

# EVALUATING USER SATISFACTIONS AND THEIR SUGGESTIONS FOR EFFECTIVE ACCESS TO E-RESOURCES IN CENTRAL GOVERNMENT-FUNDED INSTITUTIONS OF BHOPAL, MADHYA PRADESH

<sup>1</sup> Mukesh Baboo, <sup>2</sup>Dr Rakesh Kumar Khare

<sup>1</sup>Research Scholar

Library and information science

Rabindranath Tagore University, Raisen (M.P.)

write2mbp@gmail.com

9039391050

<sup>2</sup>Librarian and HOD

Rabindranath Tagore University, Raisen (M.P.)

Rakesh\_khare07@yahoo.com

9893272290

## ABSTRACT

The study examines the electronic resource accessibility and user satisfaction at multiple Bhopal institutions which receive central funding. The primary objective of this study is to assess user satisfaction with e-resources and to gather suggestions for improving their availability. The study employed a mixed methods approach which combined both qualitative and quantitative research methods. Faculty members, researchers, and students from seven institutions completed a standardized questionnaire for data collection. The study used thematic analysis and descriptive statistical methods to evaluate the 66 responses. Results revealed that a small proportion of participants expressed dissatisfaction due to inadequate infrastructure, ignorance, access challenges, and lack of functionality of electronic resources. While 51.5% of respondents expressed satisfaction, 31.8% expressed high satisfaction; the study concluded that electronic resources are crucial for advancing academic research and learning. Suggestions for enhancing the effectiveness of e-resources in institutional libraries include strengthening digital infrastructure, expanding e-resource collections, digitizing older materials, creating a unified access platform, and conducting awareness campaigns.

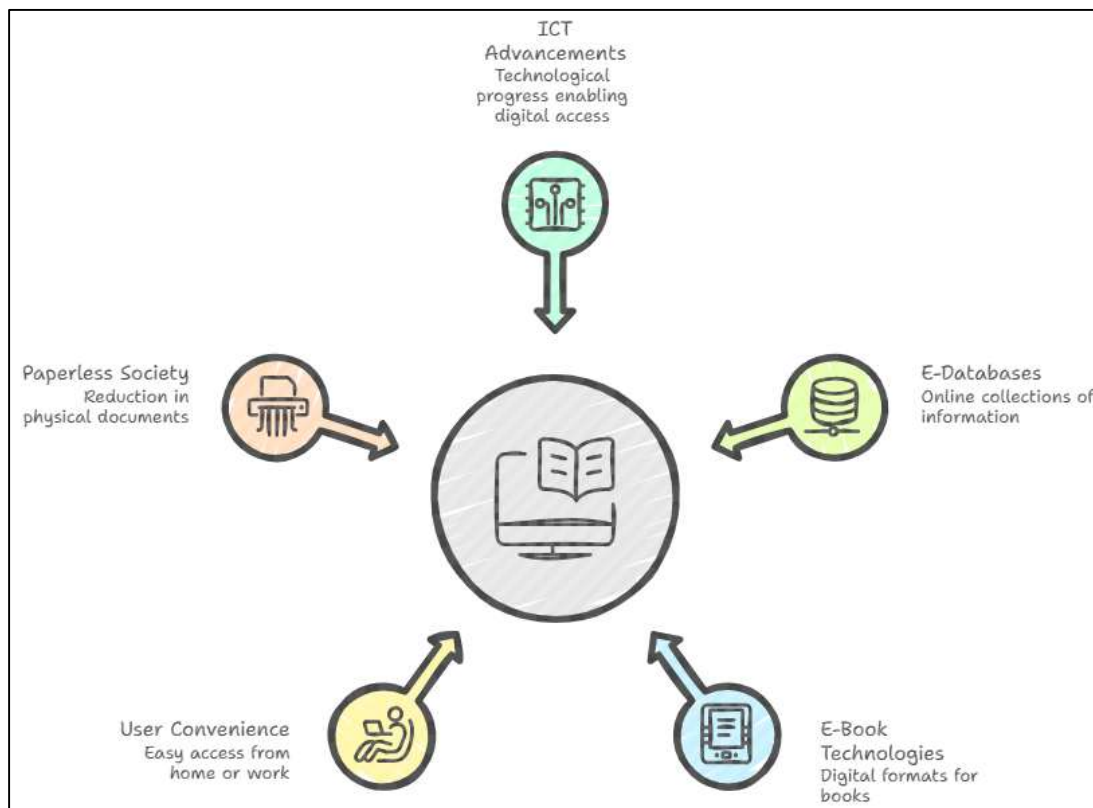
**Keywords:** E-resources, Digitals libraries, Central Government-funded institutions of Bhopal, Accessibility, Effective access, Users satisfactions, Suggestion.

## 1. INTRODUCTION

A digital library, also referred to as an electronic library, is an online collection of easily accessible digital content (Arms, 2000). In the era of ICT, it has transformed from conventional physical institutions to online hubs (Borgman, 2000). Digital libraries improve users' access to and handling of information by giving them the information they want at their homes or places of employment (Cleveland, 1998). A paperless society is the outcome of the impact of information and communication technology (ICT), which has also helped to improve library services (Lancaster, 1978). Commercial companies have created concepts like "home delivery" and "fast food" in the modern world to guarantee the comfort of their customers (Witten et al., 2009).

The rise of electronic resources has substantially transformed libraries around the world, driven by advances in information communication technology, e-databases, and electronic-book technologies (Quadri, 2012). Electronic resources refer to library resources accessible online through Information and communication technology, including e-books, e-journals, online public access catalogues, CD-ROM databases, Internet resources, online databases, and multimedia resources (Naven, 2001). E-resources are digital versions of materials accessible through computer networks and electronic systems, enabling students to access up-to-date information in the correct format (Dhanavandan & Tamizhchelvan, 2012). These resources, including e-books, e-journals, e-magazines, e-learning instructors, e-libraries, and online assessments, represent the latest developments in Information and communication technology and are vital to academic and lifelong learning (Patel, 2022). E-resources are increasingly being used in academic settings because of their flexibility, ease of access to content and subject matter, remote access, and real-time delivery (Wells & Sallenbach, 2023). They are widely available in the government, business, libraries, and education sectors. As a result, knowledge of e-resources is important in today's academic environment, as many institutions offer electronic resources in their library collections (Ani, 2013). E-journals, an important part of e-resources, have become popular worldwide due to their around the clock availability (Shuling, 2007). They offer advantages over print journals in terms of publication time, simultaneous access and the ability to save and print articles simultaneously (Naven, 2001). Additionally, electronic journals reduce the problem of missing issues. Large campuses are benefiting from the rapid replacement of traditional library resources with electronic journals, online databases, e-books, and web-based resources (Quadri, 2012). This shift has become increasingly important over the last decade, as people prefer electronic versions over print versions due to their speed and user-friendliness (Wells & Sallenbach, 2023). Desktop access to resources saves time and eliminates the need to visit the library physically (Ani, 2013). Electronic resources are information mining sites accessible through modern information and communication technology gadgets, often stored in cyberspace. They are digital documents accessible to library patrons via a computer-based information retrieval system (Dhanavandan & Tamizhchelvan, 2012). While not used as cited references, they can be helpful as bibliographic leads to

possible sources. The majority of e-resources can be accessed through the Internet, making it the most appropriate and widely used channel (Patel, 2022).



**Figure 1. Factors Contributing to the Rise of Digital Libraries**

### Institution Introduction

1. **Bhopal Memorial Hospital and Research Centre Bhopal:** Founded to provide specialized healthcare and conduct medical research post of the Bhopal Gas Tragedy, Library provides medical books, research papers, and digital archives for clinical studies (Department of Health Research, 2023).
2. **Central Forensic Science Laboratory Bhopal:** Established to support forensic investigations through scientific research, Library provides forensic science manuals, case studies, and digital forensic tools (Directorate of Forensic Science Services).
3. **Central Institute of Agricultural Engineering Bhopal:** Develops mechanize solutions to improve agriculture productivity. Its library offers agriculture engineering books, technical reports, and research databases (Indian Council of Agriculture Research [ICAR], 2023).
4. **Indian Institute of Forest Management Bhopal:** The organization was established to support sustainable forestry management and environmental policy development. The library holds collections that contain

forestry research materials and environmental policy documents and geographic information system resources, as stated in the Ministry of Environment, Forest and Climate Change 2023 documentation.

5. **National Institute for Research in Environmental Health Bhopal:** The institute investigates environmental health problems which arise from the Bhopal Gas Tragedy disaster. The library provides services which include collection of environmental health journals and toxicology reports and research publications from the Indian Council of Medical Research (ICMR) 2023.

6. **National Law University Bhopal:** The National Law Institute University provides advanced legal education which enables research activities through its library that holds legal journals together with case law databases and digital repositories. (National Law Institute University, 2023).

7. **National Institute of Fashion Technology Bhopal:** Specializes in fashion education, research, and industry collaboration, library offers fashion design books, textile research, and digital fashion archives (Ministry of Textiles, 2023).

## 2. REVIEW OF LITERATURE

1. Talawar, Anil B. & Naikar, Satishkumar (2024) Awareness and use of electronic resources by research scholars of Karnataka University, Dharwad: A study. The paper examines electronic resources used by research scholars at Karnataka University, Dharwad. A systematic questionnaire was used, with an 84% response rate. The study suggests that most users are aware of various types of E-resources and their impact on academic activities. The findings could help university libraries educate faculty, researchers, and students about e-resources and organize proactive training programs.

2. Prema & Kannappanavar, B.U. (2024) A study of user challenges with accessing online resources in degree college libraries. This paper investigates the user challenges in accessing online resources at government college libraries of Dakshina Kannada and Udupi district. Survey method is used to conduct this study. This study shows most of students are aware about e-resources but percentage of use is low due to lack of skill, poor internet connectivity, lack of computers.

## 3. OBJECTIVES OF THE STUDY

1. To evaluate user satisfaction regarding e-resources in central government funded institutions in Bhopal.
2. To collect user suggestions for improving e-resource accessibility in central government funded institutions in Bhopal.

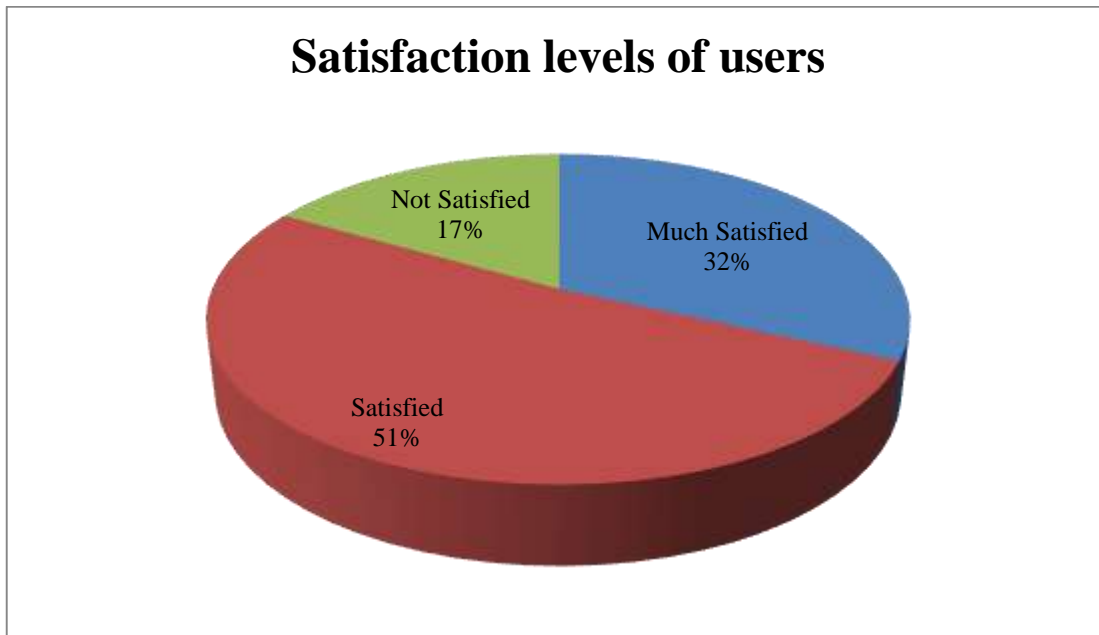
#### 4. RESEARCH METHODOLOGY:

This study employs a mixed-method approach, combining qualitative and quantitative research methodologies (Creswell & Clark, 2017). This integration allows for a more comprehensive understanding of the research problem by capitalizing on the strength of both numerical and narrative data (Wisdom et al., 2011).

- **Population and Sample:** The targeted population consists of Faculty members, researchers, and students from the listed institutions (Banerjee & Chaudhary, 2010).
- **Tools for Data Collection:** Data were collected by distributing structured questionnaires to participants. (Paradis et al., 2016).
- **Analysis of Data:** Quantitative data were analyzed using descriptive statistics to summarize trends and frequencies. (Kaliyadan & Kulkarni, 2019), Qualitative responses were thematically analyzed to identify repeating patterns and meaningful insights across responses (Kiger & Varpio, 2020).
- **Data Analysis Method:** Statistical tools were used to identify correlations and broad trends in the data, ensuring the accuracy and reliability of the findings (Wasti et al., 2022).

**Findings: Table 1 Satisfaction Survey of E-Resource and Library Services by Institute**

S.N.	Name of Institute	Much Satisfied	Satisfied	Not Satisfied	Total
1	Bhopal Memorial Hospital and Research Centre Bhopal	1 (9.09%)	8 (72.73%)	2 (18.18)	11
2	National Forensic Science University Bhopal	5 (83.33%)	1 (16.67%)	0 (0.00%)	6
3	Central Institute of Agricultural Engineering Bhopal	2 (33.33%)	3 (50.00%)	1 (16.67%)	6
4	Indian Institute of Forest Management Bhopal	7 (41.18%)	5 (29.41%)	5 (29.41%)	17
5	National Institute for Research in Environmental Health Bhopal	1 (20.00%)	4 (80.00%)	0 (0.00%)	5
6	National Law University Bhopal	2 (20.00%)	8 (80.00%)	0 (0.00%)	10
7	National Institute of Fashion Technology Bhopal	3 (27.27%)	5 (45.45%)	3 (27.27%)	11
Total		21 (31.82%)	34 (51.52%)	11(16.67%)	66



**Figure 1. Satisfaction Survey of E-Resource and Library Services by Institute**

Table 1 shows the level of satisfaction of the respondents regarding the availability and use of electronic resources in various centrally funded institutions located in Bhopal. This survey was conducted in seven different institutions of Bhopal in which a total of 66 people participated.

According to the survey data, 34 respondents (51.5%) of the total participants expressed satisfaction with the available e-resources. Additionally, 21 respondents (31.8%) reported high satisfaction, indicating their positive attitude toward the usefulness and accessibility of these resources at their institutions. However, 11 respondents (16.7%) expressed dissatisfaction, indicating that some challenges or limitations still exist regarding the effective use of e-resources.

An examination of satisfaction by institution level reveals significant differences. The Indian Institute of Forest Management, Bhopal, had the highest number of respondents at 17, with mixed perceptions, including 7 who were extremely satisfied, 5 who were satisfied, and 5 who were dissatisfied. In context, the National Forensic Science University in Bhopal showed a very positive responses, where 5 out of 6 respondents reported being extremely satisfied with none expressing dissatisfaction. Similarly respondents from both the national law university in Bhopal and The national Institute for research in Environmental Health also reported no discontent regarding the e-resources available to them.

The results indicate that the majority of respondents from the selected institutions express satisfaction with the available e-resources, highlighting their importance for academic and research activity, Nevertheless, the presence of a small group of not satisfied users underscores the need for continuous improvements in accessibility, awareness and infrastructure related to e-resources.

**Table 2 Institutional Suggestions for Improving Access to E-Resources and Library Services**

S.N.	Theme	Suggestions	No. of Institute	Institutes
1	Improvement of ICT Infrastructure	Enhancement of computer facilities and technological support for accessing e-resources	1	Bhopal Memorial Hospital and Research Centre
2	Development of Integrated e-resource Platforms	Creation of a unified platform or centralized website for accessing subscribed databases and digital resources.	2	BMHRC, National Law University.
3	Digitization of Print Resources	Digitization of books and materials published before the digital era for online access.	1	National Forensic Science University.
4	Promotion of Open and Equitable Access	Ensuring free and easy access to scholarly resources for all users to reduce the digital divide.	1	Central Institute of Agriculture Engineering.
5	Enhancement of Scholarly Resources Availability.	Improving availability of e-journals, e-resources, and updated study materials.	2	Indian Institute of Forest Management, NIREH
6	User Awareness and Promotion Activities.	Organizing exhibitions and promotional activities to increase awareness and effective use of resources.	2	National Law Institute University, NIFT

Responses received from various centrally funded institutional libraries regarding improving access to electronic resources have yielded several important suggestions. Suggestions from Bhopal Memorial Hospital and Research Centre include strengthening computer infrastructure and providing a unified platform to facilitate easy access to all registered e-resources, such as those available through consortium databases like Clinicalkey and eMRED. Additionally, the National Forensic Sciences University has suggested expanding

the e-library platform to digitize publications from the pre-digital era and further improve online access for users.

Various institutions, including the Bhopal-based Central Agricultural Engineering Institute and the Indian Institute of Forest Management, have stressed the importance of ensuring free and easy access to e-resources to reduce digital inequality and promote equal access to educational information. The Indian Institute of Forest Management suggested that access to academic journals and e-resources should be increased and educational material such as journals should be regularly updated to significantly enhance the knowledge and understanding of users. Furthermore, the National Institute of Environmental Health Research highlighted that improving the accessibility and availability of electronic resources will help users in their research work and accessing academic information.

Respondents from the National Institute of Fashion Technology and the National Law University, Bhopal, emphasized the need for promotional events and exhibitions to increase user awareness of library resources and services. They also underscored the importance of a well-organized library website that provides centralized access to essential information through relevant links. All the recommendations emphasize that increasing user awareness, digitizing older materials, expanding access to scholarly resources, and strengthening technology infrastructure are important steps to improve the usability and accessibility of e-resources in institutional libraries.

## 5. CONCLUSION

The research demonstrates that electronic resources have become essential resources for academic and research libraries which receive central government funding in Bhopal. Libraries now shift their operations toward digital resources because information and communication technology needs have evolved beyond their traditional printed collection systems. The study findings demonstrate that most respondents from the 66-person group found satisfaction with electronic resources that their institutional libraries provided because more than half of them reported moderate satisfaction while many others indicated high satisfaction with these resources.

A small minority of respondents expressed dissatisfaction, citing concerns such as inadequate infrastructure, lack of awareness, limited access to platforms, and the need to expand digital resources. The study showed different levels of satisfaction among institutions because each institution provided different digital services and facilities. The findings demonstrate that electronic resources function as essential tools which enable knowledge sharing and academic learning and research productivity. The institutional libraries require ongoing development of digital infrastructure, resource accessibility, and user training programs to achieve maximum utilization of their electronic resources.

## 6. SUGGESTIONS

- This study proposes many strategies to enhance the usability and accessibility of electronic media.
- Libraries should upgrade their computer systems and internet connections so that people may easily access e-resources.
- To make subscription databases and digital material easy to find, it's vital to develop a common platform for them. It is also suggested that libraries convert outdated printed texts into digital format.
- Institutions should add more e-magazines, e-books, and research databases to their holdings to satisfy the educational demands of users.
- Libraries should provide exhibits, lectures, and events to raise awareness of e-resources that are easy to find and how to utilize them correctly.
- Lastly, to stay up to speed with the latest research demands, digital teaching materials and journals should be updated on a regular basis.

## 7. REFERENCES

1. Arms, W. Y. (2000). Digital libraries. MIT Press.
2. Borgman, C. L. (2000). From Gutenberg to the global information infrastructure: Access to information in the networked world. MIT Press.
3. Cleveland, G. (1998). Digital libraries: Definitions, issues and challenges. International Federation of Library Associations and Institutions (IFLA).
4. Lancaster, F. W. (1978). Toward paperless information systems. Academic Press.
5. Witten, I. H., Bainbridge, D., & Nichols, D. M. (2009). How to build a digital library. Morgan Kaufmann.
6. Quadri, G. O. (2012). Impact of ICT skills on the use of e-resources by information professionals. UNL Digital Commons.
7. Naven, A. M. (2001). Electronic scholarly journals as information sources. *SA Journal of Information Management*, 3(2). <https://doi.org/10.4102/sajim.v3i2.136>
8. Cited by: 4
9. Dhanavandan, S., & Tamizhchelvan, M. (2012). An evaluation of e-resources in academic libraries. *Educational Metamorphosis*, 1(1).
10. Patel, S. (2022). Electronic information resources in library and information science: A critical study. *Research Gate*.
11. Wells, D., & Sallenbach, A. (2023). Print books and eBooks: The new equilibrium in an academic library. *Journal of the Australian Library and Information Association*, 72(2), 166–177. <https://doi.org/10.1080/24750158.2023.2183560> Cited by: 12

12. Shuling, H. (2007). Electronic information resource selection and development. UNL Institutional Repository.
13. Department of Health Research. (2023). Bhopal Memorial Hospital and Research Centre: Overview and Clinical Services. Ministry of Health and Family Welfare.
14. Directorate of Forensic Science Services. (2022). Central Forensic Science Laboratories: Annual Status Report. Ministry of Home Affairs, Government of India.
15. Indian Council of Agricultural Research (ICAR). (2023). ICAR-Central Institute of Agricultural Engineering: Research and Infrastructure. <https://ciae.icar.gov.in>
16. Ministry of Environment, Forest and Climate Change. (2023). Annual Report: Indian Institute of Forest Management. Government of India.
17. Indian Council of Medical Research (ICMR). (2022). NIREH Bhopal: Environmental Health Perspectives.
18. National Law Institute University. (2023). Gyan Mandir: The NLIU Library and Information Centre Portfolio.
19. Ministry of Textiles. (2023). National Institute of Fashion Technology: Campus and Resource Centers. <https://www.nift.ac.in/bhopal/>
20. Siddiqui, Z. A. & Aligarh Muslim University. (2024). Digital libraries, green libraries and virtual libraries: the libraries of the future. In *Digital Libraries, Green Libraries and Virtual Libraries: The Libraries of the Future*.
21. Talawar, A. B., & Naikar, S. (2024). Awareness and use of electronic resources by research scholars of Karnataka University, Dharwad: A study. *IP Indian Journal of Library Science and Information Technology*, 9(2), 111–118.
22. Creswell, J. W., & Clark, V. L. P. (2017). *Designing and Conducting Mixed Methods Research* (3rd Ed.). SAGE Publications.
23. Wisdom, J. P., Cavaleri, M. A., Onwuegbuzie, A. J., & Green, C. A. (2011). Methodological Reporting in Qualitative, Quantitative, and Mixed Methods Health Services Research Articles. *Health Services Research*, 47(2), 721–745. <https://doi.org/10.1111/j.1475-6773.2011.01344.x>Cited by: 741
24. Banerjee, A., & Chaudhury, S. (2010). Statistics without tears: Populations and samples. *Industrial Psychiatry Journal*, 19(1), 60–65. <https://doi.org/10.4103/09726748.77642>Cited by: 1305
25. Paradis, E., O'Brien, B., Nimmon, L., Bandiera, G., & Martimianakis, M. A. (2016). Design: Selection of Data Collection Methods. *Journal of Graduate Medical Education*, 8(2), 263–264. <https://doi.org/10.4300/jgme-d-16-00098.1>Cited by: 642
26. Kaliyadan, F., & Kulkarni, V. (2019). Types of variables, descriptive statistics, and sample size. *Indian Dermatology Online Journal*, 10(1), 82–90. [https://doi.org/10.4103/idoj.idoj\\_468\\_18](https://doi.org/10.4103/idoj.idoj_468_18)Cited by: 660

27. Kiger, M. E., & Varpio, L. (2020). Thematic analysis of qualitative data: AMEE Guide No. 131. *Medical Teacher*, 42(8), 846–854. <https://doi.org/10.1080/0142159x.2020.1755030> Cited by: 6580
28. Wasti, S. P., Simkhada, P., van Teijlingen, E., Sathian, B., & Banerjee, I. (2022). The Growing Importance of Mixed-Methods Research in Health. *Nepal Journal of Epidemiology*, 12(1), 1175–1178. <https://doi.org/10.3126/nje.v12i1.43633> Cited by: 515

**Copyright & License:**

© Authors retain the copyright of this article. This work is published under the Creative Commons Attribution 4.0 International License (CC BY 4.0), permitting unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.