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# Measuring Awareness and Use Patterns of Online Journals and Databases: A Study of Faculty of Science, Banaras Hindu University

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## Abstract:

This research sought to determine use of online journals and databases and to assess current user characteristics associated with use of online resources at the Faculty of Science, Banaras Hindu University, Varanasi. A questionnaire was distributed among the Faculty Members, Research Scholars and M.Sc. students to collect desired data. A total of 237 questionnaires were distributed to the selected sample; 160 valid samples were collected. The result showed a growing interest in online journals among the users at Faculty of Science, BHU. Science Direct with 55% is the most used and useful database for the scientific community, other databases showed much lower usage. Awareness among the users about the availability of online journals was found satisfactory. Online journals were mostly used for research needs and PDF was the most preferred format. There are many factors that may affect the use of scholarly online journals.

**Keywords:** Online journals users/ E-resources/ Information seeking behavior/ User study

## 1. Introduction:

Remote access of online journals has been a major boon to academic and research libraries. Online journals are considered the note chord of any library's collection and have become indispensable for research in any field. Many online journals available in the form of databases as well as they directly access through the Internet. The quantity of online journals is growing larger and has become a quite visible entity in serial publication. Today most of the online journals appear as parallel version of its print counterparts and more publishers are making their journals available in electronic format.

Many academic institutions are currently

building substantial collections of full - text journals and continue to increase access to various online databases. Because these resources come at a great cost, it becomes important to understand database and full-text journal use among university patrons and the characteristics accompanying today's remote and in-house library users. Increased access to computers, the Internet, online databases full-text journals necessitates reassessing online use patterns and user characteristics. Nowadays it is impossible for libraries to procure all the documents and subscribe to core journals that are in demand by the users. There are many online journals and databases are available open access. Subscription of online journals and databases through the consortium(s) are much economic for the libraries.

## 2. Faculty of Science, BHU:

The Banaras Hindu University established in 1916 by Pt. Madan Mohan Malaviya is one of the most prestigious central university of the country. The University has 124 independent teaching departments, 14 faculties, one college and three institutes. Faculty of Science is one of the most prestigious faculty among the others. This faculty consists 15 departments namely physics, chemistry, biochemistry, computer science, geology, geophysics, mathematics, statistics, zoology, geography, home science, biotechnology, psychology and botany. This faculty is offering B. Sc., M. Sc. and Ph.D. programmes in various branches of science.

The central library of the university consists of approximately more than 10,00,000 books, over 1,00,000 bound volume of periodicals, about 10,000 theses and other many kinds of reading materials. Library provides more than 8,000 online journals licenced through INDEST-AICTE consortia, UGC-INFONET consortia and University library subscription that can be accessed throughout the university campus.

## 3. Objectives of the Study:

The main objective of the study is to examine the use of online journals and databases by the M.Sc. Students, Research Scholars and Faculty Members of Faculty of Science, Banaras Hindu University, Varanasi. It aimed to identify users' opinion of different features of online journals, their awareness of the online journals services, awareness about user awareness programmes, their use of different publishers, the purpose of use, the components of use, needs of training, preferred formats and more.

## 4. Methodology:

A survey method based on a questionnaire was used for this study. The questionnaire was constructed around the following elements: user profile, awareness about online journals and databases, frequency of use, reasons for use and non-use of online journals and databases, and other issues faced in use of online journals. The questionnaire was pilot tested with 20 users (M. Sc. Students – 10, Research Scholars – 5, Faculty Members – 5), who were not part of the population of this study.

The revised questionnaire was administrated to the 237 users of the Faculty of Science, Banaras Hindu University. Out of 237 questionnaires distributed, 160 responses were received (67.51%), which were considered to be highly satisfactory and encouraging.

## 5. Results:

### 5.1 Population Study:

User profile section of the questionnaire provides information regarding the sex and different academic status as can be seen from Table-1. It is shown in table-1a, 63.13% of the populations studied were males and only 36.87% of total were females, who can use online journals and databases available through the library for different purposes.

**Table – 1a**

Gender	Number	
	Distribute (237)	Receive (160)
Male	142 (59.92%)	101 (63.13%)
Female	95 (40.08%)	59 (36.87%)

Table – 1b shows that 46.25% of the respondents were M. Sc. Students, 35.63% Research Scholars and only 18.12% were Faculty Members.

**Table – 1b**

Academic Status	Number	Percentage
M. Sc. Students	74	46.25%
Research Scholars	57	35.63%
Faculty Members	29	18.12%

### 5.2 Awareness of Online Journals and Databases:

Table – 2 shows the awareness of online journals and databases among the respondents available through the library. 100% Faculty Members are aware about the online journals, 94.74% Research Scholars are aware, whereas only 83.78% of M. Sc. students are aware about the availability of online journals. It can be seen that awareness about the online journals among the all category of the users are satisfactory.

**Table – 2**

Academic Status	Aware	Not Aware
M. Sc. Students	62 (83.78%)	12 (16.22%)
Research Scholars	54 (94.74%)	3 (5.26%)
Faculty Members	29 (100.0%)	0 (0.0%)

### 5.3 Preference Level of Using Online Journals:

The result reveals that 56.88% of respondents want to access only online version of journals whereas only 23.12% users want to read from printed journals but 20% respondents want to use both online and printed journals.

**Table – 3**

Type	Number	Percentage
Online	91	56.88%
Print	37	23.12%
Both	32	20%

### 5.4 Use of Online Journals and Databases:

When respondents asked whether they use online journals and databases or not, majority of respondents replied 'yes'. Table – 4 shows that 93.07% males were using online journals whereas only 91.53% of females were use online journals for the different purposes.

**Table – 4**

Gender	Use	Not Use
Male	94 (93.07%)	7 (6.93%)
Female	54 (91.53%)	5 (8.47%)

### 5.5 Mostly Used and Useful Online Journals and Databases:

Table – 5 shows that Science Direct with 55% is the most used and useful for scientific community and Medline (PubMed) is recorded the lowest usage rate with a mere 5%. The literature study also showed that Science Direct were most used at the Max Planck Society in Germany (Rusch-Feja and Siebeky, 1999). Web of Science with 30% and IEL Online with 28.13% are another most used database of online journals. Usefulness of another databases of online journals has shown in the table – 5.

**Table - 5**

Online Journals/ Databases	No. of Respondents	Percentage
Science Direct	88	55%
Web of Science	48	30%
IEL Online	45	28.13%
J-gate	27	16.88%
Springer link	26	16.25%
Pro-Quest	26	16.25%
ASCE	18	11.25%
ASME	17	10.63%
SciFinder Scholar	17	10.63%
Nature	15	9.38%
Science Online	15	9.38%
EBSCO Database	12	7.5%
Medline	08	5%

### 5.6 Purpose of Using Online Journals and Databases:

From the table – 6, it is clear that most of the respondents i.e. 47.5% use online journals and databases for their research work. 45.63% of respondents use it for studying their course work. 41.25% of respondents use online journals for update subject knowledge and 38.75% respondents use for writing papers. 26.25% of users using online journals and databases for teaching and only 21.88% respondents use for other works like competitive exams, etc.

**Table – 6**

Purpose	Number	Percentage
For Studying Course Work	73	45.63%
For Update Subject Knowledge	66	41.25%
For Teaching	42	26.25%
For Research Work	76	47.5%
For Writing Papers	62	38.75%
Any Other Works	35	21.88%

Note: Because of multiple choice options the percentage is exceeds more than 100.

### 5.7 Frequency of Using Online Journals:

It is observed from the analysis that 44.38% of respondents access online journals everyday, 31.25% of respondents access 2 – 4 times a week, about 15% respondents use once a week. About 9.37% of respondents use online journals occasionally.

**Table – 7**

Frequency	Number	Percentage
Everyday	71	44.38%
2 – 4 times a Week	50	31.25%
Once a Week	24	15%
Occasionally	15	9.37%

### 5.8 Articles Read in a Week:

Table- 8 shows that Majority of the respondents i.e. 55% read less than 5 online journal articles in a week and 35.63% of respondents read 5-10 articles. Whereas only 7.5% read 10-15 articles and a very less population i.e. 1.87% read more than 15 articles in a week.

**Table - 8**

No. of Articles	No. of Respondents	Percentage
Less than 5	88	55%
5 – 10	57	35.63%
10 –15	12	7.5%
More than 15	03	1.87%

### 5.9 Location for Accessing Online Journals:

Further a question asked to the respondents to know whether they make greatest use of online journals. Table – 9 shows that majority 68.13 % of respondents like to access online journals at their departmental library or departmental computer room. 42.5% access it at central library and 23.13% at other places like hostels, cyber cafe, etc. Where as only 19.38% respondents access it at computer center.

**Table - 9**

Location	Number	Percentage
Central Library	68	42.5%
Departmental library/ Computer Room	109	68.13%
Computer Center	31	19.38%
Others	37	23.13%

Note: Because of multiple choice options the percentage is exceeds more than 100.

### 5.10 Linking Pattern of Online Journals:

Many of the respondents search online journals through linking facility available on the library website as well as many through the search engines. Some of them also link through the publishers' website and through the online journals website. Table – 10 shows how respondents search online journals.

**Table – 10**

Linking	Number	Percentage
Links through library website	92	57.5%
Links through publisher's website	40	25%
Links through Search Engines	104	65%
Links through Online Journals website	37	23.13%

Note: Because of multiple choice options the percentage is exceeds more than 100.

### 5.11 Using Pattern of Online Journals:

Respondents were asked to indicate how they use the content of online journals? It was observed from analysis that majority 65% of respondents take printout before using online journals. 56.88% download the content in storage devices and 32.5% of respondents use on the computer screen.

**Table – 11**

Use Pattern	Number	Percentage
On Computer Screen	52	32.5%
Download in Storage Devices	91	56.88%
Take Printout	104	65%

Note: Because of multiple choice options the percentage is exceeds more than 100.

### 5.12 Preferred Format of Online Journals:

Online Journals are available in two major formats PDF and HTML. From Table – 12, it was observed that 66.25% of respondents preferred PDF format for using online journals, whereas 11.87% of respondents preferred HTML format. 21.88% having no preference.

**Table - 12**

Formats	No. of Respondents	Percentage
PDF	106	66.25%
HTML	19	11.87%
No Preference	35	21.88%

### 5.13 Difficulties of Accessing Online Journals:

Through online journals have become a common source among the academic and research communities, the majority of users (67.5%) stated (table – 13a) that they have difficulties to use online journals. The specific problems faced by the users are given in table – 13b. It was observed that majority of respondents are not satisfied with availability of enough journals in their respective subject.

**Table – 13a**

Problem Faced	Yes	No
No. of Respondents	102 (63.75%)	58 (36.25%)

**Table – 13b**

Reasons	Number	Percentage
Not many Online Journals available in my subject	48	47.06%
Coverage on OJ is not suited to my research area	37	36.27%
No assistance provide by the Information Professionals	21	20.59%
Lack of training	19	18.63%
Time Consuming	10	9.8%

Note: Table – 13b is a supporting of Table - 13a. Hence data has been calculated only by the option “Yes” (i.e. total no is 102) of the same. Because of multiple choice options the percentage is exceeds more than 100.

### 5.14 Satisfaction Level about Infrastructure provided by the Library for Accessing Online Journals:

A question was asked to know the satisfaction level of infrastructure among the users for accessing online journals. It was observed those majorities 73.75% of respondents are satisfied with the infrastructure provided by the library for accessing online journals and their databases at different levels whereas only 26.25% of respondents are not satisfied with the same.

**Table – 14**

Level	Number	Percentage
Highly Satisfied	17	10.62%
Satisfied	40	25%
Average	61	38.13%
Not Satisfied	42	26.25%

### 5.15 Need of Orientation/ Training Program:

To a further question as to whether they would like to receive orientation/ training programme to use online journals and databases. 45% respondents said that they do not want any training whereas majority 55% of respondents replied in the affirmative. The results obtain were given in table – 15(a) and the orientation/ training programmes required for the frequently use of online journals and databases are listed in table- 15(b).

**Table – 15(a)**

Need of Orientation/ Training Programme	Yes	No
No of Respondents	88 (55%)	72 (45%)

**Table – 15(b)**

<b>Orientation/ Training Programmes</b>	<b>Number</b>	<b>Percentage</b>
Computer	46	28.75%
Internet	67	41.87%
Online Journals	72	45%
Online Databases	70	43.75%

Note: Table – 15b is a supporting of Table - 15a. Hence data has been calculated only by the option “Yes” (i.e. total no is 88) of the same. Because of multiple choice options the percentage is exceeds more than 100.

## 6. Discussion and Conclusion:

The result of the survey reflects a growing interest in online journals among users at the Faculty of Science, BHU. This study reveals that mostly users are aware about the availability of online journals through the library and they can make maximum use of it for various purposes. The analysis of online journals shows that Science Direct (55%) is the most popular among the users. The other online journals and databases in decreasing order of popularity were:

- Web of Science (30%);
- IEL Online (28.13%);
- J-gate (16.88%);
- Springer link (16.25%);
- Pro-Quest (16.25%);
- ASCE (11.25%);
- ASME (10%);
- SciFinder Scholar (10%);
- Nature (9.38%)
- Science Online (9.38%)

Online journals and databases are mostly used for “research work”, followed by “studying course work” and “update subject knowledge”. They are least used for “teaching” and “writing papers”. Majority of respondents stated that coverage of online journals and databases is not sufficient for their subject area and they need more subscription of online journals and databases in

their respective field. The result of the study also showed that there is a significant association between the time spent on reading online/ offline and the frequency of use of online journals. We found that majority of users take printout of online journals before read.

This study has shown that PDF is the most preferred format for online journals. Very less users wanted to use it in HTML format. It is noted that the PDF and HTML formats are common formats for online journals, in which the full texts are available. For the linking of online journals, mostly users prefers to link through the various search engines and also from the linking facility provided through the library website.

This study has also shown that online journals and databases are mostly accessed at the departmental library/ computer room, and is followed by central library. Very less population interested to access it at computer center and other places.

The level of satisfaction among the respondents regarding the infrastructure provided by the library for accessing online journals and databases indicates that majority of users (73.75%) are satisfied at the various levels whereas, only 26.25% are not satisfied with the same.

The result of this study in general suggests that the library network with the availability of significant number of online journals and databases at Faculty of Science, BHU has been successful but in these sequence users wants more subscription of online journals and databases. The results suggest that 24-hour free access to online resources at the user’s desktop leads to increase acceptance and use of online journals. This service needs to be maintained and continued in future.

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## News

### ***NACLIN-2009***

- 12<sup>th</sup> National convention on knowledge, Library and Information Networking (NACLIN-2009), will be held from September 22-25, 2009 at the Punjab University, Chandigarh, organized by DELNET-Developing Library Network. The National Convention is scheduled for four days. This convention will mainly focus on the following topics:

- MARC 21, KOHA is an open source Library Management Software, RFDI application in Libraries, Building Digital Resources.
- Open Source Software for Libraries
- Knowledge Networking
- Collection Development Strategies
- Digital Libraries
- Web 2.0 Technologies
- Archiving Technologies and Initiatives
- Public access to Digital Resources
- Copyright
- Managing change in Libraries.

### ***International Conference on Academic Libraries***

- International Conference on Academic Libraries:- This conference will be held from October 5-8, 2009 in Conference Centre, University of Delhi. The major theme of the conference is :

- Knowledge Sharing
- ICT Management
- Digital Repository
- E-Teaching, E-Tutorials
- Library-Faculty Relationships and
- User-Centric Services

### ***The NewsRx Competitive Intelligence Database-***

- The NewsRx Competitive Intelligence Database- a searchable online database that delivers a weekly, pre screened,

custom report of news, events and drug developments.

### ***NewsRx Business Intelligence Reports***

- NewsRx Business Intelligence Reports- Comprehensive, quarterly reviews and analysis of the top biotech and pharmaceutical markets, distilled and annotated for users who want quality information at a budget price.

### ***IBIDS***

- The International Bibliographic Information on Dietary Supplements (IBIDS) database provides access to bibliographic citations and abstracts from published, International, and Scientific literature on dietary supplements. IBIDS is a collaboration between two US Government agencies: The office of Dietary Supplements of the National Institutes of Health, and the Food and Nutrition Information Centre (FNIC) of the United States Department of Agriculture's (USDA) National Agricultural Library (NAL).

### ***Medicine Plus Health Information***

- Medicine Plus Health Information is a site connected with Medicine specializing in information for laypersons. You may browse for health information by general topic (e.g. Circulation , Digestive System) or Alphabetically by condition , disease or other keyword (e.g. Diabetes, Food Allergies etc.) .the site provides links to research articles in medicine as well as full-text information from specialized professional organizations (e.g. American Academy of Pediatrics). There are also links to medical dictionaries, encyclopedias and directories of doctors, hospitals and organizations.