



E-Resource Utilization In IIMs Libraries: Insights From Faculties And Students' Surveys

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ABSTRACT

This innovative study dives deep into the usage patterns, and satisfaction levels, Navigating the labyrinth of digital resources presents a unique set of challenges at a diverse array of IIM libraries. The study samples IIM Ahmedabad, IIM Bangalore, IIM Lucknow, IIM Indore, IIM Kozhikode, IIM Tiruchirappalli, IIM Kashipur, IIM Udaipur, IIM Rohtak, IIM Raipur, IIM Amritsar, IIM Bodh Gaya, IIM Nagpur, IIM Sirmaur, IIM Vishakhapatnam, IIM Jammu, IIM Mumbai (Indian Institute of Management Act, 2017) by surveying faculty, researchers, and students, the research illuminates their awareness, preferences, and usage habits concerning e-resources. Key findings reveal that most users engage with e-resources daily, and strongly prefer e-journals and online databases. The e-ShodhSindhu Consortium's awareness is notably high, with IIM library websites considered the most reliable for e-resource searches. E-resources are predominantly used for research, teaching, and guiding students. Despite high satisfaction levels, users encounter challenges such as inadequate access and a lack of relevant sources. Conducted from October 2023 to December 2023, this evaluative study provides crucial insights into e-resource utilisation at IIM libraries, identifying areas for improvement to enhance user experience and accessibility.

Key Terms: e-ShodhSindhu, E-Journals, Online Databases, N-LIST, INDEST-AICTE Consortium, IIM (Indian Institute of Management), E-Books, Online Material, UGC-INFONET Digital Library Consortium.

1. Introduction: In modern academic settings, electronic resources act as a key player, providing users approach to vast information and understanding. Electronic resources (or e-resources) are materials in digital format accessible electronically. Examples of e-resources are electronic journals (e-journal), electronic books (e-book) and online databases in varied digital formats such as Adobe Acrobat documents, (pdf), and WebPages, (html).

E-resources can also include articles from newspapers, dictionaries or encyclopedias as well as images, and many other items. The library purchases and subscribes to many items in electronic or e-format so that user can have access free of charge anywhere they have an internet connection. Their library utilization, particularly in prestigious institutions like the Indian Institutes of Management (IIMs), is essential for enhancing research, learning, and teaching experiences. Awareness, usage patterns, and challenges experienced by teachers and learners in reaching online materials must be understood to optimize library services and meet diverse information needs. With increasing reliance on digital resources, exploring user preferences and perceptions regarding e-resources is imperative for tailoring library services effectively.

This study aims to gain insights from surveys conducted among faculties and students in IIMs to provide a comprehensive understanding of e-resource utilization trends, challenges, and opportunities in these esteemed academic institutions. Electronic resources are valuable for students seeking supplementary learning materials beyond regular classroom activities. Cloud computing has enabled constant access to data for students and researchers. Electronic assets, containing web-based journals, e-books, and online data repositories, are widely accessible as well as play a crucial role in academic research and learning.

Under the e-Shodh Sindhu, established in December 2015 through the merger of three consortia (UGC-INFONET Digital Library Consortium, N-LIST, and INDEST-AICTE Consortium), these resources are centrally

subscribed for member IIMs' libraries, providing IP-based access to users. The continuation of access to these e-resources depends on their utilization, with renewals determined annually. This study investigates making use of accessible e-resources through the e-ShodhSindhu, focusing on their use by teachers and scholars in IIMs' libraries.

1.1 Types of Electronic Resources

- Digital versions of academic and professional journals providing access to peer-reviewed articles are known as e-journals.
- Digitized books accessible via gadgets, encompassing a wide range of subjects are termed as e-books.
- Electronic copies of theses and dissertations submitted by students are often accessible through institutional repositories and are called e-theses and dissertations (ETD).
- Specialized databases providing extensive information and resources on particular academic disciplines are recognized as online databases on specific subjects.
- Physical databases stored on CD-ROMs containing theses and dissertations for offline access are known as CD-ROM databases/databases of theses and dissertations.
- Internal databases maintained by institutions containing collections of books, journals, theses, dissertations, expert profiles, and reports are called in-house databases.
- Email communication, including attached documents, and facilitating academic and research correspondence, is referred to as electronic mail (e-mail) and attachments.
- Archives housing the faculty research outcomes, researchers, along with learners titled institutional/digital repositories, provide a straightforward method for depositing and accessing research publications both within and outside the institution.
- Numerous scholarly and peer-reviewed sources hosted on the internet, including online journals, electronic books, digital databases, patents, regulations, articles, forums, and researcher indices, are recognized as scholarly web resources. These resources complement the library's collections and fulfil diverse information needs that may not be covered by standard acquisitions.

1.2 Shodh Sindhu:

- Access to electronic resources is provided to academic institutions nationally through "e-Shodh Sindhu", an initiative of the (MoE), Government of India.
- It strives to enable access to scholarly content and research databases for faculty, researchers, and students across various disciplines.
- The portal provides the availability of a variety of array of e-materials, including digital periodicals, e-publications, databases, or other digital materials, to assist academic as well as research activities in institutions like IIMs.
- e-Shodh Sindhu is pivotal in enhancing the quality of education and study by providing seamless access to a wealth of digital resources, thereby enriching the academic environment in participating institutions.
- The initiative underscores the importance of electronic resources in fostering innovation, knowledge dissemination, and academic excellence in higher education institutions like IIMs.

1.3 "Consolidation of UGC-INFONET Digital Library Consortium, N-LIST and INDEST-AICTE, Program: Upon the advice from the Expert Committee, (MoE), formerly called the Ministry of HRD, has launched e-Shodh Sindhu by consolidating three consortia initiatives: UGC-INFONET Digital Library Consortium, N-LIST, and INDEST-AICTE Consortium. This initiative continues its commitment to grant member institutions, including centrally-funded technical institutions, universities, and colleges under Sections 12(B) and 2(f) of the UGC Act, access to various resources. These encompass over 10,000 core and peer-reviewed journals, alongside numerous bibliographic, citation, and factual databases, spanning diverse disciplines from multiple publishers and aggregators". (INFLIBNET Centre, 2023).

1.4 Electronic resources access for colleges: "Under the NME-ICT, funded by UGC as a college component under the UGC-INFONET Digital Library Consortium, now part of e-Shodh Sindhu, an initiative of the Ministry of HRD. Through N-LIST, access to e-resources (6000+ e-journals, 1,64,300+ e-books through N-LIST and 6,00,000 e-books through NDL) is provided to colleges." (INFLIBNET Centre, 2023).

1.5 Users can access online resources provided by e-Shodh Sindhu remotely: "Seamless access to e-resources provided by the e-Shodh Sindhu consortium is available on member institutions' campuses through campus IPs. Off-campus access to resources is facilitated through various mechanisms offered by publishers and member libraries. Users are advised to inquire about their institution's specific off-campus access methods from their Librarian or designated Library Contact persons. VPN and proxy server options are commonly used for off-campus access, while Shibboleth Access mechanism through the INFED initiative of INFLIBNET is also available. Further information about INFED can be found on the INFED website at <http://infed.inflibnet.ac.in/>. The details of the access mechanism provided by e-Shodh Sindhu subscribed publishers are listed below" (INFLIBNET Centre, 2023).

<input checked="" type="checkbox"/> ACM Digital Library	(1162)
<input checked="" type="checkbox"/> American Institute of Physics	(19)
<input checked="" type="checkbox"/> American Physical Society	(17)
<input checked="" type="checkbox"/> Annual Reviews	(43)
<input checked="" type="checkbox"/> ASCE Journals Online	(36)
<input checked="" type="checkbox"/> ASME Journals Online	(33)
<input checked="" type="checkbox"/> JSTOR	(3165)
<input checked="" type="checkbox"/> Oxford University Press	(262)
<input checked="" type="checkbox"/> Project Muse	(731)
<input checked="" type="checkbox"/> Springer Link	(1725)
<input checked="" type="checkbox"/> Taylor and Francis	(1078)

Fig. 1 Image Source: (INFLIBNET Centre, 2023) E-ShodhSindhu: Consortium for Higher Education Electronics. E-ShodhSindhu. <https://ess.inflibnet.ac.in/publisherwiselist.php>

1.6 “CFTIs (Centrally Funded Technical Institutions) Participants in the E-SodhSindhu Consortium Table 1 presents the roster of E-SodhShindhu participants, encompassing Centrally Funded Institutions, and other Technical Institutions.” (INFLIBNET Centre, 2023)

CFTIs (Centrally Funded Technical Institutions)	
NITs, SLIET & NERIST	(32)
IITs & IISc	(24)
IIMs	(21)
IIITs, IEST, NIFFT and NITTTR	(11)
IISERs	(7)
SPAs	(3)
Total	98

Fig.2 Image Source: (INFLIBNET Centre, 2023) E-ShodhSindhu: Consortium for Higher Education Electronics. E-ShodhSindhu. Retrieved December 1, 2023, from <https://ess.inflibnet.ac.in/cfti.php>

1.7 IIM (Indian Institute of Management): “The group of 21 public, autonomous institutes of management education and research in India is comprised of the IIMs. The establishment of IIMs was initiated by Jawaharlal Nehru, the first Prime Minister of India, based on the recommendation of the Planning Commission. Following the passage of the Indian Institutes of Management Act, of 2017, IIMs were declared as institutions of national importance. All the IIMs are listed on the Ministry of Education Government of India website (<https://www.education.gov.in/iims>) and the 1st, 2nd, and 3rd generations of IIMs are shown in table-1.” (Nic, 2023).

Table 1: Overview of the three generations of IIMs

S.N.	Generation of IIMs	IIMs	Libraries of IIMs'	Est. year
1.	1st Generation IIMs	IIM Calcutta	B. C. Roy Memorial Library	1961
2.		IIM Ahmedabad	Vikram Sarabhai Library	1961
3.		IIM Bangalore	IIM Bangalore Library	1973
4.		IIM Lucknow	Gyanodaya Library	1984
5.		IIM Kozhikode	Nalanda Library and Information Centre	1996
6.		IIM Indore	Learning Centre	1996
7.	2nd Generation IIMs	IIM Shillong	The Knowledge Centre	2007
8.		IIM Rohtak	Knowledge Resource Centre	2010
9.		IIM Raipur	IIM Raipur Library	2010
10.		IIM Ranchi	Learning Resource Centre	2010
11.		IIM Tiruchirappalli	Learning Resource Centre	2011
12.		IIM Kashipur	Learning Resource Centre	2011
13.		IIM Udaipur	Knowledge Resource Centre	2011
14.	3rd Generation IIMs	IIM Amritsar	IIM Amritsar library	2015
15.		IIM Bodh Gaya	Learning Resource Centre	2015
16.		IIM Vishakhapatnam	Learning Resource Centre	2015
17.		IIM Nagpur	Learning Resource Centre	2015
18.		IIM Sambalpur	IIM Sambalpur Library	2015
19.		IIM Sirmaur	Learning Resource Centre	2015
20.		IIM Jammu	Nalanda Library	2016
21.		IIM Mumbai	IIM Mumbai Library	2023

2. Objectives:

- To examine the awareness level regarding web-based resources among academic personnel, researchers, as well as students.
- To investigate the motivations behind the use of e-resources.
- To pinpoint ideal times and places for accessing electronic reading material access.
- To evaluate the impact of online digital resources on academic performance.
- To determine the obstacles encountered by library participants' involvement in online electronic digital reading material access.
- To obtain user feedback and suggestions for improving accessibility to electronic resources

3. Significance of the Study

- Limited exploration of the utilization and impact of online digital materials on academic scholarly growth and academic success outcomes in Indian Institutes of Management (IIMs) libraries, obstructing a comprehensive understanding of the value of these resources in the institutional environment is acknowledged.
- Insufficient investigation into the knowledge levels and guidance needs of faculty and learners regarding electronic resources in IIM libraries, potentially leading to under utilization of these valuable resources
- Scarcity of studies examining the effectiveness of electronic resource management strategies in IIM libraries, such as subscription models, access protocols, and user support systems, which could enhance the overall user experience and resource accessibility
- Lack of research the challenges encountered by IIM libraries in integrating new as well as diverse digital resources into their existing collections, potentially limiting the diversity and research purposes

4. Literature Review: The utilization of e-resources in academic settings has been extensively studied, highlighting various impacts on research productivity and accessibility. Asha (2023) studied the awareness and use of e-resources among students in academic and research work, revealing increased reliance on electronic resources. Faustino and Kaur (2023) provided a balanced perspective on the benefits and challenges of e-resources in higher education. Anam, Jamal, Ansari, and Ali (2023) emphasized the need for digital services and disaster preparedness in IIM libraries during the pandemic. Sharma and Bhatt (2023) studied user awareness about marketing library products and services in Delhi. Murphy et al. (2022) documented the

expansion of digital academic library services at the University of Calgary during the COVID-19 pandemic, illustrating the crucial role of electronic resources in maintaining academic continuity. Sanjeev, Kumar, and Babel (2022) focused on the utilization of e-resources in IIM libraries, underscoring the significance of web-based services. Vrushali (2022) explored the awareness and use of e-resources at SNDT Women's University. Jayasankar (2022) highlighted patterns of e-resource utilization among faculty, students, and research scholars at Shanmuga Industries Arts and Science College. Waghmode et al. (2022) assessed the influences on e-resource utilization in engineering education. Verma et al. (2021) analyzed electronic resources in first-generation IIM libraries, noting the role of library consortia. Chand (2020) provided insights into information resource use at MNV University. Moikan Mollel and Mwantimwa (2019) explored user acceptance of e-resources at the Institute of Finance Management, Tanzania. Posner (2019) shared insights on library information and resource sharing for the future of academic collections. Madaiah, Roopa, and Subhash (2018) highlighted challenges in providing e-resources in engineering college libraries in India. Yamson, Appiah, and Tsegah (2018) surveyed Central University undergraduates' perceptions and usage of electronic versus print resources. Gautam, Singh, and Sinha (2017) In this research the research scholars' and faculty's engagement with e-resources at Allahabad University was surveyed., illustrating prevalent trends. Falloon (2016) addressed accessibility and inclusion issues in library acquisitions, underscoring the need for equitable resource distribution. Audunson and Shuva (2016) surveyed digital library education in Europe, revealing key trends and obstacles. Ani, Ngulube, and Onyancha (2015) examined how reach and deployment of electronic materials influence the performance metrics of academic staff in Universities of Nigeria finding notable positive effects. Sinha and Chanda (2014) compared the usage of electronic resources among the scientific community at Assam University, providing insights into user behavior. Tyagi (2014) conducted an analytical study on the usage of electronic information resources in pharmacopoeial libraries in India, emphasizing their importance in research and academia. Arora, Trivedi, and Kembhavi (2013) assessed the impact of the UGC-INFONET Digital Library Consortium on research output, showing significant benefits for member universities. Gorla (2012) discussed the role of consortia in enhancing the use of electronic resources in Indian higher education, proposing practical approaches for libraries. Faizul and Naushad (2012) explored e-journal awareness and usage among IIT Delhi and Delhi University library users, demonstrating the growing reliance on digital resources. Koehn and Hawamdeh (2010) explored the cost-justification of acquiring and managing electronic resources in libraries, highlighting financial considerations. Madhusudhan (2010) investigated e-resource usage by research scholars at Kurukshetra University, highlighting usage patterns and preferences. Kaur and Verma (2009) studied the impact of electronic journals at the Indian Institute of Technology, Delhi, revealing significant user engagement. Lance (2005) provided foundational insights into measuring e-resources, setting a benchmark for future studies.

5. Methodology: in this pioneering study, a novel survey approach was utilized to gain invaluable insights into e-resource usage among IIM library users. A custom-designed questionnaire served as the primary data collection tool, administered to a random selection of respondents from various "Indian Institutes of Management" Libraries. The chosen sample size for this study was 200, achieving an impressive return of 185 completed questionnaires.

Data analysis was conducted using MS Excel, ensuring precise calculations and presenting the findings in clear tabular and graphical formats. Spanning from October 2023 to December 2023, the study harnessed the power of a Simple Random Sampling approach to ensure a diverse and representative data set. This approach not only highlights user experiences but also provides actionable insights to enhance e-resource accessibility.

The study encompassed libraries from IIM Ahmedabad, IIM Bangalore, IIM Lucknow, IIM Indore, IIM Kozhikode, IIM Tiruchirappalli, IIM Kashipur, IIM Udaipur, IIM Rohtak, IIM Raipur, IIM Amritsar, IIM Bodh Gaya, IIM Nagpur, IIM Sirmour, IIM Vishakhapatnam, IIM Jammu, IIM Mumbai. This comprehensive analysis offers a robust understanding of e-resource usage patterns and user satisfaction, laying the groundwork for improving accessibility and user experience across IIM libraries.

6. Data evaluation and explanation:

6.1 General Background/Personal Characteristics of the Participants: As depicted in Table 2, Approx 200 questionnaires in online Google Form as well as offline in print form were circulated within the group of target participants. Remarkably, 185 of these were completed and returned, yielding an impressive response rate of 92.5%. This high level of participation underscores the respondents' strong engagement and interest in the survey, providing a robust foundation for the research findings.

Table 2: Study Participants

Questionnaire	Responses Received	Percentage (%)
Received	185	92.05%
Did not receive	15	07.05%
Total	200	100.00%

6.2 Proportion of Participants as gender group: As shown in Table 3, of 185 respondents, 110 are men, comprising 59.46% of the total, whereas 75 are women, representing 40.54%. This distribution highlights a striking gender imbalance, with male respondents significantly outnumbering their female counterparts.

Table 3: Gender Proportion of Participants

Gender	Participants	Percentage (%)
Women Individuals	75	40.54%
Male Individuals	110	59.46%
Total	185	100.00%

6.3 Familiarity with Digital Library Consortium: The study findings in Table 4 highlight that all 185 participants (100%) are well-acquainted with the e-ShodhSindhu Consortium. However, 0 respondents (0%) remain unaware of it. All can access to the valuable electronic material provided by the e-ShodhSindhu Consortium.

Table 4: Familiarity with Digital Library Consortium

Awareness	Participants	Percentage (%)
Yes	185	100%
No	0	0%
Total	185	100%

6.4 Frequency of E-Resource Usage: Survey results, depicted in Table 5, reveal intriguing usage patterns of electronic resources among respondents. A significant majority, 100 participants (54.06%), access electronic resources on a "Regularly." This was succeeded by 45 respondents (24.33%) participants engaged with these resources "Occasionally." About 25 respondents (13.51%) utilize electronic resources "Weekly" while a smaller group, 15 respondents (8.10%), do so "Monthly" These insights highlight diverse usage frequencies, reflecting varied academic and research needs.

Table 5: Frequency of E-Resource Usage

E-Resource Usage	Participants	Percentage (%)
Regularly/ Daily	100	54.06%
Weekly	25	13.51%
Monthly	15	8.10%
Occasionally	45	24.33%
Total	185	100%

6.5 Electronic resources are accessed with time spent: Survey data depicted in Table 6 indicated the greater part relating to participants, 80 out of 185 (43.24%), spend "less than one hour" daily on electronic resources. This is followed by 50 respondents (27.03%) who engage with electronic reading material for "Two to five hours daily meanwhile, 42 respondents (22.70%) allocated "less than two hours" to this activity. Only a small fraction, 13 respondents (7.03%), dedicate "five to ten hours" daily to accessing e-resources. These findings highlight a varied range of engagement levels, suggesting that while some users access electronic resources briefly, others spend more extended periods based on their research needs. Encouraging more extensive use of these e-reading materials could further enhance academic and research activities.

Table 6 Electronic resources are accessed with time spent

Time in hours	Participants	Percentage (%)
Under one	80	43.24%
Under two	42	22.70%
Two to five	50	27.03%
Five to ten	13	7.03%
Total	185	100%

6.6 Preferred Locations for Accessing Electronic Resources: Table 7 of the survey reveals intriguing trends in the preferred locations for using electronic resources. A significant portion, 72 respondents (38.92%), access e-resources from their respective departments and libraries. Wi-Fi zones are the second most popular choice, with 45 respondents (24.32%) utilizing these areas. Home access accounts for 38 respondents (20.54%), indicating the convenience of remote access. Additionally, 17 respondents (9.19%) use computer labs, and only 13 (7.03%) turn to cyber cafés for their e-resource needs. Interestingly, the availability of open-access resources makes home and cybercafé access viable options for many users.

Table 7: Preferred Locations for Accessing Electronic Resources

Preferred Locations	Participants	Percentage (%)
Resource Centre or Library	72	38.92%
Residential place	38	20.54%
Cyber or Digital café	13	07.03%
Wireless zones	45	24.32%
Cyber or computer lab	17	09.19%
Total	185	100.00%

6.7 Discovering e-ShodhSindhu: Table 8 and Fig. 3 highlights a fascinating landscape of search strategies employed by faculty members and scholars to access e-resources. The IIM libraries website emerges as the most frequented gateway, directing 67 respondents (36.22%) to their desired information. Library staff plays a pivotal role as well, assisting 43 respondents (23.24%) in their search. Meanwhile, the vast expanse of the internet serves as an informative frontier for 25 respondents (13.51%). Other miscellaneous sources collectively account for less than 12%, showcasing a diverse yet focused approach to navigating e-ShodhSindhu.

Table 8: Discovering e-ShodhSindhu

Data source	Participants	Percentage (%)
From Librarian/friends/staff	43	23.24%
Through Internet/websites	25	13.51%
Lectures/Seminars/Orientation Programme	12	6.49%
Institute/ Library website	67	36.22%
Faculty member/Supervisor	22	11.89%
Books/Journals	16	8.65%
Total	185	100%

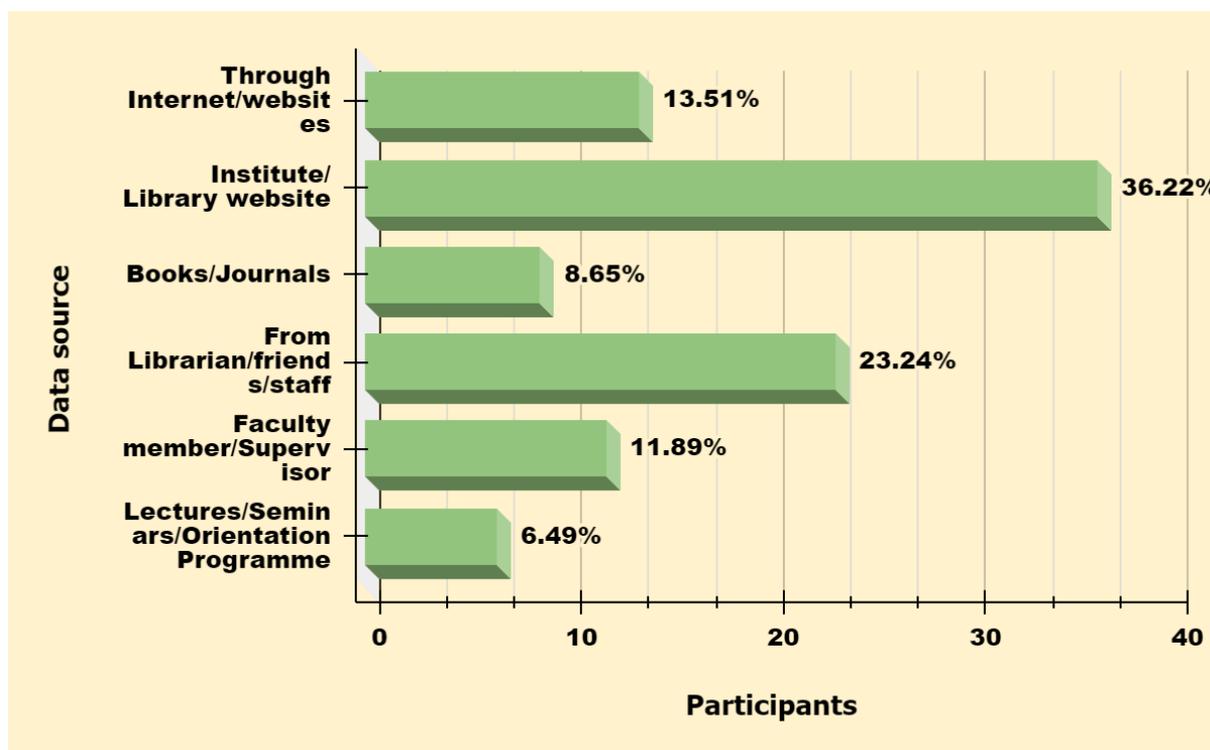


Fig. 3: Discovering e-ShodhSindhu

6.8 Exploring Electronic Resource Preferences: Table 9 paints a clear picture of electronic resource preferences among 185 respondents. E-journals, internet information resources, and online databases are unanimously favored, each capturing the interest of all 185 respondents (100%). E-books also enjoy substantial popularity, with 160 respondents (86.49%) choosing them. ETDs attract 100 respondents (54.05%), while research reports are preferred by 120 respondents (64.86%). In contrast, CD-ROM databases lag, appealing to only 68 respondents (36.76%). This spectrum of preferences underscores the evolving landscape of digital resource consumption.

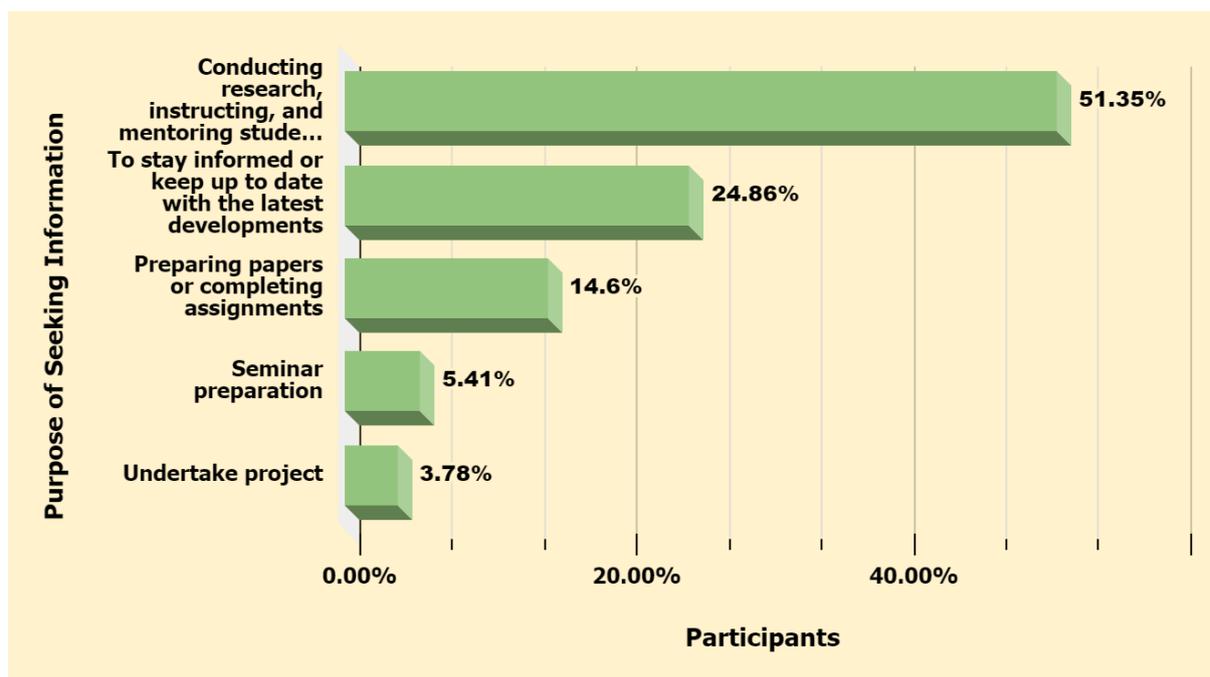
Table 9: Exploring Electronic Resource Preferences (N=185 Each)

Electronic Resources	Participants	Percentage (%)
E-Journals	185	100.00%
Online database	185	100.00%
E-Theses and Dissertations	100	54.05%
E-Books	160	86.49%
CD-ROM database	68	36.76%
Research Reports	120	64.86%
Internet Information Resources	185	100.00%

6.9 Information seeking or accessing e-resources is driven by a specific purpose: As shown in Table 10 and Fig. 4, among the 185 participants, 95 (51.35%) academic researchers and Professors use electronic resources for "research, teaching, or guiding students." Additionally, 46 respondents (24.86%) use them to "update knowledge and stay abreast of the latest developments," 27 respondents (14.60%) for writing papers/assignments, 10 respondents (5.41%) for seminar preparation, and 7 respondents (3.78%) for undertaking project purposes. From the above, it is evident that respondents use UGC-INFONET for research, teaching, and guiding students. Professors staying abreast of the latest developments.

Table 10: Information seeking or accessing e-resources is driven by a specific purpose

Information seeking for a specific purpose	Participants	Percentage (%)
Conducting research, instructing, and mentoring students	95	51.35%
To stay informed or keep up to date with the latest developments	46	24.86%
Preparing papers or completing assignments	27	14.60%
Seminar preparation	10	5.41%
Undertake project	7	3.78%
Total	185	100%

**Fig. 4: Information seeking or accessing e-resources is driven by a specific purpose**

6.10 Respondent Satisfaction with E-Resources: The survey findings in Table 11 and Fig. 5, reveal compelling insights into the gratification levels of 185 respondents accessing electronic reading material provided through e-ShodhShidhu Consortium. More than half of the respondents, 106 individuals (57.30%), reported being "satisfied" with the e-resources. Additionally, 60 respondents (32.43%) expressed as a "very highly satisfied," indicating a strong sense of fulfilment meanwhile, 10 respondents (5.41%) remained "neutral," neither satisfied nor dissatisfied. On the other end of the spectrum, 5 respondents (2.70%) reported being "very much dissatisfied," and 4 respondents (2.16%) indicated they were "not satisfied." These results highlight a predominantly positive reception, with over 89% of respondents expressing satisfaction to varying degrees.

Table 11: Respondent Satisfaction with E-Resources

Satisfaction with E-Resources	Participants	Percentage (%)
Satisfied	106	57.30%
Not Satisfied	4	2.16%
Very much satisfied	60	32.43%
Very much dissatisfied	5	2.70%
Natural	10	5.41%
Total	185	100.00%

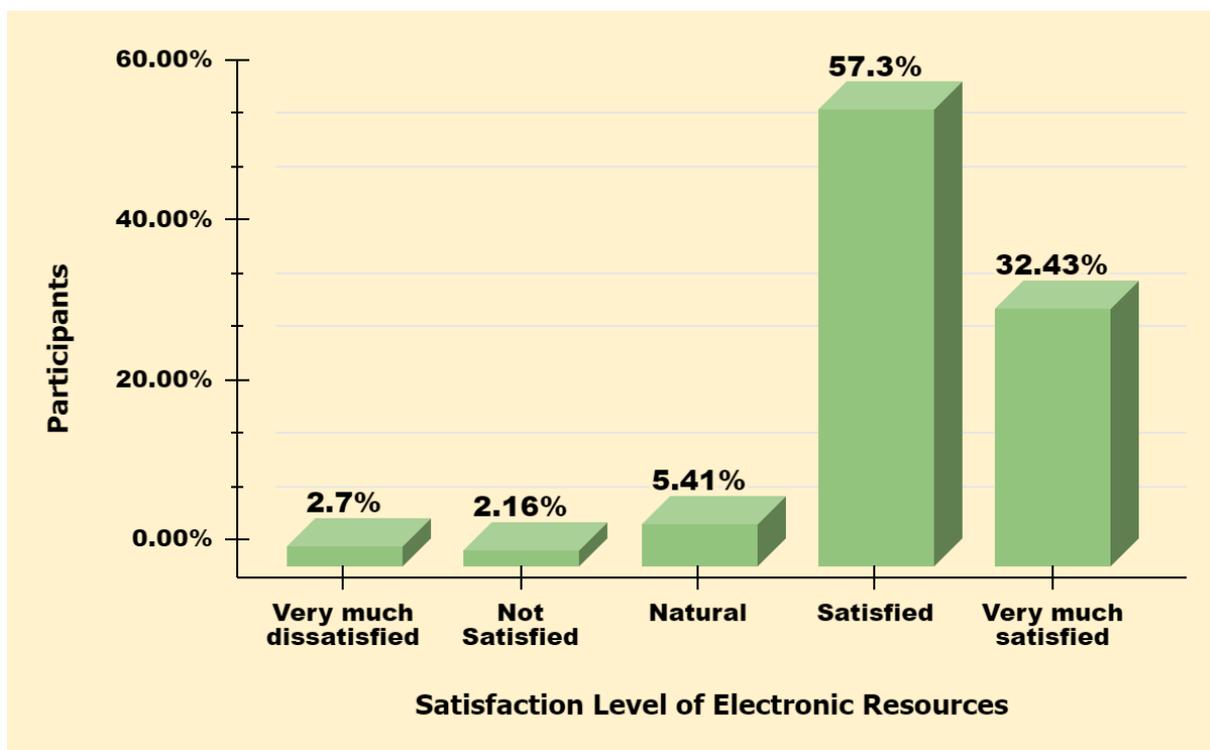


Fig. 5: Respondent Satisfaction with E-Resources

6.11 Advantages of Utilizing e-ShodhSindhu Consortium's Electronic Resources: As shown in Table 12 Electronic resources, with their dynamic characteristics, including effortless searchability, easy copying, downloading capabilities, multi-user accessibility, and continuous availability irrespective of location, provide greater effectiveness compared to printed resources. Analysis findings within Table 11 reveal indicating a significant number belonging to respondents, 70 (37.84%), find electronic resources convenient to access. Additionally, 40 respondents (21.62%) believe these resources save time and space, while 35 (18.92%) appreciate their effectiveness and speed. Furthermore, 27 respondents (14.59%) agree that searching and browsing are major advantages, and 13 (7.03%) recognize cross-referencing as a beneficial feature of electronic resources.

Table 12: Advantages of Utilizing e-ShodhSindhu Consortium's Digital Collections

Advantages of Utilizing e-ShodhSindhu Consortium's Digital Collections	Participants	Percentage (%)
Searching and browsing facilities	27	14.59%
Time and space save	40	21.62%
Cross-reference linking	13	07.03%
Convenience in Searching and Downloading	70	37.84%
Effective and expedited communication	35	18.92%
Total	185	100.00%

6.12 Problems in Accessing Digital Collections:

The questionnaire highlights Inside Table 13 in the Graphic. 6, several issues encountered while accessing e-resources. 60 (32.43%) respondents identified the lack of relevant sources as a significant problem. This is followed, by 47 respondents (25.41%) who mentioned difficulties due to information overload when searching for relevant data. Furthermore, 38 respondents (20.54%) cited technical issues, such as frequent power outages and server downtime, as obstacles. 20 respondents (10.81%) reported the current database is not available and lack of pertinent information within the consortium. Additionally, it was also found that users are dissatisfied

including the level of assistance. researchers are dissuaded from accessing e-journals from the Consortium of the e-ShodhSindhu site because of the availability of digital material for searching and downloading.

Table 13: Problems in getting Digital Collections

Problems in getting Digital Collections	Participants	Percentage (%)
Technical problems (Frequent power cuts, server down, etc.)	38	20.54%
The current database is not available	20	10.81%
Lack of relevant sources	60	32.43%
Lack of assistance by library staff	0	0%
Overload creates problems in searching for relevant information	47	25.41%
Lack of knowledge to use	20	10.81%
Total	185	100.00%

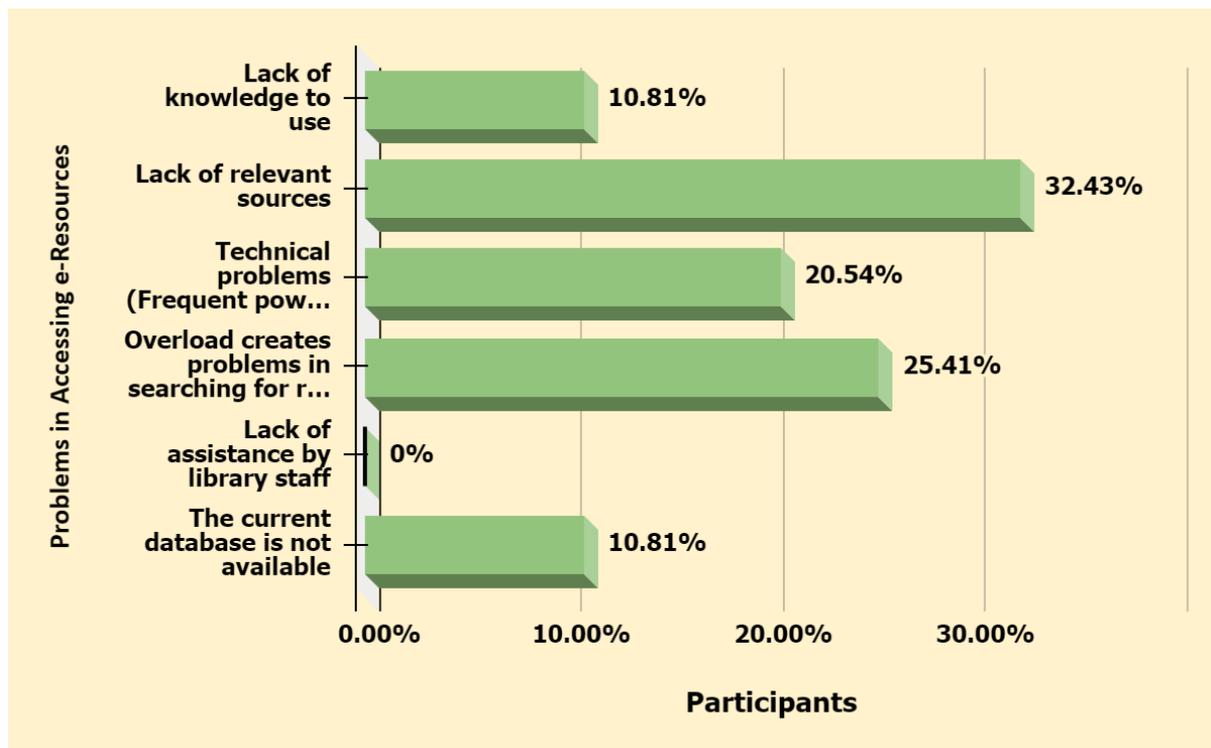


Fig. 6: Problems in Accessing Electronic Resources

6.13 The Influence in Connection with Online Materials on Teaching and Academic Personnel Research:

Table 14 uncovers the significant impact of e-resources on lecturers' professional activities. A majority of 92 lecturers (49.73%) reported that e-resources significantly aid their research endeavours. Following this, 45 respondents (24.32%) indicated that these resources enhance their teaching abilities. Additionally, 21 lecturers (11.35%) believe that online materials contribute to the overall development education system. Furthermore, 15 respondents (8.11%) utilize electronic resources to stay at the forefront of their profession, while 12 respondents (6.49%) use them to promote relationships among scholars.

Table 14: The Influence in Connection with Online Materials on Teaching and Academic Personnel Research

The Influence in Connection with Online Materials	Participants	Percentage (%)
Helps to foster relationships among academics	12	06.49%
Bring academics to the forefront of your profession	15	08.11%
Improve teaching ability	45	24.32%
Helps the development of the education system	21	11.35%
Aids in Carrying out research	92	49.73%
Total	185	100.00%

6.14 Proposed Solutions for Addressing Challenges in Accessing E-Resources: Users actively seeking solutions are pivotal in resolving issues and enhancing the services provided by the e-ShodhSindhu consortium. Respondents were surveyed regarding potential remedies for encountered challenges and

obstacles, with their reactions examined and displayed in the table 15. Numerous library patrons have proposed various resolutions for the current challenges. most recommended spreading knowledge of using electronic resources and providing dedicated workstations for faculty, researchers, and students to access e-journals. These findings are self-explanatory, and addressing these problems will undoubtedly lead to increased access of digital resources.

Table 15: Proposed Solutions for Addressing Challenges in Accessing E-Resources (N=185 each)

Solutions to problems about using e-Shodh Sindhu consortium	Participants	Percentage (%)	Ranks
To Advocate for the Use of Digital Resources	185	100%	1
Provide separate terminals for teachers/researchers/students	182	98.38%	2
Equip all departments/centre/offices with Internet	180	97.30%	3
Must educate All Users About E-Journal Access	170	91.89%	4
Increase in Internet Access Stations	157	84.86%	5
Must develop a user-friendly interface for full-text e-journals	155	83.78%	6
Provision of a separate hall for teachers/researchers/students	150	81.08%	7
The need for dedicated power supply	142	76.75%	8
Installation of more computer terminals	136	73.51%	9
Promote Internet Access Among Teachers/Researchers/PG Students	134	72.43%	10
The need to install high capacity server/voltage stabilizer	132	71.35%	11
Require extended hours for internet facility	130	70.27%	12
The need for more journals of management and allied subjects	125	67.57%	13
Organize Orientation Course/Internet Training for Users	92	49.73%	14
A printing facility should be made available to users	90	48.65%	15
Requirement for Morning Sessions for Research Scholars	75	40.54%	16
Share Best Practices for Accessing E-Journals	59	31.89%	17

7. Key Findings:

- A predominant 59.46% of participants comprised male research scholars and faculty members, with 40.54% representing the female category.
- A notable 54.06% of respondents engage with electronic resources daily.
- An overwhelming 94.59% of users demonstrated awareness of the E-ShodhSindhu Consortium, with only 5.41% lacking awareness.
- The websites of IIM Libraries were deemed the most reliable resource for e-resource searches by 36.22% of respondents.
- All participants 100% expressed a strong preference for utilizing digital databases, electronic journals, and web information resources, whereas digital databases stored on CD-ROM received as lowest preference at 36.76%.
- The primary usage of usage of digital resources among researchers and faculties is for research, teaching, and student guidance, as indicated by 51.35% of respondents.
- The most significant challenge identified by 60 (29.41%) respondents was the "lack of relevant sources."
- In terms of satisfaction, 32.43% of respondents expressed high satisfaction, 57.30% were pleased, 2.16% were not pleased, 2.70% were very dissatisfied, and 5.41% remained neutral.
- A substantial 37.84% of users found electronic resources highly convenient to access.
- Among lecturers, 49.73% noted that e-resources significantly enhance research endeavors.

8. Suggestions & Recommendations:

- Foster a culture of e-resource accessibility through targeted training sessions and workshops.

- Initiate comprehensive orientation programs led by IIM Libraries for incoming faculty and research scholars.
- Regularly host orientation and awareness initiatives tailored for postgraduate students, access to online reading materials is supported, actively seek and utilize user feedback to continually enhance library services.
- Ensure robust ICT infrastructure, including widespread Internet Access Points across IIM Libraries, Departments, Hostels, etc.
- Facilitate seamless connectivity with high-speed campus-wide Wi-Fi, optimizing access to electronic resources.
- Library hours are expanded to better accommodate the diverse needs of our users.

9. Conclusion:

The above study shows Pedagogy, Study, and Scholarly Research are Provided by electronic reading material activities. Like internet as well as digital publishing have seen a rise, numerous publishing houses now provide e-journals and additional online resources, e-books, and online/offline data repositories. However, the higher cost of electronic resources has led to the formation that e-resource consortia to facilitate access.

MHRD (Ministry of Human Resource Development) or UGC (University Grants Commission) has empowered the INFLIBNET Centre to acquire electronic resources under consortia agreements, ensuring access for Indian universities, colleges, and centrally funded technical institutions.

Findings highlight an advanced level of awareness among IIM Libraries users is observed regarding e-resources, with the IIM library being their preferred access point. However, users face various challenges and have provided suggestions to address these issues. Among these suggestions, conducting more User Awareness Training Programs was emphasized.

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