference Library</i>)	Yes	140+	Yes	LibSys	Yes
Jawaharlal Nehru University (JNU) (<i>Dr.</i>	Yes	83+	Yes	VTLS	Yes

<i>B.R. Ambedkar Central Library)</i>					
Jamia Millia Islamia (JMI) (<i>Dr. Zakir Husain Library</i>)	Yes	49+	Yes	LibSys	Yes
Aligarh Muslim University (AMU) (<i>Maulana Azad Library</i>)	Yes	100+	Yes	LibSys	Yes
Babasaheb Bhimrao Ambedkar University (BBAU) (<i>Gautam Buddha Central Library</i>)	Yes	35+	Yes	KOHA	Yes
Central University of Punjab (CUPB) (<i>Dr. S.R. Ranganathan Central Library</i>)	Yes	40+	Yes	KOHA	Yes

4.5. Institutional Digital Capability Assessment in Libraries

The assessment critically examines how effectively libraries integrate digital tools, research facilitation services, and support mechanisms to enhance scholarly productivity and user engagement. By identifying institutional strengths alongside operational gaps and service limitations, the analysis offers strategic insights into existing disparities, developmental challenges, and potential areas for digital transformation. Table 5, below, indicates the key strengths and Major gaps in (DRUSS).

Table 5: Key Strengths and Major Gaps in Digital Resources & User Support Services

University & Central Library	Key Strengths (Digital Resources & User Support Services)	Major Gaps & Identified Problems
Banaras Hindu University (BHU) (<i>Sayaji Rao Gaekwad Central Library</i>)	- Extensive access to national and international e-resources (e-ShodhSindhu, Scopus, WoS) - Well-established institutional repository and remote access facility - Regular digital literacy and plagiarism awareness programs - Strong collection of multimedia and research databases	- Complex website navigation and fragmented service architecture - Absence of structured research consultation booking system - Limited research data management (RDM) services - Lack of real-time virtual reference support (chat-based helpdesk)
University of Delhi (DU) (<i>Central Reference Library</i>)	- Highly advanced digital infrastructure and discovery service - Comprehensive research support ecosystem including citation tools, plagiarism checking and open-access platforms	- Fragmented access portals leading to user navigation challenges - Absence of integrated research workflow management system - Limited AI-based discovery and recommender tools

	• Robust training and scholarly publishing guidance mechanisms	• No centralized research data service framework
Jawaharlal Nehru University (JNU) (Dr. B.R. Ambedkar Central Library)	• Strong institutional repository and open-access infrastructure • Advanced remote access facilities • Well-organized digital literacy training modules • Effective research facilitation mechanisms	• Lack of real-time virtual reference services • Limited personalized research consultation services • Weak mobile responsiveness of digital platforms • Absence of data visualization and analytics support
Jamia Millia Islamia (JMI) (Dr. Zakir Husain Library)	• Well-developed digital collections and access platforms • Strong digital literacy and training initiatives • Active remote user support services	• Limited personalized research advisory services • Weak interactive digital reference support • Absence of structured research data management policies • Limited scholarly publishing advisory mechanisms
Aligarh Muslim University (AMU) (Maulana Azad Library)	• One of the largest hybrid digital ecosystems in India • Advanced digital manuscript and rare collection repositories • Strong scholarly communication and publishing support • Robust institutional repository infrastructure	• Outdated website interface design affecting usability • Absence of AI-driven discovery and recommender services • Limited integration of research analytics dashboards • Weak centralized research workflow platforms
Babasaheb Bhimrao Ambedkar University (BBAU) (Gautam Buddha Central Library)	• Standard national-level e-resource access through e-ShodhSindhu • Functional remote access facilities • Operational institutional repository	• Absence of structured research support services • No research consultation or scholarly communication advisory services • Limited user training and capacity-building programs • No research data management or virtual reference system
Central University of Punjab (CUPB) (Dr. S.R. Ranganathan Central Library)	• Modern library automation system • Good digital orientation and training programs • Standard access to major e-resource platforms	• Limited advanced research facilitation services • Absence of data analytics and visualization tools • Weak scholarly publishing guidance framework • No AI-based discovery or user personalization tools

5. MAJOR FINDINGS OF THE STUDY

Through its extensive analysis of seven Central University Libraries located in North India, the research study delivers essential findings about the present condition of digital resources, together with user support services.

- The research study demonstrates substantial differences in digital infrastructure between DU and JNU and BHU, which represent the high maturity group and BBAU and CUPB, which represent the low maturity group and JMI and AMU, which function as transitional institutions between these two groups.
- The research findings show that DU, JNU, BHU and AMU provide advanced research databases together with discovery platforms, while BBAU and CUPB only offer limited access to these resources, which demonstrates their inadequate research support capabilities as developing universities.
- The library websites at DU and JNU provide highly structured interactive digital interfaces, while the systems at BHU, JMI and AMU function at a moderate level, and BBAU and CUPB display weak static digital systems, which decrease user engagement with their platforms.
- DU, JNU, BHU and AMU provide complete user support services, which include research consultation and citation guidance and publishing advisory services, while JMI and CUPB offer some services that BBAU does not provide, which creates discrepancies in academic support systems.
- DU, JNU, BHU and AMU possess institutional repositories that demonstrate strong content capacity, whereas JMI maintains moderate repository strength, and BBAU and CUPB maintain restricted content resources, which hinder research visibility for their respective institutions.
- All universities use Web OPAC and automation systems, but DU and JNU lead in next-generation system integration, while BHU, JMI and AMU show intermediate progress, and BBAU and CUPB exhibit foundational development.
- The digital literacy training programs in DU, JNU and BHU operate through structured systems, which JMI and AMU use to implement their programs, while BBAU and CUPB ineffectively execute their programs.
- The universities lack advanced technologies, which include AI discovery tools, analytics dashboards and virtual reference chatbots, except for the early-stage readiness, which DU and JNU display.
- The research facilitation mechanisms at DU and JNU offer strong support, while BHU, JMI and AMU provide partial support, and BBAU and CUPB lack most of their research facilities, which demonstrate the different stages of research ecosystem development.
- The Central University Library Digital Excellence Ranking analysis shows clear academic group divisions, which begin at the top with DU, JNU and BHU and then move down to the moderate group of JMI and AMU and finally end at the developing group of BBAU and CUPB, which creates a digital gap among Central University Libraries in North India.

5.1. Major Suggestions for University Library System

Based on the major findings and institutional positioning data available on their websites, the following targeted, realistic, and impact-driven recommendations are proposed to strengthen digital ecosystems across Central University Libraries of North India:

- The Central University Libraries of North India will gain strength through digital ecosystem development, which will occur by implementing specific recommendations that match their institutional strengths and website available data, which shows their major research outcomes.
- The three universities of DU, JNU and BHU need to pursue digital transformation through next-generation strategies, which will enable them to compete academically at global standards through AI-powered discovery tools, research analytics dashboards, smart OPAC systems and customized user support.
- JMI and AMU must upgrade their existing digital infrastructure by integrating advanced research facilitation services, data management platforms, and scholarly publishing advisory units to bridge the maturity gap with leading institutions.
- BBAU and CUPB need to build their entire digital capabilities, which include infrastructure development, database growth, organized research assistance and employee training programs to achieve national standards.
- All universities should establish centralized Research Data Management (RDM) units to support open science, data preservation, compliance, and institutional research visibility.
- BBAU and CUPB need to update their Integrated Library Management Systems (ILMS), while DU JNU and BHU should implement AI-powered smart library systems that operate on cloud technology.
- BBAU CUPB and JMI should establish digital literacy programs which teach students to manage citations and understand plagiarism, together with scholarly writing skills.
- All seven universities need to install virtual reference services and real-time chatbots and 24×7 digital helpdesks to provide uninterrupted research support.
- The development of mobile-friendly library portals and unified access dashboards needs to occur in AMU, BHU, BBAU and CUPB to improve user experience and increase user participation.
- All library professionals in every institution need to participate in ongoing professional development programs that teach them about AI tools and data analytics, digital preservation, and research support technologies.
- Central University Libraries need to establish regular digital service tests and benchmarking assessments, and user feedback systems to maintain their quality improvement efforts and their responsibility to their users.

6. CONCLUSION

The present study provides a systematic assessment of digital resources and user support services across selected Central University Libraries in India, which shows major discrepancies between the libraries' digital development and their ability to provide operational services. The leading institutions operate strong e-resource systems together with their institutional repositories and training programs, while multiple universities face challenges due to their insufficient research support services, ineffective user outreach systems and their need to use outdated online systems. The study highlights areas where these libraries are lacking: Advanced research support, AI-powered discovery tools, Data management, and interactive

help for users. The study concludes that these academic libraries need to transform fast. They must develop their capabilities by implementing new policies. Libraries need to improve resources and user support services. The digital transformation is necessary for libraries to provide services.

REFERENCES

- Arunkumar, V. (2025). Empowering Users with Reading Disabilities: An Analysis of Assistive Technologies and Services in University Libraries in Kerala. *Department of Library and Information Science*, 106.
- Bharathi, K., & Sujatha, H. R. (2019). Utilization of the digital information resources and services provided in the Engineering college libraries in Karnataka, India: User's perspective. *Library Philosophy and Practice*, 1-30.
- Bharti, K. L., & Verma, S. (2021). Use of Emerging Technologies in the University Libraries: A Study of Review of Literature. *Library Philosophy & Practice*.
- Das, A. K. (2008). *Open access to knowledge and information: scholarly literature and digital library initiatives-the South Asian scenario*. UNESCO, New Delhi.
- Dadhe, P. P., & Dubey, M. N. (2020). Library Services Provided During COVID-19 Pandemic: Content Analysis of Websites of Premier Technological Institutions of India. *Library Philosophy & Practice*.
- Gumede, L. E. (2021). *Exploring undergraduate students' use and experience of online library resources: a case study of a University of Technology* (Doctoral dissertation).
- Haridasan, S., & Firdaus, S. (2021). Application of web-based sources and services for sustainable development in university libraries. *Library Philosophy and Practice*, 1-16.
- Islam, M. M. (2019). *Use of digital library software for building institutional repository in public and private university libraries of Bangladesh: a study* (Doctoral dissertation, University of Dhaka).
- Kumar, R. (2025). Utilization of E-Resources in University Libraries: A Survey-Based Analysis of User Behavior and Preferences. *International Journal of Research in Library Science (IJRLS)*, 11(3), 63-76.
- Kumar, A. & Sharma, A, "Observation Method: A Review Study" (2023). *Library Philosophy and Practice* (e-journal). 7820. <https://digitalcommons.unl.edu/libphilprac/7820>
- Kumar, A. & Walia, Prof. Paramjeet Kaur, "E-learning through e-PG Pathshala Portal in the Digital Age" (2023). *Library Philosophy and Practice* (e-journal). 7738. <https://digitalcommons.unl.edu/libphilprac/7738>
- Makate, M. G. (2022). *Usage of library electronic resources by students at North West University, Vaal Triangle Campus, South Africa* (Master's thesis, University of South Africa (South Africa)).
- Mishra, R. (2016). A study of library uses and services in Central Universities of North-East, India.
- Munshi, S. A., Biswas, A., & Barsha, S. (2025). Librarians' self-efficacy in digital literacy skills: An investigation of librarians working in libraries of government-aided colleges in West Bengal. *Science & Technology Libraries*, 44(1), 14-28.
- Raina, A. A., Bali, A., & Ashaq, M. (2025). Evaluating the impact of library usage on academic performance and student satisfaction: A case study of Government Degree College Thannamandi.
- Rafique, A., Ameen, K., & Arshad, A. (2025). Academic community's use of university digital library and their searching behaviour. *Global Knowledge, Memory and Communication*, 74(9-10), 3080-3099.

- Singh, N. K. (2012). Digital reference service in university libraries: A case study of the Northern India. *International Journal of Library and Information Studies*, 2(4), 1-17.
- Sinha, M. K., Bhattacharjee, S., & Bhattacharjee, S. (2013). A study on ICT literacy and internet use pattern among college library users of Barak Valley, South Assam, North East India. *Current Trends in Technology and Science*, 2(5), 301-316.
- Tripathi, S., Bhushan, C., & Upreti, N. C. (2025). Empowering education and research: Unveiling the dynamic influence of digital libraries and information centres. In *AIP Conference Proceedings* (Vol. 3224, No. 1, p. 020015). AIP Publishing LLC.
- Wagay, J. A., & Dutta, S. (2024). Utilization of electronic resources: an analysis of awareness and perception of users of Kashmir University. *Information Discovery and Delivery*, 52(2), 138-148.