

## Awareness and Usage of Electronic Resources among LIS Scholars of Jiwaji University, Gwalior : A Survey

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### ABSTRACT

The survey is an attempt to determine and find the present status of awareness, accessibility and use of electronic resources among library and information science research scholars of Jiwaji University Gwalior, like; CD-ROM databases, online databases, online journals, OPAC etc. The study was done to find out the challenges, benefits, and progress gained by research scholars while accessing the e-resources. It is found out through study that 'Shodhganga' was mostly used (95 per cent) by research scholars, followed by DOAJ. It was also found out that research scholars got information about available e-resources and databases in their institute through the library website (45.5 per cent), followed by searching on Internet. A detailed result of this survey was discussed and recommendations were made to improve and enhance the usage of e-resources.

**Keywords:** Digital resources; Electronic resources; online databases; Research scholars; Jiwaji University

### 1. INTRODUCTION

With the advent of new information and communication technologies (ICT), a number of electronic resources are developed such as e-journals, e-books, emails, e-patents, e-databases, e-standards, e-thesis, e-chats, etc. The speed of Internet enhanced from 2G to 4G, which drastically improve the communication of information around the globe, which helps to develop the subscription of e-resources, reduces the time taken to reach information to researchers. These changes in communication technology radically improve role of librarians in managing, organising and disseminating the information to the end-users in effective and efficient way.

Evaluation of awareness and usage of electronic resources among the user community is always a challenging task for libraries. Multiple factors are involved and influencing to know the satisfaction level and usage of e-resources, whether it may be an academic community or scientists involved in R&D projects or among working professionals. Evaluation of available resources is always necessary for any institution/organisation, to be done time to time, so that more effective services and support can be provide to users, in supporting their research work. A survey was done to evaluate the awareness and usage of e-resources among library and information science research scholars studying in Jiwaji University, Gwalior.

Electronic resources are becoming an integral part of collection of any institution/organisation. ICT has made

possible to grow the publishing industry of e-resources in leaps and bounds and helps to provide the required and quality information to the users round the clock, under the user's reach through any smart device. Majority of publication houses and societies are publishing information electronically by use implementing new and advance technology as per the demand and convenience of the users after doing a number of surveys for services. These invaluable and up to date information resources are not only irreplaceable for research scholars, scientists but also to faculty members who involved in research and development projects. As the e-resources is providing information regarding current research to scholars without any delay after online publication on their desktop. Thus it reduces the time period to reach information to them. The e-resources are best means for research scholars to update their knowledge timely.

#### 1.1 About Institute

School of Studies in Library and Information Science was established in the Jiwaji University, Gwalior in 1984 to impart quality education and modern skills in the field to the students of the region leading to bachelor, master, and doctorate degree in library and information science. The Department is extensively engaged in teaching, research and career guidance too. This job oriented course has been modernised with use of the latest equipment in teaching and training at degree, post graduate and research level.

## 2. REVIEW OF LITERATURES

According to Sharma<sup>1</sup> electronic resources has provided a number of facilities to researchers in searching, arranging, and analysing information which is not available in print resources. Academic users mostly preferred to access e-resources for searching and acquiring information for their research and academic purposes<sup>2-5</sup>.

Haridasan & Khan<sup>6</sup> in their study suggested that academic faculty members were well aware about the e-resources and the facilities available in electronic books, journals, thesis, CD-ROM and OPAC. And suggest that faculty members strongly recommended to improve the computer and internet literacy to search and access e-resources at their institutions.

Nazir<sup>7</sup> found out in his study, that lack of assistance by library personnels and less orientation and awareness programmes about the subscription of e-resources available in library are major causes of less usage of library by users. User-training and orientation/awareness programmes should be organised for faculty members and staff both for searching and usage of e-resources<sup>8-11</sup>. More online tutorials and user guides/manuals should be designed and distributed among users about the services and e-resources and library staff should reach users personally, to assist in using online resources.

Ali<sup>12</sup>, discussed that lack of training by library staff for using digital resources, untrained library staff, lack of financial support, different variety user's query, poor library ICT infrastructure are some of the main reasons in less usage of e-resources. Pamphlets, library guides and online handbooks should be distributed among users in electronic & print format for more publicity of current resources subscribed by library online.

Khan & Haridasan<sup>8</sup> also found that library users in University of Delhi (DU) are more actively using e-resources and aware about the services of library in comparison with Aligarh Muslim University (AMU) users. The study also revealed that users are using e-resources for current information search and download on internet, but once they got softcopy of the required paper, they will take print out and read it. Therefore the e-resources are not much utilised at DU & AMU.

Lack of information literacy skill, slow Internet connectivity in the institution, uneven power supply, less number of computers, poor infrastructure of library, less space for reading in library, inadequate assistance from library staff are reasons due to which users are facing problems while using the e-resources<sup>3,4,13-15</sup>. University library should take a leading role to create more awareness and give more publicity about subscribed electronic resources by conducting training and retraining programs, organising workshop, conferences and seminars, so as to increase the use of the services. Islam & Habiba<sup>16</sup> found out in the study that faculty members and students were unsatisfied with the limited numbers of computers in library, slow download speed of internet and less number of journals titles subscribed by the library. This constraint affects the use of internet and library resources by the users. Satpathy & Rout<sup>17</sup> suggested that more number of electronic journals and facility of high speed internet by library will improve the usage.

Roy & Kumar<sup>18</sup> suggested that user's interface of electronic resources and databases are very complicated, due to which the

usage of resources decreases. Sinh & Nhung<sup>19</sup> found that users are facing main problem while searching online databases and journals due to poor search skills, complex interface, less knowledge of english languages and slow internet speed.

Kattimani<sup>20</sup> in his study recommended that simple search is mostly preferred and favourite technique used by users, whereas users are rarely using advance search interface for required information. Prasad & Singh<sup>4</sup> had shown that PDF was the most preferred format for online journals. Mucnjak<sup>21</sup> discuss that in humanity subject, users are more using online databases than print resources. The reason behind the increase in usage of electronic resources may be good quality and specific subject of e-journals selection, recommended by faculty members of humanities and social science group.

## 3. PURPOSE

To study the use of online resources, enough efforts have been done to know about awareness, problem and prospects among LIS research scholars of Jiwaji University, Gwalior, by the help of survey study. The study will be helpful in reorienting electronic resources services in university library and to coordinate them with ever changing demands of the research scholars.

## 4. OBJECTIVES

The objectives of this study is to find out:

- Usage of electronic resources among research scholar's for their academic work
- The benefits that research scholar associate with electronic resources
- Challenges to research scholar encounter in assessing electronic resources
- To study the use of different types of online databases
- To find the problems faced by the research scholars while accessing and using e-resources and online databases
- To determine the satisfaction level among the users of e-resources.

## 5. METHODOLOGY

Survey (questionnaire) method is used to study the usage of e-resources. A structured questionnaire was designed to collect data from the LIS research scholars of Jiwaji University, Gwalior, keeping in mind the basic objectives of the study. Research scholars were contacted personally to collect data. Apart from this, personal interviews were also conducted with research scholars to discuss the problems faced by them while using electronic resources for research studies.

## 6. RESULTS AND FINDINGS

The 40 questionnaires were distributed among library and information science (LIS) research scholars during PhD Course work at Jiwaji University (JU), Gwalior. Out of which only 22 filled questionnaires were received from 11 male and female research scholars each. The data collected was tabulated and analysed by the help of SPSS software, to extract the better understanding about the usage and awareness of e-resources among research scholars.

**Table 1. Response rate**

Gender	Distributed (40)	Received (22)
Male	22	11
Female	18	11

The main objective of this study is to find out the awareness of usage of e-resources among research scholars at JU, Gwalior in LIS field. The data collected shows that the all research scholars respondents are using e-resources provided by university and college libraries for the research work.

As the e-resources is providing information regarding current research to scholars without any delay on their desktop, thus it reduces the time period to reach information to them.

After analysis of data from Table 2, it was found that 3 (14 %) of the LIS research scholars are using e-resources since less than 01 year, 11 (50 %) are using from 1-4 years, 6 research scholars (27 %) are using from 5-6 years and 2 (9 %) are using e-resources more than 8 years. The result shows an encouraging picture as the usage of e-resources among research scholars is increasing with time.

Regarding analysis of how long the age group of researchers is using e-resources shown in Table 2 It was found after analysing the data, that in age group of 21-25 yrs, out of 4 researchers, 3 (75 %) are using from 1-4 yrs. In age group of 26-30 yrs, out of 8 researchers, 6 (75 %) are using from 1-4 yrs and 2 (25 %) are using e-resources less than one year. In third age group of 31-35yrs, out of 4, 2 (50 %) are using since 5-8 yrs, 1 (25 %) each using since 1-4 yrs and more than 8 years. The age group of 36-40 yrs, out of total 6 users, 4 (75 %) are using since 5-8 yrs and 1 (25 %) each using under age group of 1-4 yrs, and more than 8 years.

**Table 2. Age Group wise: How long users have been using e-resources?**

Age group	Less than one year	1-4 years	5-8 years	More than 8 years	Total (%)
21-25	1	3	0	0	4 (18.2)
26-30	2	6	0	0	8 (36.4)
31-35	0	1	2	1	4 (18.2)
36-40	0	1	4	1	6 (27.3)
Total	3	11	6	2	22 (100.0)

The result show that with increase in experience in field, the usage of the e-resources also increases simultaneously.

## 7. DATABASE(S) USED BY RESEARCHER

This study is also attempted to know that which e-resources are mostly used by LIS research fellows studying at Jiwaji

University, for research purpose.

*ScienceDirect Database:* After analysing the data in Table 3, the use of ScienceDirect database among LIS researchers, 5 (23 %) are only using it for their research purpose, rest 17 (77 %) are not using it. It indicates that as ScienceDirect is database covers less research papers in LIS subject area, therefore its usage is very less among LIS scholars.

*Library & Information Science Abstract:* Library and Information Science Abstracts (LISA) is the main source of information in field of LIS. As shown in Table 3, majority 14 (64 %) scholars of LIS field are using it and rest 8 (36 %) are not referring it.

*Library, Information Science and Technology Abstract:* Library, Information Science and Technology Abstract (LISTA)<sup>23</sup> is covering full text papers in database of LIS. After analysing the usage of LISTA (Table 3), it was found that only 4 (18 %) are using it and rest 18 (82 %) are not referring LISTA for their research work. It shows that LISTA is less known among LIS researchers at JU Gwalior.

*Networked Digital Library for Thesis and Dissertations:* Networked Digital Library for Thesis and Dissertations (NDLTD) is an international organisation which helps in promoting in creation, maintenance and preservation of electronic thesis and dissertation (ETDs). As shown in Table 3, majority of research scholars, 12 (55 %) are using it for research studies and rest 10 (45 %) has not referred it.

*Directory of Open Access Journals:* Directory of Open Access Journals (DOAJ) is an online directory of open access journals. As shown in Table 3, majority of research scholars, 17 (77 %) are using DOAJ database and 5 (23%) are not referring it for research studies. It clearly shows that open access journals are referred by good number of research scholars and quite popular among them.

*Emerald Journals:* Emerald is publishing 32 journals in field of library and information science, in which it covers research papers publish on current trends and technologies. After analysing the data from Table 3, shows that 15 (68 %) of users are referring Emerald journals out of 22 users.

*Shodhganga:* Shodhganga<sup>22</sup> is an online reservoir of Indian PhD thesis published in various Indian universities, hosted by INFLIBNET, Ahmedabad. Table 3 shows that ‘Shodhganga’ is most referred (95.5%) database by LIS research scholars to pursue their research work.

### 7.1 Awareness about E-resources

*Under Consortium:* Indian university Libraries are getting access to E-journal consortium developed by INFLIBNET

**Table 3. Use of databases by LIS researchers**

	Science-Direct (%)	LISA(%)	LISTA (%)	NDLTD (%)	DOAJ (%)	Emerald Jls (%)	Shodhganga (%)
Yes	5 (22.7)	14 (63.6)	4 (18.2)	12 (54.5)	17 (77.3)	15 (68.2)	21 (95.5)
No	17 (77.3)	8 (36.4)	18 (81.8)	10 (45.5)	5 (22.7)	7 (31.8)	1 (4.5)
Total	22 (100.0)	22 (100.0)	22 (100.0)	22 (100.0)	22 (100.0)	22 (100.0)	22 (100.0)

under UGC, MHRD, GoI for faculty members, research scholars and students, are main source of information. The data collected are analysed, as shown in Table 4 that 16 (73 %) are accessing e-resources under consortium using it for research purposes.

*Ease in Access to E-resources Subscribed:* To find out how comfortable are research scholars to access to e-resources subscribed/ available in college and university libraries. Table 4 reveals that 19 (86 %) research scholars feel ease in accessing e-resources available in libraries and rest 3 (14 %) feels uncomfortable.

**Table 4. Awareness of e-resources**

	E-resources under consortium (%)	Ease in access (%)
Yes	16 (72.7)	19 (86.4)
No	6 (27.3)	3 (13.6)
Total	22 (100.0)	22 (100.0)

## 8. PURPOSE OF USING E-RESOURCES

To find the purpose of using e-resources among research scholars of Jiwaji University, Gwalior, results were analysed from Table 5 and described below:

*Research Need:* Maximum 21 (96 %) scholars urgently need the e-resources to carry out their research work, it is main source of information for their research studies.

*Enhancing Education:* To carry out the academic studies in colleges and universities, e-resources are main source of information among research scholars. Table 5 shows that 17 (72 %) are regularly using e-resources to complete their academic studies and assignments, only 5 (23 %) thinks that e-resources are not helpful in enhancing education.

*Writing Research Paper:* Writing a research paper is essential for research scholars in reputed journals, to authenticate the studies by subject experts/reviewers. Table 5 shows that 17 (77 %) of research scholars are taking help of e-resources in writing research papers and rest 5 (23 %) are using other resources.

*Aid for Teaching Assignments:* Research fellows at universities and colleges are also engaged in academic activities. They have also been given the task of teaching undergraduate and post graduate students. Table 5 reveals that 9 (41 %) are referring e-resources for teaching aid and 13 (59 %) are consulting other resources for information in teaching.

*Updating the Domain Knowledge:* Updating domain knowledge time-to-time helps research scholars to keep them abreast about the subject domain in their field. Thus, e-resources are main sources of extracting information from various sources. Table 5 shows that 14 (64 %) are keep updating their domain knowledge through e-resources available to them.

**Table 5. Purpose of using e-resources**

	Research need (%)	Enhancing education (%)	Writing research paper (%)	Aid for teaching assignments (%)	Updating the domain knowledge (%)
Yes	21 (95.5)	17 (77.3)	17 (77.3)	9 (40.9)	18 (81.8)
No	1 (4.5)	5 (22.7)	5 (22.7)	13 (59.1)	4 (18.2)
Total	22 (100.0)	22 (100.0)	22 (100.0)	22 (100.0)	22 (100.0)

## 9. WAY TO LOCATE E-RESOURCES

To locate e-resources by research scholars, various options where given, to know by which means they locate/find e-resources. Table 6 shows that 11 (50 %) are locating e-resources by their personal efforts, 6 (27 %) are taking help from fellow scholars/supervisors, 1 (5 %) taking help from library staff and 4 (18 %) are getting information through user awareness/orientation programmes organised by library staff.

**Table 6. How to locate e-resources**

Head	Frequency (%)
Personal Effort	11(50.0)
Help from Fellow Scholars/Supervisor	6 (27.3)
Help from library staff	1 (4.5)
User awareness by library staff	4 (18.2)
Total	22 (100)

## 10. SOURCE OF INFORMATION ABOUT E-RESOURCES?

It was also tried to find out that by which source a research scholar is getting information about e-resources. Table 7 reveals that library website is best source of getting information about e-resources as 10 (46 %), followed by surfing through internet 9 (41 %), then 1 each (4.5 %) through mail from library staff, discussion with colleagues, Blogs and Social media.

**Table 7. Sources of information about e-resources**

	Frequency (%)
Library Website	10 (45.5)
Mails from library staff	1 (4.5)
Internet	9 (40.9)
Colleagues	1 (4.5)
any other	1 (4.5)
Total	22 (100)

## 11. PROBLEMS FACED IN ACCESSING

Problem in accessing the e-resources always hamper the main motto of library to send information to its users and it defeats the purpose of second law of library science. From Table 8, it was found out that 5 (23 %) feels that lack of skills is problem in accessing, 6 (27 %) feels inadequate number of computers, 3(14%) were unsatisfied with available information, 4 (18 %) feels that user interface is not suitable/user friendly and 4 (18 %) feels no problems in accessing and searching e-resources.

**Table 8. Problems faced in accessing/using e-resources**

	Frequency	Percent
Lack of skills	5	22.7
Inadequate number of computers	6	27.3
Unsatisfied with available information	3	13.6
Searching interface of e-resources	4	18.2
Any other	4	18.2
Total	22	100.0

## 12. FINDINGS

- ❖ It was found that 'Shodhganga' was most used (95 %) by LIS research scholars, followed by DOAJ (77.3 %), Emerald Journals (68.2 %), LISA (63.6 %), NDLTD (54.5%) and LISTA (18.2 %), ScienceDirect (11 %) was least used database by scholars.
- ❖ It is found out that most of the LIS research scholars using e-resources for completing their PhD work (95.5 %), followed by enhancing their education (77.3 %), writing research papers (77.3 %), updating domain knowledge (63.6 %) and as an aid in teaching assignments (40.9 %).
- ❖ It is found out that most of the LIS research scholars were facing difficulty in accessing e-resources due to inadequate number of computers (27.3 %), followed by lack of skills in searching (22.7 %), complicated searching interface of e-resources (18.2 %) and unavailability of required information (13.6 %),
- ❖ It is also found out in study that most of LIS research scholars were using e-resources during 1-4 years (50 %), followed by 5-8 years (27.3 %) and 13.6 % are using e-resources less than one year.
- ❖ After analysis, it was also found out that LIS researcher scholars are locating e-resources mostly by personal efforts (50%), followed by the taking help of fellow scholars/supervisors (27%).
- ❖ It was also found out that library website (45.5%) is the best source to get information about available e-resources, for research scholars, followed by internet (40.9%)
- ❖ It was also found out that LIS research scholars got information about available e-resources and databases in their institute through the library website (45.5 %), followed by searching internet (40.9 %) and by email from library and also from their colleagues (4.5 %),
- ❖ Through the study it known that majority of research scholars are satisfied (86.4 %) with the availability of e-resources and databases in institutes.

## 13. SUGGESTIONS FOR IMPROVEMENT

To improve the usage and awareness of e-resources following suggestion are put forth on the basis of usage analysis of e-resources among research scholars of Jiwaji University, Gwalior:

- Celebrate special week/month on specific subject in coordination with various departments, libraries should organise a series of user-orientation programmes and distribute special handbooks/tutorials, link to online gateways and list of the resources available in libraries

and circulate them among faculty members and students

- Central library and college libraries needs to organise various department-wise training and orientation programmes for faculty members and students for the optimum utilisation of available e-resources. Also, should organise, time to time, the product demonstrations and trials for the new resources introduced by the publishers for the users, to make them aware about recent developments in their subject fields.
- High speed network of Wi-Fi as well as leased line should be introduced in the campus and hostels, with security features according to the suitability of users.
- To save the time of users in searching the information about the availability and usage of e-resources, libraries should introduce content alert services, bulletin board services, library newsletter, pamphlets, training tutorials/modules and online tutorials of the subscribed e-resources/databases.
- Need to improve infrastructure of libraries and there should be uninterrupted power supply and enhance the speed of Internet.
- There is need to improve the literacy skills of the research scholars.
- Need to develop web-based library services for the research scholars.
- To improve library services, new gadgets such e-book readers, self-help Kiosk, QR-Codes, RFID technology, etc. should be made available in libraries, to attract more users in libraries.
- All academic libraries should conduct time-to-time, user survey/feedback regarding awareness and usability of resources available in libraries.
- More advertisement/publicity should be given to e-resources subscribed/available in libraries.

## 14. RECOMMENDATIONS AND CONCLUSIONS

With the development of ICT technologies for improving digital environment, college and university libraries are improving their infrastructure and trying to attract more users and making libraries more user-friendly. UGC with the help of INFLIBNET, are providing a number of e-resources and databases through consortium to college and university libraries. The user-friendly features of e-resources are attracting more and more users towards libraries. It not only improves the quality of research but also make faculty and students more confident after having access to large number of e-resources and databases to their desktop and to keep themselves up-to-date in their relevant subject field. Features of e-resources are making users heavily dependent to get required information timely.

The challenge to librarian is to make balance in acquisition of print and electronic resources to meet the users demand. The librarians should ask all departments to send the priority list of e-resources for procurement in the coming year and consult all head of the departments before finalising the subscription of e-resources collection. Student's representative should also be made a member of selection committee in e-resources, to

make the collection development more effective and visible. Upgrading infrastructure of the libraries, increase in acquisition of new e-resources and databases, communication should be improve between end-users and librarians, are some of the main steps to enhance the confidence, awareness and usage of library resources. Librarians should organise pro-actively end-user training sessions in libraries and also in the various departments of the college and universities. Special training sessions on demand should also be organised to improve the usage. Librarians should coordinate with various departments to organise user education sessions during seminar/workshops/conferences organised by them.

The users also prefer to search the e-resources having simple and user-friendly interface. Librarians should make the homepage of library, such that user may get required information in minimum clicks on webpage. The webpage of libraries should also provide subject gateways and subject-wise list of e-resources available in libraries to improve the visibility of collection to more number of users.

The paper will facilitate university libraries to improve understanding about e-resources among faculty members, research scholars and students and will organise more proactive end-user training programs to create awareness towards effective usage of e-resources.

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#### ACKNOWLEDGEMENT

The author is sincerely thanks to Dr Ajay Kumar Singh, Director, INMAS for his continuous encouragement and permission to submit the paper to DJLIT.

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