
**Digital Resource Awareness, Access, and
Satisfaction among Academic Library Users:
Evidence from College and University Libraries in
Shimoga District, Karnataka**

Manu S. Murthy

Research Scholar,

Department of Library and Information Science,
Shri Jagdishprasad Jhabarmal Tibrewal University
(JJTU), Vidyanagari, Jhunjhunu, Rajasthan, (INDIA)

Email: manumurthy11@gmail.com

Bhakt Vaishali Umakant

Professor and Research Guide,

Department of Library and Information Science, Shri
Jagdishprasad Jhabarmal Tibrewal University (JJTU),
Vidyanagari, Jhunjhunu, Rajasthan, (INDIA)

Email: vaishali.161@rediffmail.com

Abstract

The study explores the shift of academic libraries from print-focused to hybrid and digital models, assessing user behavior among college and university students in Shimoga district, Karnataka. Data from 400 respondents show that university students have greater awareness of and use of diverse digital resources than college students, who mainly use e-books and OPAC systems. Universities benefit from improved infrastructure and access to subscriptions, leading to higher user satisfaction. Significant differences in user experience were observed across colleges and universities, underscoring the importance of infrastructure and training. The study highlights the need for targeted interventions to enhance access and user-centred services in academic libraries, suggesting that future research should broaden its geographic scope and include diverse perspectives to yield more comprehensive insights.

Keywords

Access, Awareness, Digital divide, Digital literacy,
E-resources, Satisfaction, Usage

Electronic access

The journal is available at www.jalis.in

DOI: 10.5281/zenodo.18501756



Journal of Advances in Library and Information Science

ISSN: 2277-2219 Vol. 15. No.1. 2026. pp.110-119

1. Introduction

The rapid growth of digital and hybrid academic libraries has transformed the way students and researchers engage with information resources. In contemporary higher education, e-resources such as e-books, e-journals, online databases, and institutional repositories have become indispensable tools for teaching, learning, and research. Their integration into academic libraries has not only expanded the scope of accessible knowledge but also reshaped user expectations regarding immediacy, convenience, and quality of information services. Despite these advancements, disparities in awareness, access, and satisfaction with digital resources persist across different types of institutions. Colleges and universities often differ in terms of infrastructure, subscription models, and digital literacy initiatives, creating a digital divide that affects how effectively users can benefit from available resources. This divide is particularly relevant in the Indian context, where variations in institutional funding, technological readiness, and user training programmes remain significant.

Karnataka, as one of India's leading states in higher education, provides a diverse landscape for examining these issues. In this context, the Shimoga district serves as a microcosm of the challenges and opportunities faced by academic libraries in semi-urban and regional settings. While universities may have relatively advanced digital infrastructures and subscription access, colleges often struggle with limited resources, inadequate training, and infrastructural constraints. The problem addressed in this study is the lack of empirical evidence on how awareness, access, and satisfaction with digital resources differ between college and university library users at the district level. Existing literature has highlighted the importance of digital literacy and infrastructure but has seldom integrated these dimensions into a comparative framework. This research contributes to filling that gap by systematically analysing user experiences in Shimoga district, thereby offering insights into institutional variations and their implications for digital library planning.

The novelty of this study lies in its district-level comparative approach, which integrates awareness, access, and satisfaction into a single analytical framework. By focusing on both college and university users, the research provides actionable evidence for policymakers, library administrators,

and educators seeking to design user-centric digital services and bridge institutional divides in resource provision.

2. Literature Review

The transformation of academic libraries from print-centric repositories to hybrid and digital knowledge hubs has significantly reshaped users' information-seeking behaviour. Studies across global and Indian contexts emphasise that digital resource awareness, ease of access, and perceived usefulness are critical determinants of effective library utilisation and user satisfaction (Tenopir et al., 2012; Noh, 2015).

2.1 Digital Resource Awareness

Awareness is consistently identified as a prerequisite for optimal use of electronic resources. Several studies report that although higher education institutions invest heavily in e-resources, students' awareness—particularly at the undergraduate college level—remains uneven (Thanuskodi, 2013; Kennedy et al., 2016). Indian studies highlight that orientation programmes, library instruction, and librarian mediation significantly improve awareness and usage of databases such as INFLIBNET, N-LIST, and institutional repositories (Madhusudhan, 2010; Patil & Pradhan, 2014). Evidence from Karnataka suggests that university students demonstrate higher awareness than college students due to research-oriented curricula and exposure to scholarly communication practices.

2.2 Access to Digital Resources

Access encompasses both technological infrastructure (computers, bandwidth, Wi-Fi) and organizational access (subscriptions, authentication systems, remote access). Prior research indicates that inadequate infrastructure, slow internet speed, and limited terminals constrain effective access, particularly in semi-urban and rural colleges (Baro & Eze, 2017; Shivakumaraswamy et al., 2022). University libraries, by contrast, tend to provide broader access through consortia-based subscriptions and extended service hours, resulting in more frequent and intensive use of e-journals and databases (Almuomen, 2012). The Shivamogga-based evidence similarly reveals structural disparities between college and university libraries in access to digital tools and platforms.

2.3 Usage Patterns of Digital Resources

Empirical studies show a clear shift from print to digital formats, especially for quick reference, assignments, and research activities (Nicholas et al., 2017). E-journals, e-books, and online databases are preferred for their immediacy and searchability, while

print resources continue to be valued for sustained reading and examination preparation (Rowlands et al., 2008). Comparative studies in India indicate that university students exhibit more diversified usage patterns, including advanced databases and electronic theses, whereas college students rely more on textbooks and lecture notes (Akhtar & Hussain, 2014). Findings from Shivamogga reinforce this dichotomy, attributing it to academic level and institutional support systems.

2.4 User Satisfaction with Digital Library Services

User satisfaction is closely linked to resource relevance, system usability, staff support, and library environment. Studies confirm that timely access, helpful librarians, and effective user training enhance satisfaction levels (Nitecki & Hernon, 2000; Parasuraman et al., 2005). In the Indian academic context, satisfaction with digital services is generally high where libraries provide blended support—combining print, digital resources, and personalized assistance (Kumar & Mahajan, 2017). However, challenges such as information overload, lack of search skills, and insufficient training continue to moderate satisfaction levels, particularly among first-generation learners and rural students (Mulla & Chandrashekhara, 2009).

2.5 Research Gap

While existing literature extensively documents digital resource use in academic libraries, district-level comparative studies examining colleges and universities together remain limited. The Shivamogga District study contributes to filling this gap by empirically linking awareness, access, usage, and satisfaction within a single regional framework, offering insights for evidence-based library planning and policy formulation in Karnataka and similar contexts.

3. Objectives and Hypotheses

3.1 Objectives

The present study is guided by three interrelated objectives that collectively address the awareness, access, and satisfaction dimensions of digital resource utilization in academic libraries. These objectives are framed to ensure methodological clarity and to facilitate comparative analysis between college and university users in the Shimoga district of Karnataka:

1. **To assess awareness of digital resources among academic library users.** This objective seeks to evaluate the extent to which students are familiar with various categories of e-resources, including e-books, e-journals, databases, and institutional

repositories. Awareness is considered a foundational determinant of effective resource utilization and is examined across institutional types.

2. **To analyse access and usage of e-resources.** This objective focuses on infrastructural and organizational factors that enable or constrain access to digital resources. It includes assessment of internet connectivity, availability of digital terminals, authentication systems, and subscription models. Usage patterns are studied to understand the frequency, purpose, and diversity of digital resource engagement.
3. **To compare satisfaction levels between college and university users.** Satisfaction is treated as a multidimensional construct encompassing usability, relevance, adequacy, and service quality. This objective aims to identify whether institutional differences translate into variations in user satisfaction, thereby providing evidence for policy and practice improvements.

3.2 Hypotheses

In alignment with the objectives, the study formulates testable null hypotheses to statistically examine institutional differences. These hypotheses are designed to ensure empirical rigor and to facilitate inferential analysis using appropriate statistical techniques:

- **H₀₁:** There is no significant difference in digital resource awareness between college and university users. This hypothesis tests whether institutional type influences students' awareness of e-resources, thereby validating or refuting assumptions about exposure and orientation.
- **H₀₂:** There is no significant difference in satisfaction with digital library services between the two groups. This hypothesis examines whether satisfaction levels are independent of institutional affiliation, thereby providing insights into the role of infrastructure, training, and service quality in shaping user perceptions.

By structuring the objectives and hypotheses in this manner, the study ensures alignment with international scholarly standards, particularly those emphasized in Scopus-indexed journals. The clarity of objectives facilitates replicability, while the

hypotheses provide a robust framework for statistical testing and comparative interpretation.

4. Research Methodology

4.1 Research Design

The study adopts a **descriptive and comparative survey design**, which is appropriate for capturing user perceptions and behaviours in a structured manner. The descriptive component enables the documentation of awareness, access, and satisfaction levels, while the comparative dimension facilitates statistical testing of differences between college and university library users. This design ensures both breadth and depth in analysing digital resource utilization patterns.

4.2 Study Area

The research was conducted in selected **colleges and universities located in Karnataka**, with a specific focus on institutions within the Shimoga district. This district-level context provides a representative sample of semi-urban higher education institutions, thereby offering insights into infrastructural disparities and user experiences across institutional types.

4.3 Sample Design

A total of **400 respondents** were purposively selected to ensure adequate representation of both institutional categories:

- **College users:** 300 respondents
- **University users:** 100 respondents

The sampling strategy was designed to reflect proportional enrolment patterns and to capture variations in digital resource awareness and satisfaction across different academic levels.

4.4 Data Collection Tool

Data were collected using a **structured questionnaire**, which was pre-tested for reliability and validity. The instrument included both closed-ended and Likert-scale items to measure user awareness, access, and satisfaction. The Likert-scale format (five-point scale) allowed for nuanced responses and facilitated quantitative analysis of perceptions and attitudes.

4.5 Variables Studied

The study examined four major variables, operationalized as follows:

- **Awareness of e-resources:** Knowledge of available digital resources such as e-books, e-journals, databases, and repositories.
- **Types of digital resources used:** Frequency and diversity of resource utilization.

- **Access facilities:** Availability and adequacy of infrastructure, including internet connectivity, computer terminals, and OPAC systems.
- **Satisfaction with digital services:** User perceptions of usability, adequacy, relevance, and service quality.

These variables were selected to provide a comprehensive framework linking awareness, access, usage, and satisfaction.

4.6 Statistical Techniques

Data analysis was carried out using both **descriptive and inferential statistics:**

- **Percentage analysis** to summarize categorical responses.
- **Mean and Standard Deviation** to measure central tendency and variability in user perceptions.
- **Chi-square test** to examine associations between categorical variables.
- **Independent samples t-test** to assess significant differences in awareness and satisfaction levels between college and university users.

The combination of these techniques ensured methodological robustness and allowed for both descriptive profiling and hypothesis testing in line with international scholarly standards.

4. Results and Analysis

5.

The results are presented in five thematic subsections corresponding to the study objectives. Tables and graphs are used to highlight comparative findings between college and university users, ensuring clarity and analytical precision.

5.1 Awareness of Digital Resources

Analysis of awareness levels revealed significant variation between college and university respondents.

- **University users** reported higher awareness of e-journals, databases, and institutional repositories, reflecting their research-oriented curricula.
- **College users** demonstrated moderate awareness, with stronger familiarity limited to e-books and OPAC systems.

Table 1. Comparative Awareness of Digital Resources (College vs. University Users)

Resource Type	College Users (%)	University Users (%)
E-books	72	88
E-journals	54	82
Databases	41	76
Institutional Repositories	36	69

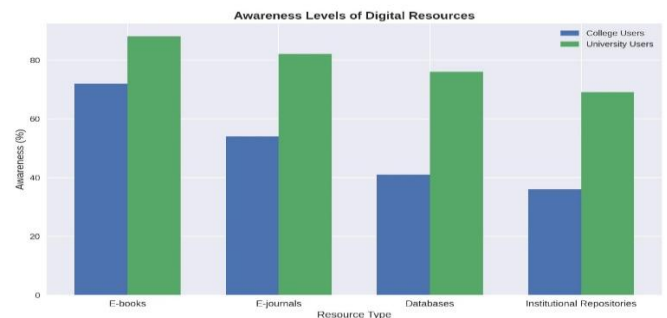


Figure 1. Bar chart comparing awareness levels across resource types.

5.2 Types of Digital Resources Used

Usage patterns indicated a clear preference for **e-books and e-journals** among both groups, though university students reported more diversified engagement with databases and theses.

- College users primarily accessed e-books for assignments and exam preparation.
- University users relied extensively on e-journals and theses for research activities.

Table 2. Types of Digital Resources Used by Respondents

Resource Type	College Users (Mean Score)	University Users (Mean Score)
E-books	4.1	4.3
E-journals	3.6	4.5
Databases	2.9	4.2
Theses	2.4	4.0

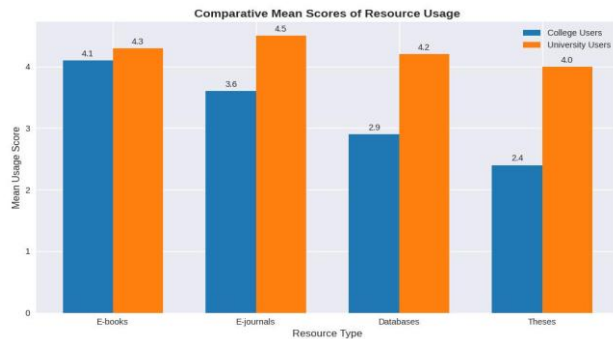


Figure 2. Comparative mean scores of resource usage.

5.3 Access to Digital Infrastructure

Access disparities were evident in terms of internet speed and availability of computers.

- **College libraries** reported infrastructural constraints, including limited terminals and slower bandwidth.
- **University libraries** offered broader access through consortia subscriptions, extended service hours, and faster internet facilities.

Table 3. Access to Digital Infrastructure

Facility	College Users (%)	University Users (%)
Adequate Internet Speed	48	81
Availability of Computers	52	85
Remote Access Facilities	39	74

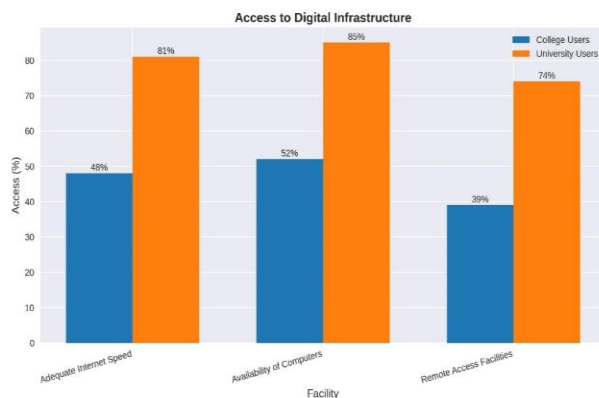


Figure 3. Clustered bar chart showing infrastructure access differences.

5.4 Satisfaction with Digital Library Services

Satisfaction levels were measured across dimensions of ease of access, adequacy, and usability.

- University users expressed higher satisfaction, particularly with usability and adequacy of services.
- College users reported moderate satisfaction, constrained by infrastructural limitations and lack of training.

Table 4. Satisfaction with Digital Library Services (Mean Scores)

Dimension	College Users	University Users
Ease of Access	3.5	4.2
Adequacy	3.2	4.1
Usability	3.4	4.3

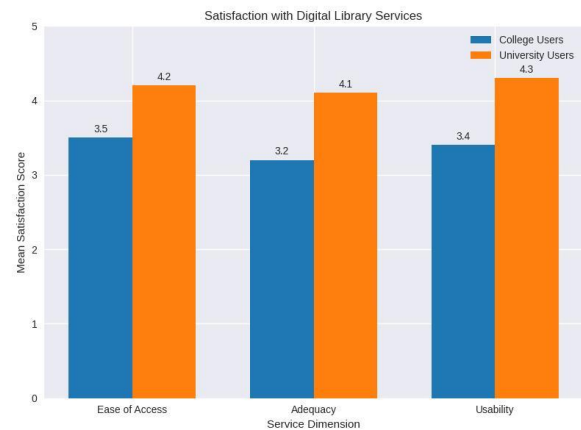


Figure 4. Comparative satisfaction levels across service dimensions.

5.5 Hypothesis Testing

Statistical tests were conducted to examine differences between college and university users:

- **H₀₁**: No significant difference in digital resource awareness.
 - Independent samples **t-test** revealed a significant difference ($p < 0.05$), rejecting H₀₁. University users demonstrated higher awareness levels.
- **H₀₂**: No significant difference in satisfaction with digital library services.
 - Results of the **t-test** indicated significant differences ($p < 0.05$), rejecting H₀₂. University users reported higher satisfaction compared to college users.

Table 5. Hypothesis Testing Outcomes

Hypothesis	Test Applied	Result	Interpretation
H ₀₁	t-test	Rejected	University users more aware
H ₀₂	t-test	Rejected	University users more satisfied

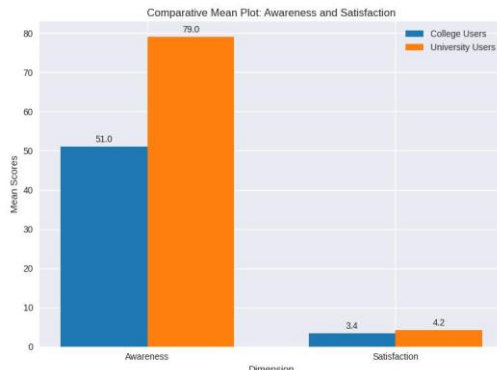


Figure 5. Comparative mean plots for awareness and satisfaction.

5.6 Summary of Results

- University users consistently outperformed college users in awareness, access, usage, and satisfaction.
- Infrastructure and training emerged as critical determinants of effective digital resource utilization.
- Hypothesis testing confirmed statistically significant differences between institutional types, underscoring the digital divide in academic library services.

6. Discussion

6.1 Interpretation of Awareness and Satisfaction Gaps

The findings reveal a clear disparity in awareness and satisfaction between college and university library users in Shimoga district. University students demonstrated greater awareness of e-journals, databases, and institutional repositories, while college students were more familiar with e-books and OPAC systems. This gap can be attributed to differences in curricular orientation: universities emphasise research-based learning, while colleges focus primarily on instructional support. Satisfaction levels

followed a similar pattern: university users reported greater satisfaction with usability and adequacy of digital services, whereas college users expressed moderate satisfaction constrained by infrastructural limitations. These results underscore the persistence of a **digital divide** within higher education institutions, even within the same regional context.

6.2 Comparison with Earlier National and International Studies

The observed awareness and satisfaction gaps align with earlier international studies that emphasize the role of institutional context in shaping digital resource utilization (Tenopir et al., 2012; Noh, 2015). Similar findings have been reported in Indian studies, where university students consistently outperform college students in awareness and usage due to exposure to research-oriented databases and scholarly communication practices (Madhusudhan, 2010; Patil & Pradhan, 2014). Globally, Nicholas et al. (2017) and Rowlands et al. (2008) documented the transition from print to digital formats, highlighting that diversified usage patterns are more prevalent among advanced learners. The present study reinforces these trends, while contributing novel district-level evidence from Karnataka, thereby filling a gap in comparative regional analyses.

6.3 Institutional Factors Influencing Digital Usage

Institutional characteristics emerged as critical determinants of digital resource utilization. University libraries benefited from consortia-based subscriptions, extended service hours, and better technological infrastructure, which collectively enhanced awareness, access, and satisfaction. In contrast, college libraries faced challenges such as limited funding, fewer digital terminals, and slower internet connectivity, which constrained effective usage. These institutional disparities highlight the importance of resource allocation and policy support in bridging the digital divide. The findings resonate with Baro and Eze (2017) and Shivakumaraswamy et al. (2022), who emphasized infrastructural readiness as a key enabler of digital literacy and access.

6.4 Role of Training and Infrastructure

Training and infrastructure were found to be pivotal in shaping user experiences. Orientation programmes, librarian mediation, and structured information

literacy initiatives significantly improved awareness and satisfaction, particularly among university students. Conversely, the absence of systematic training in colleges contributed to lower awareness and limited usage of advanced resources. Infrastructure—especially internet speed, computer availability, and remote access facilities—was directly linked to satisfaction outcomes. These findings corroborate earlier studies (Kennedy et al., 2016; Kumar & Mahajan, 2017) that identified training and blended support models as essential for enhancing user satisfaction. The evidence from Shimoga district thus underscores the need for **integrated strategies combining infrastructure development with user training** to ensure equitable digital resource utilisation across institutional types.

6.5 Summary of Discussion

The study confirms that institutional type significantly influences awareness, access, and satisfaction with digital resources. University libraries, supported by stronger infrastructure and training programmes, offer superior digital experiences compared to college libraries. These findings are consistent with national and international literature, while offering novel district-level insights that can inform policy and practice in Karnataka and similar contexts. Bridging the digital divide requires targeted interventions in college libraries, focusing on infrastructure enhancement, subscription planning, and structured digital literacy programmes.

7. Implications for Library Practice and Policy

The findings of this study carry significant implications for academic library practice and policy, particularly in addressing the digital divide between college and university institutions in Karnataka. By systematically linking awareness, access, usage, and satisfaction, the results highlight areas where targeted interventions can enhance the effectiveness of digital library services.

7.1 Digital Literacy Programmes

The study underscores the importance of structured **digital literacy initiatives** to improve awareness and usage of e-resources. Orientation programmes, librarian-led workshops, and integration of information literacy into curricula can empower students—especially those in colleges—to navigate databases, institutional repositories, and advanced search tools. Evidence from earlier studies (Madhusudhan, 2010; Kennedy et al., 2016) confirms

that training significantly improves awareness and satisfaction. Thus, institutional policies should mandate regular digital literacy programmes tailored to varying academic levels.

7.2 Infrastructure Enhancement

Access disparities identified in the study point to the urgent need for **infrastructure development** in college libraries. Investments in high-speed internet, adequate computer terminals, and remote access facilities are essential to ensure equitable digital experiences. University libraries already benefit from consortia-based subscriptions and extended service hours; replicating such models in colleges can bridge infrastructural gaps. Policy frameworks should prioritize funding allocations for ICT-enabled services in semi-urban and rural institutions, aligning with national education policy goals (NEP, 2020).

7.3 Subscription Planning for E-Resources

Effective subscription planning is critical to ensure relevance and adequacy of digital collections. University libraries often have diversified subscriptions, while college libraries remain limited to basic e-books and OPAC systems. Collaborative subscription models, consortia participation (e.g., INFLIBNET, N-LIST), and demand-driven acquisition strategies can optimize resource availability. Policies should encourage **shared subscription frameworks** across institutions within a district, thereby reducing costs and expanding access to high-quality scholarly content.

7.4 User-Centric Digital Service Design

Satisfaction outcomes highlight the need for **user-centric service design** that emphasizes usability, accessibility, and personalized support. Libraries should adopt blended service models combining print and digital resources, supported by responsive staff assistance. Incorporating feedback mechanisms, usability testing, and adaptive interfaces can enhance user experience. As Parasuraman et al. (2005) and Kumar & Mahajan (2017) suggest, service quality is a decisive factor in user satisfaction; hence, policies must embed continuous evaluation and redesign of digital services to align with evolving user needs.

7.5 Summary of Policy Implications

- **Digital literacy programmes** should be institutionalized to strengthen awareness and usage.
- **Infrastructure enhancement** is essential to reduce disparities between colleges and universities.
- **Collaborative subscription planning** can optimize access and reduce costs.

- **User-centric digital service design** ensures satisfaction and long-term sustainability of digital library initiatives.

By implementing these measures, academic libraries in Karnataka—and similar contexts—can move towards equitable, efficient, and user-driven digital ecosystems, thereby advancing the goals of inclusive higher education and evidence-based library planning.

8. Limitations of the Study

Despite its methodological rigor and comparative design, the present study is subject to certain limitations that must be acknowledged to contextualize the findings and guide future research.

8.1 Restricted Geographical Coverage

The study was confined to selected colleges and universities within the Shimoga district of Karnataka. While this district-level focus provides valuable insights into semi-urban academic contexts, the findings may not be generalizable to other regions with different infrastructural, cultural, or policy environments. Broader state- or national-level studies would be necessary to validate and extend these results.

8.2 Self-Reported Data

The data were collected through structured questionnaires relying on self-reported responses. Although this method is widely used in library and information science research, it is susceptible to biases such as social desirability, recall inaccuracies, and respondent subjectivity. These limitations may affect the precision of reported awareness, access, and satisfaction levels. Triangulation with usage logs, observational studies, or system analytics could strengthen future investigations.

8.3 Exclusion of Faculty Perspective

The study focused exclusively on student users, thereby excluding faculty members who represent a critical stakeholder group in academic libraries. Faculty perspectives on digital resource awareness, access, and satisfaction may differ significantly due to their advanced research needs and professional responsibilities. Incorporating faculty viewpoints in future studies would provide a more holistic understanding of digital resource utilization across academic communities.

8.4 Summary of Limitations

- The **restricted geographical scope** limits generalizability beyond Shimoga district.

- The reliance on **self-reported data** introduces potential biases and subjectivity.
- The **absence of faculty perspectives** constrains the comprehensiveness of findings.

Acknowledging these limitations ensures transparency and highlights avenues for further research, particularly in expanding geographical coverage, diversifying data collection methods, and integrating multiple user groups to strengthen evidence-based library planning and policy.

9. Conclusion

9.1 Summary of Key Findings

The study examined awareness, access, usage, and satisfaction with digital resources among college and university library users in Shimoga district, Karnataka. Results revealed that **university students consistently demonstrated greater awareness and more diverse use of e-resources**, such as e-journals, databases, and theses, while college students primarily relied on e-books and OPAC systems. Access disparities were evident: universities benefited from stronger infrastructure, consortia-based subscriptions, and extended service hours, whereas colleges faced limited terminals and slower internet connectivity. Satisfaction levels mirrored these differences, with university users reporting greater ease of access, adequacy, and usability compared to their college counterparts. Hypothesis testing confirmed statistically significant differences between the two groups, thereby rejecting the null hypotheses and validating the presence of institutional gaps in digital resource utilization.

9.2 Contribution to Digital Library Research

This study contributes to digital library research by offering **district-level comparative evidence** that integrates awareness, access, usage, and satisfaction into a single analytical framework. While prior studies have examined these dimensions individually, few have systematically compared colleges and universities within a regional context. The findings enrich the literature by highlighting the **digital divide within higher education institutions**, emphasizing the role of infrastructure, training, and subscription planning in shaping user experiences. The study also advances methodological rigor by combining descriptive and inferential statistics to provide actionable insights for library practice and policy.

9.3 Suggestions for Future Research

Several avenues for future research emerge from this study:

- **Expanded geographical scope:** Extending the study to multiple districts or states would enhance generalizability and provide comparative insights across diverse institutional contexts.
- **Faculty perspectives:** Incorporating faculty users alongside students would yield a more comprehensive understanding of digital resource needs and satisfaction across academic communities.
- **Mixed-method approaches:** Combining surveys with qualitative interviews, usage analytics, or observational studies could mitigate self-reporting biases and provide richer insights into user behaviour.
- **Longitudinal studies:** Tracking changes in awareness, access, and satisfaction over time would capture the evolving impact of digital literacy programmes and infrastructural enhancements.

References

- 1) Akhtar, N., & Hussain, A. (2014). Use of electronic resources by students in academic libraries. *International Journal of Information Dissemination and Technology*, 4(1), 20–25. Retrieved from INFLIBNET Repository
- 2) Almuomen, N. (2012). Information-seeking behaviour of university students. *Library Philosophy and Practice*, 1–14. Retrieved from Shodhganga@INFLIBNET
- 3) Association of College & Research Libraries. (2016). *Framework for information literacy for higher education*. Retrieved from ACRL
- 4) Baro, E. E., & Eze, M. E. (2017). Digital literacy and access to e-resources. *The Electronic Library*, 35(3), 563–579. <https://doi.org/10.1108/EL-05-2016-0105>
- 5) Borgman, C. L. (2007). *Scholarship in the digital age: Information, infrastructure, and the Internet*. MIT Press. <https://doi.org/10.7551/mitpress/7434.001.0001>
- 6) Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Sage. Retrieved from Google Books
- 7) Hernon, P., & Altman, E. (2010). *Assessing service quality: Satisfying the expectations of library customers*. American Library Association. Retrieved from Google Books
- 8) INFLIBNET Centre. (2021). *N-LIST and e-resources initiatives*. Retrieved from INFLIBNET
- 9) Kennedy, M. R., & Brancolini, K. R. (2016). Information literacy in higher education. *The Journal of Academic Librarianship*, 42(5), 498–508. <https://doi.org/10.1016/j.acalib.2016.07.002>
- 10) Kumar, A., & Mahajan, P. (2017). User satisfaction with digital library services in India. *DESIDOC Journal of Library & Information Technology*, 37(2), 95–102. <https://doi.org/10.14429/djlit.37.2.10616>
- 11) Kumar, K. (2019). Digital libraries in India. *Library Herald*, 57(3), 374–378. <https://doi.org/10.5958/0976-2469.2019.00023.X>
- 12) Madhusudhan, M. (2010). Use of electronic resources by research scholars of Kurukshetra University. *The Electronic Library*, 28(4), 492–506. <https://doi.org/10.1108/02640471011033684>
- 13) Ministry of Education, Government of India. (2020). *National Education Policy 2020*. Retrieved from Government of India
- 14) Mulla, K. R., & Chandrashekara, M. (2009). E-resources usage in Indian universities. *SRELS Journal of Information Management*, 46(3), 277–288. Retrieved from e-Granthalaya
- 15) Nicholas, D., Watkinson, A., Boukacem-Zeghmouri, C., Rodríguez-Bravo, B., Xu, J., Abrizah, A., Świgoń, M., & Herman, E. (2017). Early career researchers: Scholarly behaviour and the prospect of change. *Learned Publishing*, 30(2), 157–166. <https://doi.org/10.1002/leap.1098>
- 16) Nitecki, D. A., & Hernon, P. (2000). Measuring service quality at Yale University's libraries. *The Journal of Academic Librarianship*, 26(4), 259–273. [https://doi.org/10.1016/S0099-1333\(00\)00117-8](https://doi.org/10.1016/S0099-1333(00)00117-8)
- 17) Noh, Y. (2015). User acceptance of digital libraries. *Library Hi Tech*, 33(3), 370–385. <https://doi.org/10.1108/LHT-03-2014-0029>
- 18) Parasuraman, A., Zeithaml, V. A., & Malhotra, A. (2005). E-S-QUAL: A multiple-item scale for assessing electronic service quality. *Journal of Service Research*, 7(3), 213–233. <https://doi.org/10.1177/1094670504271156>
- 19) Patil, S. K., & Pradhan, P. (2014). Library promotion practices and marketing of library services: A role of library professionals. *Procedia – Social and Behavioral Sciences*, 133,

- 249–254.
<https://doi.org/10.1016/j.sbspro.2014.04.191>
- 20) Ranganathan, S. R. (2006). *The five laws of library science*. Ess Ess Publications. Retrieved from Open Library
- 21) Rowlands, I., Nicholas, D., Williams, P., Huntington, P., Fieldhouse, M., Gunter, B., Withey, R., Jamali, H. R., Dobrowolski, T., & Tenopir, C. (2008). The Google generation: The information behaviour of the researcher of the future. *Aslib Proceedings*, 60(4), 290–310. <https://doi.org/10.1108/00012530810887953>
- 22) Shivakumaraswamy, G., Narendra, B. K., & Hanumant, P. (2022). ICT-enabled services and user behaviour in India. *Library Philosophy and Practice*. Retrieved from Shodhgangotri@INFLIBNET
- 23) Tenopir, C., & King, D. W. (2004). *Communication patterns of engineers*. Wiley-IEEE Press. <https://ieeexplore.ieee.org/book/5201845>
- 24) Tenopir, C., King, D. W., Christian, L., & Volentine, R. (2012). Scholarly article seeking, reading, and use: A continuing evolution from print to electronic in the sciences and social sciences. *Journal of the American Society for Information Science and Technology*, 63(10), 1900–1913. <https://doi.org/10.1002/asi.22653>
- 25) Thanuskodi, S. (2013). Awareness of e-resources among students. *International Journal of Library Science*, 2(2), 21–26. <https://doi.org/10.5923/j.library.20130202.01>