USE OF ELECTRONIC JOURNALS BY RESEARCH SCHOLARS OF ALIGARH MUSLIM UNIVERSITY, ALIGARH AND JAMIA MILLIA ISLAMIA, NEW DELHI

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E-Journals are online and digital in nature. They disseminate scientific results through communication networks. They are important and contain primary information on research in concerned field. This paper explores the use of e-journals among research scholars of Aligarh Muslim University (AMU) and Jamia Millia Islamia (JMI). It compares the use of e-journals among the science and social science research scholars of AMU and JMI. It highlights that PDF format of e-journals is the most popular format among research scholars. It shed light on the purpose of using e-journals by research scholars of both universities and the search strategies adopted by science scholars and social science scholars of AMU and JMI. It discloses the infrastructural problems faced by the research scholars of these universities.

Keywords: E-Journals; use; search strategies; e-journal consortia; Research scholars; Aligarh Muslim University; Jamia Millia Islamia.

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INTRODUCTION

Recording of information is ages old practice of human being. When man was living in Stone Age period he started recording information on rocks. With the passage of time the advancements in man took place in all aspects of his life including his writing styles and materials used for writing. After writing on rocks he started writing on leaves and animal skins. With the development of printing technology man started publishing his knowledge on paper in the form of books and journals. Paper became medium of storage, dissemination and communication of information. But there is a proverb "necessity is the mother of all inventions", the thirst of making communication faster lead the invention of internet. The advent of Information, communication and technology not only effect the communication but also affect our reading and learning habits. Such developments have given birth to electronic journals. It not only makes scholarly communication faster but also makes wider dissemination and distribution of information faster. Electronic journals help to communicate scientific results faster. Electronic journals are digital in form, it can be seen by eyes but can't be touched or felt. Electronic journals are virtual in nature and it is also known as paperless journal or online journal. Electronic journals are published by publishers like any printed journals but it is done in electronic way and it is distributed through internet world widely.

This paper discusses on the use of e-journals by science and social science research scholars of Aligarh Muslim University (AMU) and Jamia Millia Islamia (JMI), New Delhi. It also compares the frequency of usage of e-journals among research scholars of these universities and explores the awareness of e-journal consortia among research scholars.

E-JOURNALS AT ALIGARH MUSLIM UNIVERSITY

Maulanaa Azad Library is one of the largest university libraries of the world. It is the Central library of the Aligarh Muslim University with over 110 sister libraries (college/seminar libraries). It provides access to about 1800000 volumes of books, and about 2000000 research paper in hard and soft copies. Library has developed its institutional repository containing 9000 plus PhD Theses & Dissertations.

Services provided by the library to its users are- retrieval of information, assistance in locating/ searching of documents, advisory services, current awareness service, bibliographic instructions, interlibrary loan, organization of exhibitions, press clipping, reprographic service, print facility, etc.

Periodicals Division of library acquires and procures periodicals both in print as well as in electronic form. This Division not only acquires periodicals but also manages it. This division also acquires magazines and newspapers. In the month of February 2017 this division has 416 printed journals and freely available journals and 8066 + e-journals and some world famous databases. The Maulanaa Azad Library is giving access to e-journals through e-shodhsindhu e-journal consortium of INFLIBNET within university campus to all students, faculties, research scholars and staff. Advanced search is provided to search journal articles (www.amu.ac.in).

Table 1: E-Resources Available in AMU Library

Sl. No.	Name of E-Resource
(A)	E-Books with Perpetual Access
1.	Cambridge University Press (Social Science Digital Library)
2.	Elsevier/Science Direct e-books
3.	Taylor & Francis (Social Science Digital Library)
(B)	Databases/e-journals subscribed by Maulana Azad Library for 2019
1.	Clinical learning
2.	Computer & Concrete (e-journal)
3.	Construction & Building Materials (e-journal)
4.	DELNET
5.	Earthquakes and Structures (e-journal)
6.	EBSCO: Library & Information Science source Database
7.	Emerald Univ. collection
8.	IndiaStat.com
9.	Institute of Physics
10.	ProQuest Dissertations & Theses Global Database
11.	Prowess
12.	Renewable Energy (e-journal)
13.	Scopus
14.	Science Direct (10 subject collection)
15.	SciFinder Scholar
16.	Springer e-books
17.	UP To Date
18.	Wiley Black Well Publishing
19.	EBSCO Discovery Services

(www.amu.ac.in)

E-JOURNALS AT JAMIA MILLIA ISLAMIA (JMI)

Dr. Zakir Husain Library is the Central Library of JMI. The library has stack capacity for about 6 lakh books. The library has 3.7 lakh books on various subjects. The Library has Digital Resource Centre which facilitates access to e-journals and other in-house digitized e-resources. The library's LAN

linked to the university campus-wide network. The library also provides remote login facility for e-journals to faculty, researchers and other bonafide members. The library provides online catalogues. Services provided by the library are circulation, reference service, book reservation, reprography, Inter loan, etc.

Dr. Zakir Husain Library provides membership login ID to its members and members can access online full text e-journals from library site. Library gives remote access to its members. It gives access to 6246 e-journals and library also give access to open access journals from DOAJ, Academic Journal, Free Medical Journals, E-Journals.org, Journal of Digital Information, Scientific Research Open Access, International Association for Sharing Knowledge and Sustainability. Library has provided a federated search tool Knimbus to search journal articles from multiple databases. Besides e-journals library is providing print journals too. Library provides access to 191 Indian print Journals and 130 foreign print journals. (www.jmi.ac.in).

Table 2: E-Resources Available in JMI Library

Sl. No.	Name of E-Resource
A.	Online Catalogue
B.	E-Journals/Database
1.	ABI/INFORM Complete
2.	American Chemical Society
3.	American Institute of Physics
4.	American Physical Society
5.	American Society of Civil Engineers (ASCE Journals)
6.	American Society of Mechanical Engineers (ASME Journals)
7.	Annual Reviews
8.	Bentham Science & Technology Package
9.	Britannica Academic Edition
10.	CMIE-Prowess IQ
11.	Critical Collective
12.	Ebsco Business Source Elite
13.	Economic & Political Weekly
14.	Elsevier
15.	Indian journals.com
16.	Hein Online
17.	IEEE XPLORE Digital Library
18.	Indian Standards IS Complete Set Online
19.	IndiaStat.com
20.	International Encyclopedia of Social & Behaviral Sciences
21.	ISID Database
22.	Jgate Plus
23.	JSTOR
24.	Lexis Nexis Online E-Law Library
25.	Manupatra
26.	Material Science & Engineering Database
27.	MathSciNet
28.	Nature
29.	Notnul.Com
30.	Oxford University Press
31.	Project Muse
32.	ProQuest Politics Collection
33.	ProQuest Psychology Collection
34.	SCC Online
35.	SciFinder
36.	Science
37.	South Asia Archive
38.	Springer Link
39.	Taylor & Francis
40.	V-ideo
41.	Web of Science
42.	Wolters Kluwer
C.	World eBook Library
D.	Trial Access E-Databases
1.	EBSCO host- Rehabitation
2.	ProQuest Dissertation & Theses Global full text
3.	Research Companion
4.	Academic videos online
E.	E-Books Database
1.	De Grutyer
2.	Elsevier E-books
3.	McGraw-Hill Education Express Library
4.	IGI Global (Library Science, Information studies & education)
5.	International Encyclopedia Social & Behaviral Sciences
6.	Pearsons E-Books
7.	World Scientific Publishers (Mathematics)
F.	Open Access E-Resources

(a)	E-Books
1.	Project Gutenberg
2.	Digital Library of India
3.	Google Books
4.	Free Computer Books
5.	Open Library
6.	Free E-Books.Net
(b)	E-Journals
1.	Directory of Open Access
2.	Academic Journals
3.	Free Medical Journals
4.	E-Journals.org
5.	Journal of Digital Information
6.	Scientific Research open Access
7.	International Association for sharing knowledge and sustainability
(c)	E-Reference Source
1.	Reference and User Services Association (RUSA)
2.	Infoplease
3.	Refdesk.com
4.	India.gov.in (National portal of India)
5.	Merriam-Webster Dictionary & Thesaurus
(d)	Shodhganga
(e)	E-Newspapers
1.	India Press
2.	Online newspapers.com

(www.jmi.ac.in)

REVIEW OF RELATED LITERATURE

It is very important to get background knowledge through studies conducted on use of e-journal. Some review of literature has been done on this topic, as follows: Sudhier (2016) explored the usage of e-journals among the students of TKM college of Engineering (TKMCE), Kollam, India. This study revealed that most preferred e-resources among students are e-journals. For searching and locating electronic information, students widely use Google search engine. It is found that students take print out of e-journals for reading purpose and most of students use e-journals for their academic works. The study also shed light on the problems faced by the users while accessing e-journals and one of the major problem is slow speed of internet. Students of this college are interested in taking training programme on the use of e-journals. This study also discloses that e-resources are good substitute of conventional resources. The study conducted by Leduc & Schöpfel (2015) on the usage of e-journals in different privately run business schools of France. This study found that large numbers of e-journals are subscribed through packages or bundling and others ordered individually by titles and the mode of subscription has impact on the usage of e-journals. The extent of online usage of journals was higher than its usage in university. The usage of e-journals was high in business schools than its usage in universities due to emerging research activities in business schools and a projected and required international orientation. It also compared the usage of e-journals between different business schools. A survey was done to analyse the use of e-journals by the scientists of Council of Scientific and Industrial Research Institute of Genomic and Integrative Biology (CSIR-IGIB). It is found that scientists were more interested in e-journals provided by CSIR-NISCAIR consortia, NKRC (The National Knowledge Resource Consortium) than those available via direct subscription. The maximum number of scientists were searching and using e-journals from their campus cabin for research purpose and to keep their knowledge up to date. A good and advanced ICT infrastructure was provided to the scientists of CSIR-IGIB and scientists need training in using e-resources and retrieving exact and pinpointed information on their topics from the databases (Qasim& Khan, 2015). The use of e-journals by PhD scholars of University of Lucknow from UGC INFONET Digital Library consortium is determined. The purpose of using electronic journals by Ph.D. scholars like resource sharing, use for access and downloading materials, use for accessing to electronic information, use to link open access journals, etc. The problem faced by scholars in using UGC-INFONET consortium was disclosed. The satisfaction level on UGC-

INFONET among scholars was expressed. The large numbers of respondents were partially satisfied (Parveen, 2014). Kaur (2011) found the impact on use of e-journals in various university libraries of India. The use of e-journals increased in libraries and increased availability of e-journals decreased the use of print journals. Availability of e-journals also effected number of visitors visiting libraries. Use of e-journals increased the number of visitors in Indian University libraries. A survey conducted by Ali and Nisha (2011) on the use and awareness of e-journals among research scholars at Central Science Library of Delhi University. E-Journals were used by research scholars of Computer Science, Mathematics and Physics discipline for several purposes such as for research work, for preparation of assignments and seminar presentations and as study material. Most of the research scholars were familiar with e-journals and they were using e-journals in their variety of works. The most preferred online format was PDF for reading e-journals. The most popular search strategy followed by the research scholars was keywords and 71% users are aware of UGC-INFONET e-journal consortia.

OBJECTIVES OF STUDY

1. To compare the usage of e-journals among research scholars of Aligarh Muslim University and Jamia Millia Islamia, NRE Delhi.

2. To determine frequency of e-journal usage between research scholars of Aligarh Muslim University and JamiaMilliaIslamia.

3. To know the preference of users on e-journals over printed.

4. To examine the awareness of e-journal consortia among research scholars in these universities.

5. To understand various constraints being faced by scholars while using e-journals.

6. To suggest recommendations for effective usage of e-journals.

METHODOLOGY

It is a survey based study and the sampling technique used in this study to select the samples is stratified random sampling and convenience sampling. Stratified random sampling is used in selecting departments and convenience sampling is used for choosing respondents/scholars. The data collection tool adopted for this study is questionnaire method. Close ended questionnaire are administered to research scholars. Only MPhil and PhD scholars are covered under this study. This survey is conducted during 24/08/2016 to 7/09/2016.

Questionnaires were administered to the M.Phil. and Ph.D. scholars. In total 226 questionnaires are distributed but investigator received only 219 valid questionnaires; 80 and 64 questionnaires were administered to science scholars and social science scholars of AMU respectively and 52 and 30 questionnaires were distributed to science and social science scholars of JMI respectively. Received 76 valid questionnaire from science scholars and 62 valid questionnaire from social science scholars of AMU whereas from JMI received 52 valid questionnaire from science scholars and 29 valid questionnaire from social science scholars and one questionnaire was not returned by the social science scholars of JMI.

SCOPE OF THE STUDY

The scope of this study is limited to MPhil and PhD science and social science research scholars of Aligarh Muslim University, Aligarh and JamiaMilliaIslamia, New Delhi.

DATA ANALYSIS AND
INTERPRETATION

This study is conducted to know the use of electronic journals among MPhil and PhD scholars of Jamia Millia Islamia (JMI) and Aligarh Muslim University (AMU).

A Comparison of Usage of e-journals between research scholars of Aligarh Muslim University (AMU) and JamiaMilliaIslamia (JMI)

This study disclosed that 95% (76) of science research scholars and 96.88% (62) of social science research scholars of AMU are using E-Journals where as 100% of both science and social science research scholars of JMI are using E-Journals. In AMU 95.83% research scholars in total are using e-journals whereas in JMI 100% scholars in total are using it. Some Ph.D. research scholars at AMU dislike to read e-journals because it is electronic in nature and read only on machines which produces strain on their eyes.

Frequency of usage of e-journals between scholars of AMU and JMI

This study revealed that 51.32% science scholars of AMU spent time on reading e-journals 'daily' where as 73.07% science scholars of JMI are reading e-journals 'daily'. It is a large difference in the usage of e-journals under this category of research scholars in these universities. Science scholars of JMI are using e-journals more than science scholars of AMU; there frequency of usage is higher than the frequency of usage of e-journals by science scholars of AMU. It is also found that only 32.25% of social science scholars of AMU are spending time on reading e-journals 'daily' where as 37.93% of social science scholars of JMI are reading e-journals 'daily'; here difference is little between research scholars of AMU and JMI. This study reveals that in both universities science scholars are spending more time on reading e-journals than social science scholars.

Table 3: Usage of E-Journals

Usage of E-Journals	AMU Science Scholars (n=80)		AMU Social Science Scholars (n=64)		Total no. of scholars at AMU (n=144)		JMI Science Scholars (n=52)		JMI Social Science Scholars (n=29)		Total no. of scholars at JMI (n=81)	
		(%)		(%)		(%)		(%)		(%)		(%)
Yes	76	95%	62	96.88%	138	95.83%	52	100%	29	100%	81	100%
No	4	5%	2	3.12%	6	4.17%	0	0%	0	0%	0	0%

Table 4: Frequency of usage of e-journals

Frequency	AMU Science Scholars(n=76)		AMU Social Science Scholars (n = 62)		JMI Science Scholars (n = 52)		JMI Social Science Scholars (n = 29)	
	No. of Responses	(%)	No. of Responses	(%)	No. of Responses	(%)	No. of Responses	(%)
Daily	39	51.32%	20	32.25%	38	73.07%	11	37.93%
Weekly	23	30.26%	19	30.65%	10	19.23%	12	41.39%
Monthly	4	5.26%	9	14.52%	2	3.85%	3	10.34%
Sometimes	10	13.16%	14	22.58%	2	3.85%	3	10.34%

Preference of e-journals over print journals

The study found that both categories of research scholars (science and social science) in both universities (AMU and JMI) are equally interested in e-journals as well as printed journals. 57.89% science scholars and 66.13% social science scholars of AMU and 59.62% science scholars and 72.41% social science scholars of JMI are equally interested in using both type of journals.

Learn to use e-journals

This study examined the sources from where the science scholars of AMU got knowledge about e-journals. The Table 6 is clearly showing that 75% (57) science scholars came across e-journals through Teachers/Friends, 2.63% (2) scholars came to know about e-journals through Library Staff,

5.26% (4) got awareness about e-journals through Formal Course, and 21.05% (16) science scholars learnt to use e-journals through any other sources like internet where as in JMI 67.31% (35) science scholars came across e-journals through Teachers/Friends, 13.46% (7) came to know about e-journals from Library Staff, 1.92% (1) got awareness about e-journals from Formal Courses and 17.31% (9) learnt to use e-journals from Any Other sources like internet or self. On the other hand 69.35% (43) social science scholars of AMU came across e-journals through Teachers/Friends, 12.90% (8) social science scholars came to know about e-journals through Library Staff, 9.68% (6) social science scholars got knowledge about e-journals through Formal Courses and 19.35% (12) social science scholars came across e-journal via any other sources like internet, etc. whereas 65.52%

Table 5: Preference of e-journals over printed journals

Journal Type	AMU Science Scholars(n = 76)		AMU Social Science Scholars(n = 62)		JMI Science Scholars(n = 52)		JMI Social Science Scholars(n = 29)	
	No. of Responses	(%)	No. of Responses	(%)	No. of Responses	(%)	No. of Responses	(%)
E-Journals	22	28.95%	10	16.13%	16	30.76%	3	10.35%
Print Journal	10	13.16%	11	17.74%	5	9.62%	5	17.24%
Both	44	57.89%	41	66.13%	31	59.62%	21	72.41%

Table 6: Learn to use e-journals

Name of Source	AMU Science Scholars (n = 76)		AMU Social Science Scholars (n = 62)		Total no. of scholars at AMU (n = 138)		JMI Science Scholars (n = 52)		JMI Social Science Scholars (n = 29)		Total no. of scholars at JMI (n = 81)	
		(%)		(%)		(%)		(%)		(%)		(%)
Teachers/ Friends	57	75%	43	69.35%	100	72.46%	35	67.31%	19	65.52%	54	66.67%
Library Staff	2	2.63%	8	12.90%	10	7.25%	7	13.46%	6	20.69%	13	16.05%
Formal Course	4	5.26%	6	9.68%	10	7.25%	1	1.92%	1	3.45%	2	2.47%
Any Other	16	21.05%	12	19.35%	28	20.29%	9	17.31%	5	17.24%	14	17.28%

(Multiple answers were permitted)

(19) social science scholars of JMI got knowledge about e-journals through Teachers/Friends, 20.69% (6) from Library Staff, 3.45% (1) from Formal Courses and 17.24% (5) from any other sources like internet or self, etc. It is very much clear that maximum number of both categories of scholars, science as well as social science scholars in both the universities got knowledge to use e-journals from their teachers or friends (72.46% from AMU and 66.67% from JMI).

Purpose of using e-journals in AMU and JMI

The study found that 88.16% science scholars and 80.65% social science scholars of AMU and 90.38% science scholars and 72.41% social science scholars of JMI were using e-journals for research work. Maximum numbers of research scholars were using e-journals for research works in both universities. From Table 7 it is clear that research scholars are not only using e-journals for research works but also for various purposes like for preparing assignments and seminar presentations and publishing articles, to keep their knowledge up to date, etc.

Search strategy adopted by AMU and JMI scholars

It is found that most popular search method among science research scholars of AMU is 'Author' and 'Title' i.e. 61.84% and 64.47% respectively whereas among social science scholars of AMU, the most accepted search method is 'Title' and 'Keywords' i.e. 70.97% and 58.06% respectively. On other hand in JMI among science as well as social science scholars the most accepted search method is 'Title' and 'Keywords'; figures are 71.15%, 46.15%, 65.52% and 55.17% respectively. It is clear from the data presented in table 7 that 'Title' and 'Keywords' search methods are most popular among research scholars.

Most preferred e-journals format among scholars of AMU and JMI

It is noticed from the study that the majority of users like to read e-journals in PDF format; it means that format affects the use of e-journals. 75% science scholars of AMU preferred PDF format and 25% science scholars liked to read e-journals in both (i.e. PDF and HTML) formats equally. But 31.58% (24)

Table 7: Purpose of using e-journals

Purpose	AMU Science Scholars (n = 76)		AMU Social Science Scholars (n = 62)		JMI Science Scholars (n = 52)		JMI Social Science Scholars (n = 29)	
	No. of Responses	(%)	No. of Responses	(%)	No. of Responses	(%)	No. of Responses	(%)
Research Work	67	88.16%	50	80.65%	47	90.38%	21	72.41%
Making Assignments and Seminar Presentations	5	6.58%	13	20.97%	3	5.77%	11	37.93%
Writing Articles	16	21.05%	21	33.87%	12	23.08%	13	44.83%
To keep up to date Knowledge	19	25%	24	38.71%	15	28.85%	12	41.38%
Searching relevant information in the area of Specialization	28	36.84%	28	45.16%	17	32.69%	12	41.38%

(Multiple answers were permitted)

Table 8: Search Strategy adopted by research scholars

Search Method	AMU Science Scholars (n = 76)		AMU Social Science Scholars (n = 62)		JMI Science Scholars (n = 52)		JMI Social Science Scholars (n = 29)	
	No. of Responses	(%)	No. of Responses	(%)	No. of Responses	(%)	No. of Responses	(%)
Author	47	61.84%	22	35.48%	22	42.31%	14	48.28%
Title	49	64.47%	44	70.97%	37	71.15%	19	65.52%
Keywords	28	36.84%	36	58.06%	24	46.15%	16	55.17%
Subject	19	25%	24	38.71%	9	17.31%	12	41.38%
Date of Publication	12	15.79%	7	11.29%	11	21.15%	2	6.9%
Journal Title	28	36.84%	28	45.16%	19	36.54%	7	24.14%
Table of Content	2	2.6%	6	9.68%	1	1.92%	0	0%
Abstract	6	7.89%	14	22.58%	8	15.38%	4	13.8%

(Multiple answers were permitted)

science scholars faced problem while accessing e-journals through both these formats (i.e. PDF and HTML formats). Out of 31.58% science scholars of AMU 54.17% (13) scholars responded that PDF files load slowly, 25% (6)scholars replied picture in HTML load slowly, 16.67% (4) scholars said pictures in PDF were too small, 12.5% (3) scholars said in PDF format pictures were in b/w. And 67.74% social science scholars of AMU preferred PDF format for e-journals and 32.26% scholars likedto read e-journals in both formats (PDF and HTML) equally. Though 29% social science scholars were facing problem while accessing e-journal through these formats (i.e. HTML or PDF). And out of

29.03% (18) social science scholars 72.22% (13) respondents replied PDF files load slowly, 44.44% (8)scholars responded pictures in HTML load slowly and 22.22% (4)users replied picture in PDF were too small and 5.56% (1) respondent said pictures in PDF were in black and white.

In case of JMI It is found that 82.69% science scholars prefer PDF format of e-journals and 17.31% scholars like both the formats equally. Some scholars faced problems while using e-journals through PDF and HTML formats. The study found that 17.31% (9) science scholars at JMI faced problems while using e-journals through these formats. Out of 17.31% (9) science scholars, 66.67% (6) said PDF files load

Table 9: Preferred e-journals format

Format	Science Scholars (AMU) (n=76)		Social science Scholars (AMU) (n = 62)		Total No. of scholars at AMU (n=138)		Science Scholars (JMI) (n=52)		Social Science Scholars (JMI) (n=29)		Total No. of scholars at JMI (n=81)	
		(%)		(%)		(%)		(%)		(%)		(%)
PDF	57	75%	42	67.74%	99	71.74%	43	82.69%	20	68.97%	63	77.78%
HTML	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
BOTH	19	25%	20	32.26%	39	28.26%	9	17.31%	9	31.03%	18	22.22%

(Multiple answers were permitted)

slowly, 22.22% (2) users said pictures in HTML load slowly and 11.11% (1) scholars said picture in PDF were b/w. And 68.97% social science scholars at JMI gave preference to PDF format and 31.03% social science scholars liked both formats equally i.e. PDF and HTML. Some social science scholars faced problem while using e-journals through these formats. Only 13.79% (4) social science scholars were facing problem while using e-journals through these formats. 50% (2) out of 13.79% social science scholars said PDF files load slowly and remaining 50% (2) scholars said picture in PDF were too small. It is clearly noticed from table 9 that most preferred e-journals format among research scholars is PDF format. In both universities research scholars gave preference to PDF format of e-journals.

Get support from library in using e-journals: response of scholars from AMU and JMI

Library staff extends assistance to their users in using e-journals, if users faced difficulty in using e-journals. Table 10 shows that 13.16% science scholars of AMU responded 'Yes' ; they got assistance or guidance or training for using e-journals from their library and 86.84% scholars responded 'No'. And 87.1% of social science scholars said AMU Library staff did not provide any type of guidance/training programme or workshop on usage of e-journal and 12.9% users responded Yes. It is clear from here that Maulana Azad Library doesn't provide such type of assistance to their users.

The authors tried to find out whether Dr. Zakir Husain Library of JMI provides any type of technical support or training programmes to their users for using e-journals. In this regard 88.46% science scholars in JMI responded 'Yes' and 11.54% science scholars responded in 'No'; and 86.2% social science scholars replied "Yes" and other 13.8% social scholars replied "No". Dr.Zakir Husain Library of JMI, time to time, conducts Seminar, Workshops and Training programmes on the usage of e-journals for their research scholars.

Awareness of e-journals consortia among research scholars of AMU and JMI

Here an attempt has been made to find out whether science scholars as well Social Science scholars of AMU and JMI are aware of the term e-journals consortia when they are using e-journals. The Table 11 is showing very depressing result, only 2.63% AMU science scholars were aware of term e-journals consortia and rest 97.36% were unaware of e-journals consortia. And in case of social science scholars of AMU, only 16.13% were aware of term e-journals consortia and 83.87% social science scholars are not familiar about the term e-journal consortia.

The study found that 3.85% science scholars of JMI had awareness about the term e-journals consortia. In case of social science scholar of JMI only 3.45% scholars were aware of e-journal consortia.

Infrastructural problems faced by research scholars of AMU and JMI

It is noticed that research scholars face various type of infrastructural problems while using e-journals. These problems include low internet

Table 10: Guidance/Training Programme provided by AMU and JMI Libraries

Response Type	Science Scholars (AMU) (n=76)		Social Science Scholars (AMU) (n=62)		Total No. of Scholars at AMU (n=138)		Science Scholars (JMI) (n=52)		Social Science Scholars (JMI) (n=29)		Total No. of Scholars at JMI (n=81)	
		(%)		(%)		(%)		(%)		(%)		(%)
Yes	10	13.16%	8	12.90%	18	13.04%	46	88.46%	25	86.2%	71	87.65%
No	66	86.84%	54	87.1%	120	86.96%	6	11.54%	4	13.8%	10	12.35%

Table 11: Awareness of E-Journal consortia

Response Type	Science Scholars (AMU) (n=76)		Social Science Scholars (AMU) (n=62)		Science Scholars (JMI) (n=52)		Social Science Scholar (JMI) (n=29)	
	No. of Responses	(%)	No. of Responses	(%)	No. of Responses	(%)	No. of Responses	(%)
Yes	2	2.63%	10	16.13%	2	3.85%	1	3.45%
No	74	97.36%	52	83.87%	50	96.15%	28	96.55%

speed, problem in networking, compatibility of system, insufficient workstations, etc. It is found that 64.47% (49) Science scholars of AMU faced following infrastructural problems:
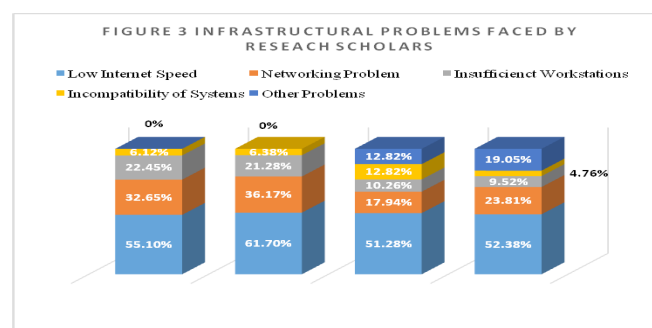
- 55.10% Science scholars are facing low internet speed problem.

- 32.65% are facing problem in networking.

- 22.45% are facing insufficient workstations problem.

- 6.12% scholars are facing incompatibility of systems.

In case of social science scholars of AMU, 24.19% social science scholars didn't feel any type of infrastructural problem but 75.81% (47) scholars are facing infrastructural problem. Out of 75.81% science scholars 61.7% science scholars reported low internet speed problem, 36.17% respondents are facing networking problem, 21.28% users said there was insufficient workstations and 6.38% scholars are saying about incompatibility of systems.

The study found that in JMI 75% (39) science scholars were facing infrastructural problem while searching e-journals and 25% (13)science scholars did not face any type of infrastructural problems. Further out of 75% science scholars, 51.28% scholars were facing low internet speed problem, 17.94% scholars were facing networking problem, 10.26% scholars were facing insufficient workstation problem and 12.82% scholars were facing problems related to compatibility of system and another 12.82% scholars were facing other type

of problems like e-journals not accessible from all area of university campus and computer labs were not well equipped.

In case of social science scholars of JMI, 72.41% (21) social science scholars said they were facing various type of infrastructural problems while using e-journals such as low internet speed, problem in networking, insufficient workstations, etc. And 27.59% (8) scholars didn't feel any type of infrastructural problem. Out of 72.41% social science scholars, 52.38% scholars are facing low internet speed problem, 23.81% scholars are facing networking problem, 9.52% were facing insufficient workstation problem, 4.76% scholars are facing system compatibility problem and 19.05% scholars are facing other type of problems such as unable to access e-journals easily and proxy access to J-Store was not provided by the university.

FIGURE 3 INFRASTRUCTURAL PROBLEMS FACED BY RESEACH SCHOLARS

SUGGESTIONS

1. Maulana Azad Library of AMU and Dr. Zakir Hussain Library of JMI may increase availability of number of e-journals through

consortia in order to increase utilization of e-journals in their respective fields.

2. Maulana Azad Library of AMU and Dr. Zakir Hussain Library of JMI and departments of these universities may provide proper ICT infrastructure such as well-equipped computer labs with sufficient number of computers for proper utilization of e-resources.

3. Both libraries may organize awareness workshops/seminars on E resources frequently to create awareness about importance and availability of e-journals in their areas of research.

4. Topics on E-resources may be introduced in their formal courses at curriculum of Post graduate /M.Phil./Ph.D. course work.

5. In order to increase use of e-journals by students, the faculty should give more assignments on latest topics so that students may force to exploit e journal services more efficiently.

CONCLUSION

Science scholars as well social science scholars of Aligarh Muslim University and Jamia Millia Islamia are using e-journals not only for research activities but also for other type of works like for preparation of assignments and seminar presentations, writing and publishing articles, to keep their knowledge up to date, etc. The study found sufficient number of research scholars of both categories is aware of e-journals/online journals and they are using e-journals for their various type of activities. This study also discloses that frequency of usage of e-journals among science scholars is higher than among social science scholars. Majority of science scholars are reading e-journals daily whereas social science scholars are using e-journals weekly. The major difference is that cent percent scholars of JMI are using e-journals but in case of AMU scholars is different. In AMU cent percent scholars are not using e-journals; their disliking towards e-journals because of its electronic in nature, means it can be read only on machines which produces strain to their eyes. Due to this discomfort some research scholars in AMU dislike to read e-journals. This study reveals that frequency of usage of e-journals among scholars of JMI is higher than scholars of AMU. In both universities, researchers like PDF format of e-journals. Though e-journals are used by large number of scholars but still scholars like to read printed journals also. Though large number of users are using e-journals in both universities but they are not familiar with the term e-journal consortia. It is also found that insufficient ICT infrastructure is major barrier in the usage of e-journals. This must be corrected so that proper utilization of e-journals will take place.

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