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# Use of E-Journals by Students and Research Scholars in the Department of Botany of Aligarh Muslim University

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## Introduction

### Abstract

Keywords: e-journals, consortium, online journal, library consortia, database.

### Scope

The scope of the study has been limited by following construction.

- 1) The study is limited to the students and research scholars of the department of botany.
- 2) For this study a questionnaire was framed for users. The sample of questionnaire was distributed among 100 users of the department of botany.
- 3) It includes aspects like purpose of visiting the library and which type of services provided by the library and users satisfaction level of these libraries.
- 4) The main focus of this study is to know the usage and problems faced in accessing the information through e-journals by the Students and Research Scholars in the field botany.

## Objectives of the Study

The main objectives of the study are as follows:

- 1) To study about the awareness of e-journals among the students and research scholars, in the Department of botany in Aligarh Muslim University.
- 2) To find the purpose of the using e-journals by the students and research scholars
- 3) To study the use of e-journals

- 4) To find out the most frequently used e-journals being referred by students and research scholars.
- 5) To study the research output after usage of e-Journals by students and research scholars.
- 6) To study the users satisfaction pertaining to e-journals availability
- 7) To study the problems faced by students and research scholars in accessing e-journals.

#### Research Methodology

In the absence of proper methodology, research cannot be carried out systematically. Methodology plays an important role in the scientific investigation of any research. Scientific investigation involves careful and proper adoption of research design, use of standardized tools and texts in identifying adequate sample techniques for analyzing the data. For this study the investigator used the questionnaire, observation and interview method.

#### Questionnaire

It is a tool to collect data from diverse large and the widely scattered group. A questionnaire is a written document listing a series of questions pertaining to the problem under study, which the investigator requires to answer. For this study a questionnaire was designed for students and Research Scholars. A total of 100 questionnaires were distributed, but only 80 duly filled questionnaires were returned back by the Students, Research Scholars of department of botany, Aligarh Muslim University. The questionnaires were distributed in the first week of month of March and collected in the second week of March 2011.

#### Observation

Observation involves the investigator watching the subject(s), or research situation or phenomena. Observation method is a data collection method in which a person (usually) observes subject or phenomena and record information about characteristics of the phenomena. Observation is restricted to watching. Watching implies use of eyes. However it also involves listening and reading. In this study observation method was also used to elicit the requisite information

#### Interview method

The face-to-face conversation between the researcher and respondents is called interview. Interviewing is a process of personal interaction between researcher and a respondent. It is possible to gather more complex information. It allows the exploration of a topic in depth. In this study interview method was also used to elicit the requisite information.

#### 1. Introduction

Research has been changed significantly over the past four decades. The changing patterns of the research reflect developments in the intellectual thought that have created new academic disciplines and areas of research. One of the consequences of these changes has been the broadening of the definition of information and sources useful to search. E-publication is the publication of any kind of information on any form of electronic media. E-journals have become major resource in scholarly research. E-journals are the simple electronic representation of journals. In most cases, they replicate exactly the printed version of the journal, occasionally including additional information (such as interactive graphs of external link), but in some cases there is no parallel print source as the journal was 'born digital'. Any journal available on Internet can be called an 'electronic journal'. It may or may not have print equipment. There is no standard definition available for electronic journal. As a result they have called by various names, such as e-journals, virtual journals, paperless journals, online journals,

scholarly electronic journals, networked journals, and CD-ROM journals.

## 2. E-Journals

The phrase electronic journal or "e-journal" is used to denote a broader category of electronic publications that may or may not have a print counterpart.

### 2.1 Definition

The Encyclopedic Dictionary of Library and Information Science define a journal as "the record of proceeding of transactions of a learned society".

According to Harold's Librarian's Glossary it is a journal for which the full end-product is available on optical disk, over a network or in any other electronic form, strictly a journal in which the entire process is carried out electronically. In other word, an electronic journal is one where writing, editing, refereeing and distribution of item are carried out electronically without paper intermediaries.<sup>1</sup>

According to David Pullinger and Brian Schkel "e- journal is one whose input text may be entered directly by a computer or by other file transfer mechanisms in a machine readable form, whose editorial processing is facilitated by a computer and whose articles are thus made available in electronic form to readers."<sup>2</sup>

According to Lancaster "an e-journals are those journals which are available in electronic medium and is available only in this medium. In general a journal that is available in electronic form through online host is called e-journals."<sup>3</sup>

### 2.2 Characteristics of E-Journals

There are several characteristics of electronic journals. However, a few worthy to be mention are: (Dash 94-97)<sup>4</sup>

- (i) Printing and distribution processes have been virtually eliminated.
- (ii) Faster reviewing of the journals, saving thereby the precious time of specialist.
- (iii) The production mode of e-journals offers opportunities to established network communication among the author, editor and referees.
- (iv) Users can access a particularly article or the entire issue of the journals , within no time If required , printouts of the relevant pages can be obtained
- (v) Since the information is sought from different e-journals simultaneously, the retrieved pieces of information emerge in a package form.
- (vi) Hypertext and hypermedia formats enable linkages among different sections within an article or among a group of articles in journals and other electron resources.
- (vii) Multimedia capabilities can also be incorporate into the journal. This provides an edge over the conventional journal available in print form.
- (viii) Immediacy is another feature of web based publication.
- (ix) Allows remote access.
- (x) Can be used simultaneously by more than one user.
- (xi) Provide time access and at 24x7 formula.

### 2.3 Advantages of E-Journals

Electronic –journals are becoming quite popular because the cost of electronic equipment is falling down considerably, thereby making e-publishing cost effective. The cost of electronic publishing and distribution has also become more economic than paper printing. In addition, e-journals, like e-book have a large number of advantages. (Jones, S.L)<sup>5</sup>

- (i) Speed of access and quick searching to latest information has led to their popularity.
- (ii) Linking to and from other resources
- (iii) Security (i.e. e-journals cannot be lost)
- (iv) Most of the publisher are providing keyword and author search facilities, thus supplementing the role of indexing and abstracting services.
- (v) Provide 24 hours accessing, downloading and printing facility, irrespective of users' geographic location.
- (vi) Most of the publishers have site licensee policy, providing multiple access and access through LAN.
- (vii) Provide access to other related resources by hypertext link.
- (viii) Ease to download an article to personal computer for later use or printing.

From authors' perspective, as revealed in literature, some other advantages are:

- (i) Articles are published at much faster speed as, the turnaround time, i.e. the time-lag in submission, processing and dissemination of information is saved.
- (ii) Peer reviewing and revision becomes much easier due to easy submission and quick electronic response.
- (iii) Has the facility of wider and faster dissemination of current information.

#### 2.4 Disadvantages of E-Journals

These publications have certain disadvantages also as given below:

- (i) Even though it is becoming cost effective, but initial investment is high. Special equipment computers or printers are required to read electronic journals.
- (ii) Potential authors are reluctant to submit their paper in e-journals as scientist's main consideration in choosing a journal is its standard and reputation which is many times doubtful.
- (iii) Unless the system is not easy to use, contributors have no incentive to change their normal pattern of publication.
- (iv) Required technological support and compatibility of hardware may vary from one publication /publisher to another.
- (v) Different formats have different pricing schemes, making their selection, use and organization increasingly difficult.
- (vi) They may take some time to display page images conveniently on computer screen.
- (vii) Involves legal/copyright issues.

#### 3. Access Types of E-Journals

According to Cook the publishers provide the following different types of access mechanisms.

3.1 Free Access: In which publishers sometimes provides access to those e-journals, which are subscribed in print format.

3.2 Exclusive Subscription: In which institutions can obtain complete to all the journals brought out by the publisher without subscription to the print counterpart.

3.3 Selective Access: In which the subscriber choose a few e-journals from the publisher and pay for them as per agreed terms and conditions.

3.4 Fee-Based Access: Through which on the payment of an access fee, which is a certain percentage of the cost of the print journals being subscribed, the publisher provides access to its complete e-holdings. The subscriber will have to maintain the print level subscription throughout the period of agreement

3.5 Institution Vs Consortium Access: Through which a few institutions having common interests and requirement can for consortia for e-journal access

3.6 Consortium-Based Access Model: In which the member institutions need not subscribe to journals on ownership basis but could access them on Internet on payment of access.

## 4. Categorization of E-Journals

E-journals can be grouped under the following three broad categories:

4.1 Online Journals: These are paid journals that are available on 'pay-as-you' or 'cost-per-access' basic via online databases such as Knight-Rider Information Inc (Dialog), Information Service. Such journals are not considered as a part of library collection because in most libraries are rarely allowed free or ultimate access to remote online system.

4.2 CD-Rom Journals: These are journals published on CD ROM, may be bibliographical or full-text. They vary in frequency and are distributed along with search software to access and print.

4.3 Network E-Journals: Network e-journals are electronic journals, available over network, such as Internet, BITNET or any other commercial network. Examples of network e-journals are e-newsletters e-discussion list.

5. Electronic journals are predominantly distributed in two ways:

5.1 Through Aggregators: These offer a group of title from different publisher through one interface. Examples for aggregators are: Ingena, Ovid, EBSCO, TDNet,

5.2 Through Publisher: Titles are directly through the Internet which allows the publisher to completely control the process.

## 6. Review of literature

Review of related literature is very essential in a new research topic because each research study has its own specific purpose. Study of related literatures implies locating, reacting and evaluating reports of research as well as report of casual observation and opinion are related to the individual planned research project. Investigator reviewed only those studies which were similar to the present study or indirectly related to the present study.

6.1 The article "Usage of E-journals by researchers in Aligarh Muslim University: A study" presents a study that seeks to examine the usage of e-journals by the researchers at Aligarh Muslim University. The survey reveals that all the researchers are aware of e-journals in AMU. From this survey, the investigator has been able to find out that many research scholars are consulting e-journals from their departmental labs and computer centers, not only for research purposes but

also to update their own knowledge. However, the study also revealed several problems, including lack of training and slow downloading. The researchers' feelings about the need for print journals as well as electronic journals are also discussed.<sup>6</sup>

(Raza, Ashok 170-179)

6.2 Using "Science Direct" that was provided by Elsevier Science at the Japan Atomic Energy Agency (JAEA) carried out "a survey on the usage of electronic journals" Results showed that the number of users and articles read by users increased during the survey period. Moreover, JAEA users browsed a total of 1,028 titles for various fields such as chemistry, engineering, medicine, physics, and social sciences.<sup>7</sup>

(Fuzaka, Nakajima, Ishikawa 301-305)

6.3 The purpose of the paper "Impact and use of e-resources by social scientists in National Social Science Documentation Centre (NASSDOC), India" is to present the fact that electronic resources are a significant part of library collections. A large amount is invested in the development and management of e-resources in the libraries. The study aims to identify the acceptance of e-resources in the National Social Science Documentation Centre (NASSDOC) library in New Delhi, India and determine their usage, performance, degree of user satisfaction, and barriers faced in the access of e-resources. It also attempts to find out the users' views about computer literacy among the social scientists.<sup>8</sup>

(Haridasan, Khan 117-133.)

## 7. Analysis and interpretation of data

The data collected and analyzed with the help of various statistical measures. After analyzing the data the investigator test the hypotheses and arrives at generalizations and builds a theory. This process is known as interpretation.

In the present study Use of E-Journals by the Students and Research Scholar Department of Botany, Aligarh Muslim University, Aligarh: A Study. The data collected by the investigator were organized and presented below

Table 1: Questionnaire Distributed and Response Rate

Response Category	No. of Respondents	%
Responded	80	80
Non-responded	20	20
Total	100	100

Total questionnaires distributed = 100

Figure 1

Table 2: Frequency use of Periodicals

Frequency	Research Scholar	%	M.Sc. Students	%	B.Sc. Students	%
Daily	13	86.66	11	52.38	13	29.55

Twice a Week	1	6.67	5	23.81	18	40.91
Weekly	1	6.67	3	14.29	8	18.18
When needed	0	0	2	9.52	5	11.36
Total	17	100	21	100	44	100

The above table shows that 86.66% Research Scholars are using Periodicals daily, 6.67 twice in a week and 6.67% use Periodicals in a week. Similarly, more than half 52.38% students of M.Sc. use Periodicals daily, 23.81 twice in a week, 14.29% weekly and 9.52% students use Periodicals when needed. Similarly 29.55% students of B.Sc. use Periodicals daily, 40.91% students use Periodicals twice in a week, 18.18% students use Periodicals in a week and 11.36% students use only when needed.

Figure 2

Table 3: Physical Form of Catalogue used

Physical Form of Catalogue used	Research Scholar	%	M.Sc. Students	%	B.Sc. Students	%
OPAC	15	100	21	100	44	100
Card catalogue	0	0	0	0	0	0
Total	15	100	21	100	44	100

The above table shown that there is no use of card catalogue of Research Scholars and Students also because there is no provision for card catalogue only uses OPAC.

Figure 3

Table 4: Awareness of E-journals

Awareness	Research Scholar	%	M.Sc. Students	%	B.Sc. Students	%
Yes	15	100	21	100	40	90.91
No	0	0	0	0	4	9.09
Total	15	100	21	100	44	100

The above table shows that 100% Research Scholars are aware of E-journals similarly, 100% Student of M.Sc. are aware of E-journals and the 90.91% student of B.Sc. are aware of E-journals whereas 9.09 are not aware of E-journals

Figure 4

Table 5: Sources which give information about the E- journals

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Sources	Research Scholar	%	M.Sc. Students	%	B.Sc. Students	%
Print journals	5	33.33	15	71.43	20	45.45
Library professionals	7	46.66	5	23.81	15	34.09
Teachers	7	46.66	10	47.62	25	56.81
Internet	2	13.33	2	9.52	5	11.36
Colleagues	3	20	7	33.33	9	20.45
Any other	1	6.67	2	9.52	5	11.36

(Multiple answers were received)

The table shown that information about E-journals given many sources and everyone got information many sources 33.33% Research Scholars, 71.43% M.Sc. students and 45.45% B.Sc. students get information about e-journals from Print journal and other sources also, 46.66% Research Scholars, 23.81% M.Sc. students and 34.09% B.Sc. students get information from Library professionals, while Teachers share 46.66% Research Scholars, 47.62% M.Sc. students and 56.81% B.Sc. students while through the Internet 13.33% Research Scholars, 9.52% M.Sc. students and 11.36% B.Sc. students know about the E-journals. Discuss through the colleague 20% Research Scholars, 33.33% M.Sc. students and 20.45% B.Sc. students' gated information about E-journals. a small number of Them, i.e. 11.36% get information from other sources such as social Networking sites, notice board of the departments etc. the table shown that information about E-journals given many sources and everyone got information many sources.

Figure 5

Table 6: Place of Accessing E-journals

Place	Research Scholar	%	M.Sc. Students	%	B.Sc. Students	%
Departmental Computer Lab	10	66.67	17	80.95	36	81.82
Computer Centre Lab	5	33.33	3	14.29	20	45.45
Maulana Azad Library Computer Lab	12	80	10	47.62	10	22.73
Any other	2	13.33	3	14.29	5	11.36

(Multiple answers were received)

This table shown that every one access E-journal many place some access Departmental Computer Lab, Maulana Azad Library Computer Lab and other place and some use Computer centre Lab, departmental Computer Lab and other places also and the use of Departmental Computer Lab on big scale for accessing E-

journals 66.67% Research Scholars, 80.95% M.Sc. students and 80.82% B.Sc. students prefer Departmental Computer Lab after that Maulana Azad Library Computer Lab also popular for accessing e-journals.

Figure 6

Table 7: Most Preferred format for Reading E-journals

Format	Research Scholar	%	M.Sc. Students	%	B.Sc. Students	%
HTML	4	26.67	6	28.57	9	20.45
PDF	7	46.66	11	52.38	14	31.82
Print copy	4	26.67	4	19.05	21	47.73
Total	15	100	21	100	44	100

It can be understood from the above table that the most preferred format for reading e journals articles by the respondents is PDF as 46.66% Research Scholars, 52.38% M.Sc. and 31.82% B.Sc. of the user prefer it, than the HTML format which only 26.67% RS, 28.57% M.Sc. and 20.45% B.Sc. students use it and rest 26.67% Research Scholars, 19.05% M.Sc. and 47.73% B.Sc. students prefer Print copy only.

Figure 7

Table 8: Access Point for Locating a Citation

Search by	Research Scholar	%	M.Sc. Students	%	B.Sc. Students	%
Author	5	33.33	5	23.81	9	20.45
Title	5	33.33	4	19.05	14	31.82
Journal name	2	13.34	3	14.29	7	15.91
Vols./issue/page	3	20	9	42.85	14	31.82
Total	15	100	21	100	44	100

It is clear from the above table that 33.33% Research Scholars, 23.81% M.Sc. students and 20.45% B.Sc. students locate citations through Author, 33.33% Research Scholars also like locate the citation through Title, 19.05% M.Sc. students and B.Sc. students locate citation through Title and through the journal name 13.34% RS, 14.29% M.Sc. and 15.91% B.Sc. students locate the citation and other search such as through the vol./issue no. and through page no. 20% Research Scholars, 42.85% M.Sc. and B.Sc. students locate the citation.

Figure 8

Table 9: Access Point for Searching Articles

Search by	Research Scholar	%	M.Sc. Students	%	B.Sc. Students	%
Subject heading	3	20	5	52.38	14	31.82
Keyword	6	40	9	90.48	16	36.36
Title	3	20	4	66.66	7	15.91
Author	3	20	3	76.19	7	15.91
Total	15	100	21	100	44	100

It can be seen from the above table that every one search the Documents different-different way such as 20% Research Scholars, 52.38% M.Sc. and 31.82% B.Sc. students like searching the document and 40% Rs, 90.48% M.Sc. and 36.36% B.Sc. students like searching the document through keyword Searching and some use Title searching such as 20% Research Scholars, 66.66% M.Sc. and 15.91% B.Sc. students liking It and 20% Research Scholars, 76.19% M.Sc. and 15.91% B.Sc. students like search the Document through Author name. In last we found that Keyword searching is most liking.

Figure 9

Table10: E-journal Article in Foreign Language

Method of dealing	Research Scholar	%	M.Sc. Students	%	B.Sc. Students	%
Try to get translation	7	46.67	3	14.29	2	4.55
Ignore such articles	8	53.33	18	85.71	42	95.45
Total	15	100	21	100	44	100

The data in the above table reveals that the way 46.67% Research Scholars try to get the translation but M.Sc. and B.Sc. students ignore it only 14.29% M.Sc. and 4.55% B.Sc. students want translation and other Research Scholars, M.Sc. and B.Sc. students ignore such article.

Figure 10

Table 11: Choice of Search Material for Reading

Outcome	Research Scholar	%	M.Sc. Students	%	B.Sc. Students	%
Relevance	4	26.67	7	33.33	23	52.27
Depth	11	73.33	14	66.67	21	47.73

Total	15	100	21	100	44	100
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The above table reveals that 73.33% RS prefer depth (retrieval of a large number of records) and only 26.67% Research Scholars like relevance search for journal articles other it 66.67% M.Sc. like Depth search and 33.33% like Relevance search it means M.Sc. students also like Depth search but only 47.73% B.Sc. students like depth study and 52.27% B.Sc. students like Relevance study its mean most of B.Sc. students use E-journals only Relevance study.

Figure 11

Table 12: Awareness of E-journal Consortium

Awareness	Research Scholar	%	M.Sc. Students	%	B.Sc. Students	%
Yes	15	100	19	90.48	25	56.82
No	0	0	2	9.52	19	43.18
Total	15	100	21	100	44	100

It is clearly indicated from the above table that 100% Research Scholars in Department of Botany Aligarh Muslim University, Aligarh are aware of e-journal consortia, 90.48% M.Sc. students also know about E-journal consortia and only 9.52% are not aware of E-journal consortia and same most of B.Sc. students 56.82% are aware the E-journal consortia and 43.18% B.Sc. students are not aware to the E-journal consortium.

Figure 12

Table 13: E-journal Consortium used

Consortium	Research Scholar	%	M.Sc. Students	%	B.Sc. Students	%
UGC INFONET	15	100	19	90.48	25	56.82
CSIR Consortium	11	73.33	14	66.67	19	43.18
J-Gate	7	46.67	6	28.57	9	20.45
Any other	3	20	4	19.05	4	9.09

(Multiple answers were received)

More respondent are used UGC-INFONET by Research Scholars 100%, M.Sc. students used 90.48% and B.Sc. students used 56.82%, CSIR Consortium used by Research Scholars 73.33%, M.Sc. students used 66.67% and B.Sc. students used 43.18%, J- Gate used by Research Scholars 46.67%, M.Sc. students used 28.57% and B.Sc. students used 20.45% and user prefer other consortium very less such as 20% RS used different-different Consortium M.Sc. students used only 19.05% and B.Sc. students used only 9.09% in this table shown that UGC-INFONET consortium is very important for everyone in the department of botany

AMU Aligarh and other Consortium also used by the user regularly.

Figure 13

Table 14: Satisfaction with Infrastructural Facilities of E-journals

Satisfaction level	Research Scholar	%	M.Sc. Students	%	B.Sc. Students	%
Fully satisfied	3	20	5	23.81	6	13.64
Partially satisfied	7	46.67	12	57.14	29	65.91
Unsatisfied	5	33.33	4	19.05	9	20.45
Total	15	100	21	100	44	100

The above tabulated data clearly indicates that majority of Research Scholars 46.67%, M.Sc. students 57.14% and 65.91% B.Sc. students are Partially satisfied with infrastructural facility provided to them for accessing e-journals and only 20% Research Scholars, 23.81% M.Sc. students and only 13.64% B.Sc. students are Fully satisfied with E-journals facility and 33.33% Research Scholars, 19.05% M.Sc. students and 20.45% B.Sc. students are not satisfied with the E-journals facility.

Figure 14

Table 15: Preferred Form of Journal

Form of Journal	Research Scholar	%	M.Sc. Students	%	B.Sc. Students	%
Print	3	20	3	14.29	22	50
Electronic	5	33.33	4	19.05	9	20.45
Both	7	46.67	14	66.66	13	29.55
Total	15	100	21	100	44	100

The data in the above table reveals that 46.67% Research Scholars plan to use print and e-journals but 33.33% Research Scholars use E-journal and only 20% Research Scholars prefer Print journals in the Present day and 66.66% M.Sc. students also prefer to use print and e-journals and in the Present 19.05% M.Sc. students prefer to use e-journals and only 14.29% M.Sc. students prefer Print journals in the Present day but majority of B.Sc. its mean 50% students prefer Print journals present day and only 29.55% B.Sc. students plan to use print and e-journals and only 20.45% use e-journals in present day.

Figure 15

## 8. Findings

### 8.1. Findings

8.1.1 Research Scholars (100%) are aware of E-journals while majority of M.Sc. (100%) and B.Sc. students (90.91%) are aware of e-journals.

8.1.2 Internet and Library professional was revealed as the chief source which gave information about the e-journals both Research Scholars and students. Print journals also being an important source which give information about the e-journals.

8.1.3 Departmental computer lab was found to be a clear choice for accessing e-journals in department of botany second being library computer lab.

8.1.4 Major portion of Research Scholars and M.Sc students access e-journals daily and B.Sc. students use e-journal facility 2-3 times in a week.

8.1.5 PDF was found out to be the most preferred format for reading e-journal articles in both RS and Students.

8.1.6 The study found that 20% Research Scholars search by subject headings 40% keyword and 20% through the title and 20% through the author prefer to search the articles, M.Sc. and B.Sc. students also most like keyword searching.

8.1.7 In the articles search result as a depth material preferred for the reading Research Scholars (73.33%) and M.Sc. students (66.67%) while B.Sc. students (52.27%) preferred relevance search in journal articles.

8.1.8 Analysis of some problematic issue shows that electronic journals being unorganized was identified as a major problem to Research Scholars and Students. Difficulty to use from screens Research Scholars 33.34%, M.Sc. students 23.81% and 15.91% B.Sc. students face this problems, lack of training, unavailability of full text, less number of journal subscribed, were found to be other problems in both Research Scholars and students.

8.1.9 Majority of students and Research Scholars are aware of e-journal consortia. UGC INFONET was found to be the consortia used by the majority of M.Sc. students and Research Scholars and B.Sc. students also.

8.1.10 Another important finding of the study is e-journals were found to be equally authoritative as print journals in both Research Scholars and Students.

8.1.11 Majority of Research Scholars 46.16%, M.Sc. 57.14% students and 65.91% B.Sc. students were found to be Partially satisfied by the infrastructural facility for accessing e-journals, however only 20% Research Scholars, M.Sc. students 23.81% and 13.64% B.Sc. students were fully satisfied with the infrastructural facility for accessing e-journals.

8.1.12 The study revealed that information needs while searching for journal articles are more satisfied with e-journal articles Research Scholars 80%, 76.19% M.Sc. students and 34.09% B.Sc. students than the print journal articles Research Scholars 20% M.Sc. students 23.81% and 65.91% B.Sc. students full fill the need.

8.1.13 The study found that UGC-INFONET Consortium is most important and 100% Research Scholars use it and M.Sc. and B.Sc. students also use it regularly.

8.1.14 An important finding of the study is that majority of Research Scholars 46.67% and M.Sc. students 66.66% and 29.55% B.Sc. students will still prefer to use journals in both electronic and print form.

## 8.2. Suggestions

Based on the results and opinions of the respondents, the present study suggests the following:

8.2.1 To provide the e-journal service effectively and efficiently, more number of access terminals should be installed in the Departmental Computer lab and Library

Computer lab as well as in the computer center laboratories.

8.2.2 To save the precious time of the Research Scholars and students in the department of botany, high speed internet connection should be provided.

8.2.3 Need of more trained and skilled staff, which is well aware of the functioning of both software and hardware, which can help the users in areas like accessing, downloading, and proper exploitation of the e-journal services.

8.2.4 In order to improve the efficiency of the users towards access to electronic journals the library should provide hands on experience and conduct user orientation programmes to students, preferably at the start of every academic session.

8.2.5 Proper feedback system should be introduced to know about various problems faced by the Research Scholars and students and to solve them effectively.

8.2.6 The e-journal labs in the library and departments should provide printing facility to the students free of cost or at a nominal cost.

8.2.7 The Maulana Azad Library should provide the list of e journals, which can be accessed in the library, to various departments of studies showing the titles which are of interest of the Research Scholars and students of the department.

8.2.8 More number of e-journals should be subscribed by the library in the fields of specialization, where only small numbers of e-journals are being subscribed.

8.2.9 An adequate number of students suggested that necessary arrangements should be made to access the full text of more electronic journals.

## 9. Conclusion

The present study sought to examine the use of electronic journals by the students and research scholars, department of botany A.M.U, and the result show that most of the objectives are met satisfactorily; the study reveals that majority of research scholars and students are aware of e-journals. It has been found from the survey that maximum Research Scholars, M.Sc. students and B.Sc. students access e-journals through departmental Computer lab and Library computer lab also. Using e-journals for seminars was recognized as an important purpose for doing so in both the Research Scholars and M.Sc. students apart from using it for writing papers and finding relevant information in area of specialization. Majority of Research Scholars and M.Sc. students use e-journals daily and majority of B.Sc. students use e-journal 2-3 times in a week. A major portion of Research Scholars and students search articles through search engines, because they find it easy to use. The study also found PDF to be most important format for reading e-journal articles. Research Scholars and M.Sc. students prefer depth, while relevance is preferred by B.Sc. students of department of botany A.M.U. Aligarh. In search result of journal articles; Internet was identified as the major source to give information about the e-journals. The study also reveals institutional online subscription to be the major source for accessing Library science journals, other than the printed editions. Unorganized, lack of training, difficulty to read from screen unavailability of full text were found to be the major problems faced by the students while, speed of publication, hyperlinks timeless availability were identified as major advantages of e-journals. The present study found that majority of students are aware of e-journal consortia, and Research Scholars and M.Sc. students use a wider range of consortia reason being, they are aware of more e-journal consortia in their respective field than the students of B.Sc. E-journals were considered to be equally authoritative as print journals. The study also found out that majority of students and Research Scholars are partially satisfied with the infrastructural facilities. Majority of students of B.Sc. and M.Sc. both feel that user training is useful for increasing the usage of e-journals among the students.

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