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Use of Online Databases in Central Science Library, University of Delhi: A Survey

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ABSTRACT

The study finds out the level of awareness and use of online databases by the post graduate (PG) students and their satisfaction level with the infrastructure to support accessing online databases in the Central Science Library (CSL). A well structured questionnaire was prepared and distributed to the PG students to carry out the study and analyses the data regarding the awareness and use of online databases. The survey shows that most of them are well aware of the online databases and largely use them for their research work and to update their subject knowledge. It is also found that the main problems faced by them in using online databases are lack of information on online databases subscribed by university on their subjects/researches. It is also noticed that nearly 80 % of users are satisfied with the infrastructure that support accessing online databases in the Central Science Library.

Keywords: Online databases, database usage, Central Science Library

1. INTRODUCTION

In the present era, libraries in India are moving towards use of computers and related technology to improve the efficiency and effectiveness of the information services. Information in digital content makes easier for teachers and students to access information anytime and anywhere. Information has become a necessity for everyone, and everybody needs information for some or other purpose.

A database is a computerised collection of logically related set of data or records about something that are stored and organised in the computer. The researchers, especially in the field of science and technology, need information on continuing basis and are considered the biggest users of information.Therefore, most of the information systems and services have been developed in academic institutions and universities to satisfy these requirements of the researchers.

An online database search is simply bibliographic research which is performed by an individual scholar or librarian using a computer and the internet. By connecting with a database research service, millions of records from thousands of publications in hundreds of databases can be searched for material on a topic.

An online database is a database accessible from a network, including from the internet. It differs from a local database, held in an individual computer or its attached storage, such as a CD. Currently, there are several database products designed specifically as hosted databases, delivered as software as a service, products. Some of the differences are:

- The online databases are delivered primarily via a web browser
- They are often purchased by a monthly subscription
- They embed common collaboration features such as sharing, e-mail notifications, etc.

Some examples of online databases are: (a) Web of Science; (b) EBSCO; (c) Science Direct; (d) Springer Link; (e) ABI/INFORM; and (f) Scopus.

2. ABOUT CENTRAL SCIENCE LIBRARY

The emergence of Central Science Library (CSL) dates back to 1981. Prior to that, it was a part of Central Reference Library (CRL), Delhi. However, the need to have a separate science library was shown much earlier by Carl M. White in 1966 who recommended that, 'a Science Library be created to serve the departments, which consist of Faculty of Science and that the collection now maintained by these departments and related material in the main library be used to form the nucleus of the new library. A science librarian of outstanding ability be employed to take charge of it and that a new building be erected to house the library'. With the growth of the University, the membership of Central Library kept on increasing, as a result in due course of time with increasing membership and their changing information needs, it became inconvenient for Central Library to serve the users, belonging to the faculty of science effectively. The three-storied building having a carpet area of 22,595 sq. feet with a sitting capacity of 185 seats started functioning independently with effect from 8 April 1981. The administration of CSL is under the Dean of the faculty of science. The library has internet access facility and is available to science stream clientele only. All internet services like e-mail,

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browsing, and downloading are open to them. In some cases printouts of articles are also provided. Presently ,more then 90 databases and 28074 online journals from various publishers are available through IAF. A list of such online journals is on CSL website at http://csl.du.ac.in, www.du.ac.in. The CSL library has 90 personal computers installed. The library is using Troodon software. Prior to Troodon, the CDS/ISIS software was used in acquisition and cataloguing functions. The CSL is actively engaged in rendering e-resource availability through http://csl.du.ac.in.

The CSL provides e-mail services to the users informing them about latest additions and e-alert services. Articles on request are sent or received through e-mail attachments. The university being central in character ,has provision to allow scholars of other universities to consult library resources at Rs.100 per month.

3. LITERATURE REVIEW

The CSL provide online database to its user to support teaching, research, and development. The literature show s that online databases with their retrieval due to network capabilities have been gradually replacing some of their printed counterparts.

Armstrong & Wheatley[1] in their book have discussed in details on one area of research in an E-Lib-MODELS supporting study which had three investigative area; an examination of current database producers guideline for their abstract writer, a brief survey of Abstract some traditional online database. They also discussed about electronic databases, print sources online databases, internet subject directories and subject gateways available on the internet.

Tenopir & King[2] in their study demonstrated that reading of scholarly articles has been increased. A growing proportion of these readings come from e-prints. Most scientists in a discipline now use e-journals at least part of the time with considerable variations among discipline. It highlighted that scientist and scholars reading from a range of journals than in a past, and shows influence of timely e-publishing and by growth in bibliographic searching and interpersonal communications as means of identifying and locating articles.

Calvert[3] has evaluated the impact of electronic journals and aggregate databases on interlibrary loan activities. His findings reveal that results are not significant enough to justify searching, borrowing requests in aggregate databases.

Coombs[4] conducted a case study 'Lesson Learned from analysed library database usage data', and found that library through examining the usage data discovered that users were utilising particular types of resources, from specific physical locations, and accessing these resources from website.

Odini[5] has reported on a comparative study carried out at the University of Sheffield that online searches have considerable advantages over manual sources, but manual sources still have some qualities which make these valuable. The study recommended that the databases should be selected on the basis of compromise between high recall and high precision, and ultimately between both of these and the cost.

Khan & Zaidi[6] endeavours to find out the level of awareness and use of online databases as well as to ascertain research scholar's satisfaction with the infrastructure to support accessing online databases in the AMU. Roy, Shailendra Kumar & Satija[7] investigated and determined the different challenges faced by the searchers of online database in selected central university libraries in India. Eight central universities in India were chosen on the basis of the bandwidth utilisation (higher to lowest in each group). Mercado[8] has discussed the changes occurring in online database searching with the advances in telecommunication, development of faster and more powerful computers, and the improvements in user-friendly software. The study suggests that the library users know how to search and learn critical thinking skills for databases and keyword selection. Falk[9] reviewed library online databases of the United State library and described the availability of online databases for library patrons in the USA. His major findings are: (i) online databases are now widely available to library patrons in the United States, and many patrons can tap into these databases from their own computers and, (ii) larger libraries and library systems can afford to offer their own choice of databases to their patrons through their internet websites.

4. OBJECTIVES

Today's everyone is talking about e-learning, in which all the documents are available in e-form. The reasons to evaluate the databases are to:

- Establish the reliability of the information
- Measure the efficiency and effectiveness of the databases content
- Establish the authencity of the information in the database

In the present era of information explosion more and more publications are becoming web-enabled. The environment is rapidly changing to electronic environment. So, there was a need to conduct the study for measuring the use of online databases by the post graduate students of CSL. The main purpose of this study is to find out the level of use of online databases by the post graduate students in the CSL. The present study consists of only of online databases used by the PG students of CSL.

The main objectives of the study are to:

(a) Find out the use various online databases, about users

(b) Assess the purpose and frequency of use of online databases

(c) Examine the method of search and access of online databases

(d) Know the problems faced by users in using online databases

(e) Ascertain user satisfaction with the infrastructure to support online databases in the library

5. METHODOLOGY

A set of well-structured questionnaire was developed in the light of objectives. The total population size of post graduate (PG) students is 3312. The questionnaires were personally distributed to 100 PG students in March 2015. Out of 100 distributed questionnaires, 80 duly filled up were received back, showing 80 % response rate. The collected data was classified, tabulated and analysed.

6. ANALYSIS

6.1 Awareness and Use of Online Databases

Table 1 shows that maximum users, i.e., 70 (97.22 %), were aware and used Science Direct, 69 (95.83 %) and 61 (84.72 %) users were aware of and used Springer Link and IEEE Xplore, respectively. Fifty eight 58 (80.55 %) users were aware and used EBSCO; 54 (75%) ABI/INFORM; 52 (72.22 %) Web of Science; and 51 (70.83 %) were aware and used Scopus. There are also other databases in the CSL but post graduate students rarely used them.

Table 1. Awareness of the online databases

S. No.	Name of databases	No. of respondents	Percentage
1.	IEEE Xplore	61	84.72
2.	EBSCO	58	80.55
3.	Science Direct	70	97.22
4.	Springer Link	69	95.83
5.	ABI/INFORM	54	75.00
6.	Web of Science	52	72.22
7.	Mathscinet	50	69.44
8.	Scopus	51	70.83
9.	Any other	0	0

6.2 Usage of Online Databases

Thirty (41.6 %) users use the online databases on daily basis and 24 (34 %) users use online databases on weekly basis. Whereas, 20 (27.7 %) users use the databases 2-3 times in a week and no user used the online databases occasionally.

6.3 Usefulness of Information

Figure 1 shows users'views about the relevancy of information in the databases. On analysis, it was found that 87.5% users found relevant information in IEEE Xplore; 90.27 % users found relevant information in EBSCO, and 94.44 % in Science Direct. 90.27 % and 95.8 % found Springer Link and ABI/INFORM as their relevant source of information. 97.22 %, 93.05 % and 95.83 % users found Web of Science, Mathsci net and Scopus, respectively as their relevant source of information.

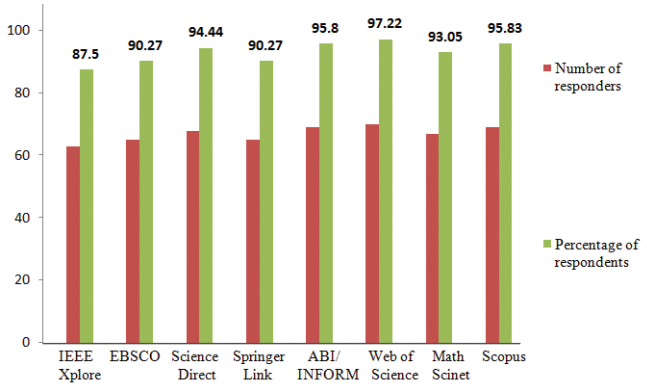

Figure 1. Relevancy of information contained in databases.

6.4 Searching Technique Used

Table 2 reveals that maximum users, i.e., 65 (90.27 %) use phrase searching technique, 87.5 % use simple search, (84.72 %) of users use keyword searching method, (69.44 %) use Boolean searching method and (66.66 %) of users use truncation search.

Table 2. Type of searching technique

Searching technique	No. of respondents	Percentage
Keyword search	61	84.72
Simple search	63	87.50
Boolean search	50	69.44
Phrase search	65	90.27
Truncation search	48	66.66

6.5 Satisfaction Regarding Browsing Online

Table 3 concludes that maximum users, i.e., 97.22 % are satisfied with the Science Direct browsing, (94.44 %) satisfied from the Springer Link, (90.2 %) of users satisfied from the Web of Science, (86.11 %) of users are satisfied form Scopus, (83.33 %) of users are satisfied from IEEE Xplore, EBSCO, Mathscinet and (81.94 %) satisfied with the ABI/INFORM.

Table 3. Satisfaction regarding browsing online databases

Browsing satisfaction	Number of responders	Percentage
IEEE Xplore	60	83.33
EBSCO	60	83.33
Science Direct	70	97.22
Springer Link	68	94.44
ABI/INFORM	59	81.94
Web of Science	65	90.2
Mathscinet	60	83.33
Scopus	62	86.11

6.6 Downloading and Printing Satisfaction

It was noted that 97.22 % users were satisfied with the ABI/INFORM's printing and downloading facility, and 100 % users were satisfied with Springer Link and

Web of Science. 98.61 % and 95.83 % users were satisfied from Scopus and EBSCO, respectively. 94.44 % users were satisfied from IEEE Xplore and Mathscinet.

6.7 User Interface Satisfaction

It was analysed that 98.61 % users were satisfied with the Science Direct's user interface. All are satisfied from the Springer Link. About 84 % users were satisfied with Web of Science; 83.33 % from Scopus and 86.11 % from IEEE Xplore. About 81.94 %, 80.55 % and 80.55 % were satisfied with EBSCO, Mathscinet, and ABI/INFORM, respectively.

7. FINDINGS

The present study reveals the very specific trends in the use of different online databases in the CSL. Depending upon the analysis of the data acquired by conducting user survey, the following are the findings:

(a) Data analysis shows that 41.6 % of post graduate students uses the online databases on daily basis whereas 34 % use the databases weekly basis.

(b) The most used databases by post graduate students members (97.22 %) of CSL is Science Direct followed by Springer Link (95.83 %) while there are many other databases also in the library.

(c) About 90 % users use phrase search technique and 87.5 % of users use simple search method followed by keyword searching method (84.72 %). This shows that the users are well aware of various searching techniques.

(d) About 97 % users have found relevant information in Web of Science and 95.4 % users found ABI/ INFORM as their relevant source of infomation. More than 80 % users found relevant information on all the online databases.

(e) Users are much aware about the archival collection and ranking facility of journals in online databases.

8. SUGGESTIONS

Based on the analysis of the data the following suggestions can be made to improve the usage of different databases available in the CSL.

(a) To improve the efficiency of the post graduate scholars towards access of databases, the library should provides hands on experience and conduct user orientation programmes to post graduate students.

(b) For most effective searching of databases, there is need to provide training about how to use advance search techniques for getting most relevant results.

(c) Students are needed to make aware about various other online databases which are procured by CSL.

(d) A user survey is to be condeucted at definite intervals so that library staff can know about the searching strength in the online databases in their users.

(e) Technical hindrance of the databases should be avoided.

9. CONCLUSIONS

The evaluation of online databases is done from users point of view and it is found that users are much aware about the online databases like Science Direct, Springer Link, Web of Science, IEEE xplore, ABI/INFORM, EBSCO, etc., and also are aware of searching techniques to certain extent which will lead to the qualititative work and mostly users used the online database for their research work in the central library or departmental lab. The Science Direct is found as the best database from all kind of perspective.

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