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Online Databases Usage by Research Scholars of the Aligarh Muslim University

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ABSTRACT

The study 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 campus. A well structured questionnaire was administered to the research scholars of the AMU to collect data regarding the awareness and use of online databases. The survey reveals that most of the research scholars are aware of the online databases availability and largely use them for their research work and to update subject knowledge. They fully agree that with the usage of online databases, the quality of research work improves with enrichment of appurtenant contents and materials, leading to high quality manuscript. It is however found that the main problems faced by research scholars in using online databases are lack of information on online databases subscribed by university on their subjects/researches. It is also noticed that nearly 50 per cent research scholars are satisfied with the infrastructure to support accessing online databases in the AMU campus.

Keywords: Online databases, research scholars, database usage, Aligarh Muslim University, AMU

1. INTRODUCTION

Information has become a necessity for everyone, and everybody needs information for some purpose or the other. Education and research activities require more and more information. Students need it for pursuing academic studies. Teachers also need information for imparting education to their students, professionals like doctors, engineers, legal advisors, etc. need information for pursuing their professions. Besides, 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.

The emergence of the Internet, particularly the World Wide Web, as a new medium of information storage and delivery represents a revolution, which would have a lasting impact on the publishing and information delivery system in the 21st century. An increasing numbers of publishers are using the Internet as a global way to offer their publications to the international community of scientists, reserchers, and technologists[1]. A database is a computerised collection of logically related set of data or records about something that are stored, organised or structured in the computer. It is the collection of data or information stored in a form that may be accessed by a computer and also accessed by more than one user in a way that makes it easy to retrieve needed information[2]. The study endeavours to find out the level of awareness and use of online databases by the researchers in the Aligarh Muslim University (AMU), a central university funded by the UGC.

2. HISTORICAL ALMANAC OF ALIGARH MUSLIM UNIVERSITY

Aligarh Muslim University is a residential academic institution of international repute offering about 300 courses in traditional and modern branches of education. It is modelled on the pattern of Oxford and Cambridge universities and situated at Aligarh, 130 km South-East of Delhi on Delhi-Calcutta railway and Grand Trunk Road. Sir Syed Ahmed Khan, a great reformist, felt the need for modern education and started a school in 1875 which later became a college under the title of Mohammadan Anglo Oriental College, and finally, Aligarh Muslim University in 1920 by an Act of Parliament. AMU draws

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students from all corners of the world, especially Africa, West Asia, and South East Asia. In some courses, seats are reserved for students from South Asian Association for Regional Collaboration (SAARC) and Commonwealth countries. The university is open to all irrespective of caste, creed, religion or sex.

3. REVIEW OF LITERATURE

Most of the institutes and universities provide online databases to their users to support teaching, research and development. The literature shows that online databases with their retrieval from network capabilities, have been gradually replacing some of their printed counterparts. Tenopir and King[3] in their book have discussed in detail the realities of electronic journals for scientists, librarians, and publishers. They have taken an historical perspective, providing best factual foundation for understanding paper journals today as well as the potential impact of new technologies. They have shown the direction of authorship, publishing, library and intermediary services, as well as scientists' information seeking and readership patterns. They have attempted to develop some 'themes' that need to be considered in the future.

Later, Tenopir and King[4] in a study carried out from 1977 through 2001 have demonstrated that scientists continue to read widely from scholarly journals. Reading of scholarly articles has increased to approximately 120-130 articles per person per year, with engineers reading fewer journal articles on an average, and medical faculty reading more. A growing proportion of these readings come from e-prints. Most scientists in a discipline now use electronic journals at least part of the time, with considerable variations among disciplines. Evidence suggests that scientists are reading from a broader range of journals than in the past, influenced by timely electronic publishing and by growth in bibliographic searching and interpersonal communication as means of identifying and locating articles.

Although the scholarly journals system has changed dramatically in the past few decades, it is evident that the value scientists place on the information found in scholarly journal articles, whether electronic or print, remains high. Still later, Tenopir[5], *et al.* have further studied the patterns of journal use by scientists. Access to electronic journals and articles has involved three system phases: an early phase following introduction of electronic journals; an evolving phase, in which a majority of scientific journals are available in electronic format, new features are added to some journals, and some individual articles are made available through preprint archives, author web sites, etc; and an advanced phase in which searching capabilities, advanced features, and individual articles are integrated in a complete system along with full text of core journals available back to their origin. They also provide some evidence of how scientists' information seeking and reading patterns are affected by using journals in these three system phases. Readership surveys of scientists shed some light on how the three phases affected use, usefulness, and value of articles read; where articles are obtained; the format of articles read; how they were found; and the age of articles read. Bar-Ilan[6], *et al.* conducted an extensive survey of the senior academic staff of the Israeli universities on their use of electronic journals and databases. The major findings were that the use of electronic sources is already widespread among the respondents and more than 50 per cent found the electronic services indispensable. Disparities were found between the usage patterns in the different disciplines. Coombs[7]conducted a case study under the title, 'Lesson Learned From Analysing 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.

Falk[8] 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 were: (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 (ii) larger libraries and library systems can afford to offer their own choice of databases to their patrons through their internet web sites. This study provides valuable information to the information professionals.

Singh and Gautam[9] under the title, Electronic databases: The Indian Scenario, focus on access to information through online or CD-ROM media that has remained a challenging effort for both the user and the intermediary. It determined that information services/ products of all kinds that are being generated by various agencies in the government, public and private sectors are emerging out into the Indian Information market place. It concludes that the nature of information delivery and consumption is changing. Modern information technology provides easy and fast access for almost everyone to use the ever-growing amount of stored information in international, national or local database. It further reveals that many of the electronic databases are being created and made available today in India for use both within the country and outside. Calvert[10] has evaluated the impact of electronic journals and aggregate databases on inter-library loan activities. His findings reveal that results are not significant enough to justify searching, borrowing requests in aggregate databases and changing current inter-library loan procedure for searching request before ordering. Mercado[11] has discussed in his study 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.

Odini[12] 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.

4. OBJECTIVES

Objectives of the study were:

(i) To find out the use among research scholars about various online databases.

(ii) To assess the purpose and frequency of use of online databases.

(iii) To examine the method of search and access of online databases.

(iv) To know the problems faced by research scholars in using online databases.

(v) To ascertain research scholars satisfaction with the infrastructure to support accessing online databases in the AMU campus.

5. METHODOLOGY EMPLOYED

A set of well-structured questionnaire was developed in the light of above objectives. This method was also preferred as it is less time consuming and economical for a scattered population. The total population size of research scholars of AMU was 970. The selected population for the study was only the research scholars from science, technology and medical-based disciplines.

The questionnaires were personally distributed to the research scholars in the month of May 2008. Out of 80 distributed questionnaires, 72 duly filled up were received back showing overall response rate of 90 per cent. The collected data were analysed, classified and tabulated by employing statistical methods.

6. NEED AND SIGNIFICANCE

In the present era of information explosion more and more publications are becoming web-enabled. The environment is rapidly changing to electronic environment. So we decided to conduct the study for measuring the use of online databases by research scholars of AMU.

7. SCOPE AND LIMITATIONS OF THE STUDY

The main purpose of this study is to find out the level of use of online databases as well as ascertain research scholar's satisfaction with the infrastructure supporting online databases in the AMU campus. The investigators faced some of major limitations such as:

(i) The present study consists of only of online databases used by research scholars of AMU.

(ii) The geographical area is restricted to AMU only.

8. ANALYSIS AND INTERPRETATION OF DATA

8.1 Use of Online Databases

It is evident from Table 1 that the majority of research scholars are aware about *J-gate, Science Direct, INSPEC, Compendex and Medline*, followed by *SciFinder Scholar* (72.22 per cent), *Biological Abstract* (70.83 per cent), *Web of Science* (56.94 per cent), EBSCO Databases (54.16 per cent) and *MathSci Net* (47.22 per cent) databases. However, it is found from the analysis that J-gate, Science Direct, INSPEC, Compendex and Medline are most popular databases among the research scholars of the purported university.

8.2 Purpose and Use of Online Databases

As regards the purpose and use of on-line databases, it is discernible from Table 2 that the research scholars (94.44 per cent) mainly make use of on-line databases for their research work followed by subject knowledge (84.72 per cent) and for career development (2.22 per cent) respectively.

Table1. Awareness about online databases

Online Databases	Number of Respondents	Percentage
Science Direct	69	95.83
Web of Science	41	56.94
Compendex	58	80.55
Medline	54	75
Biological Abstract	51	70.83
J-gate	70	97.22
SciFinder Scholar	52	72.22
INSPEC	61	84.72
MathSci Net	34	47.22
EBSO Databases	39	54.16
Any Other	0	0.00

(Multiple answers were permitted)

Table 2. Purpose of use of online databases

Purpose	Number of respondents	Percentage
Research Work	68	94.44
Update Subject Knowledge	61	84.72
For Career Development	52	72.22

8.3 Frequency of Use of Online Databases

Figure 1 shows that largest percentage of the research scholars i.e. (72.22 per cent) use on-line databases daily, whereas very few research scholars (15.27) use 2-3 times a week and weekly (12.5 per cent). However, it is interesting to note that not a single research scholar reported that he/she uses these sources occasionally.

8.4 Place of Use of Online Databases

Table 3 reveals that majority of research scholars (70.83 per cent) use online databases in departmental lab, followed by computer centre (33.33 per cent) and central library (23.6 per cent). The research scholars reported that most of the online databases are not accessed in library; it is accessed in either departmental lab or computer centre. The researchers feel that the license of access to online databases has been given to departmental lab by the librarian for its maximum utilisation.

8.5 Method of Search and Access of Online Databases

Table 4 shows that a high percentage of research scholars (84.72 per cent) search and access online databases directly, followed by links through search engines (76.38 per cent) and links through library website (56.94 per cent). Links through publisher website receives low priority.

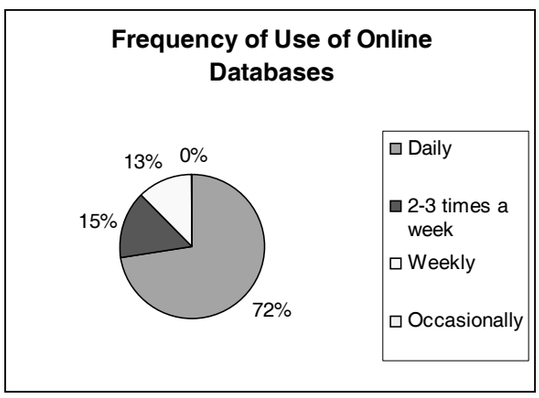

Figure 1. Frequency of use of online databases.

Table 3. Place of use of online databases

Place of use of online databases	Number of respondents	Percentage
Central library	17	23.61
Departmental lab	51	70.83
Computer centre	24	33.33

Table 4. Method of search and access of online databases

Method of search and access	Number of respondents	Percentage
Links through library website	41	56.94
Links through publisher website	02	2.77
Links through search engines	55	76.38
Direct Links through online databases	61	84.72

(Multiple answers were permitted)

8.6 Problems Faced by Research Scholars in Using Online Databases

Table 5 shows that the main problem faced by research scholars in using online databases is not many online databases subscribed by university on their subjects/researches constituting (45.83 per cent), whereas no assistance is provided by Information Professional constitutes (29.16 per cent), coverage of online databases is not suited to their researches, is (13.88 per cent) and Limited number of terminals, is (11.11 per cent) are other problems faced by the research scholars.

Table 5. Problems faced by research scholars in using online databases

Problems faced by research scholars	Number of respondents	Percentage
Not many online databases subscribed by university on my subject/research	33	45.83
Coverage of online databases is not suited to my research	10	13.88
No assistance provide by information professional	21	29.16
Limited access of terminals	08	11.11

8.7 Level of Satisfaction with the Infrastructure to support accessing Online Databases

As far as the level of satisfaction of research scholars with the infrastructure to support accessing online databases in the AMU campus are concerned, it is discernible from Fig. 2 that 48.61 per cent research scholars are 'satisfied' with infrastructure to support accessing online databases, whereas 29.16 per cent are neither satisfied nor dissatisfied. At the same time, 13.88 per cent are 'dissatisfied'. In case of high-level satisfaction and dissatisfaction only 5.55 per cent are 'highly satisfied' and 2.77 per cent are 'highly

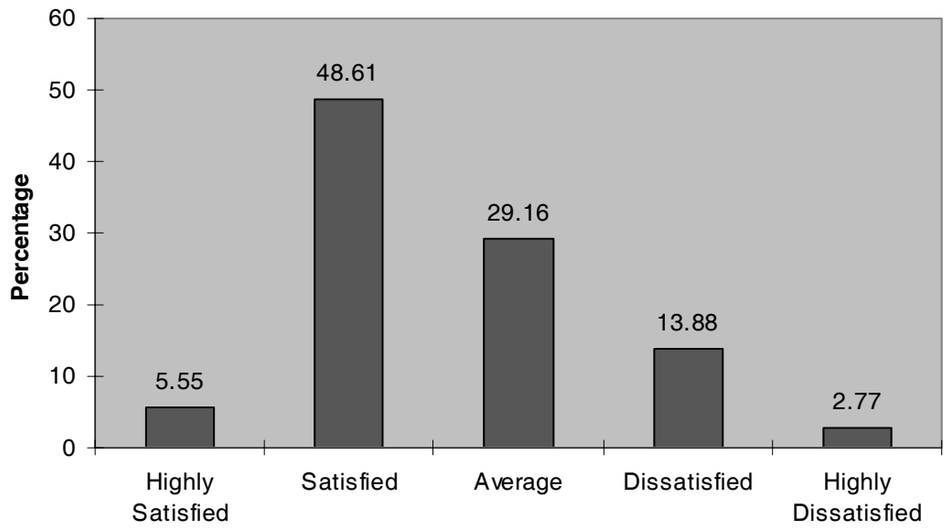

Figure 2. Level of satisfaction with the infrastructure to support accessing online databases.

dissatisfied'. On the whole, it can be deduced that the infrastructure to support accessing online databases in the AMU campus is good because nearly 50 per cent research scholars are found to be satisfied.

9. FINDINGS

It is felt from the analysis that majority of research scholars are aware about *J-gate, Science Direct, INSPEC, Compendex and Medline*. The research scholars are mainly found to have been making use of online databases for their research work and to update their subject knowledge. It is also seen that largest percentage of the research scholars make use of online databases daily. Majority of research scholars use online databases in departmental lab whereas use of online databases in central library is very low. It is further found from analysis that a high percentage of research scholars search and access online databases directly and by links through online databases and search engines whereas links through publisher website receives low priority.

The study identifies that the main problem faced by the research scholars in using online databases are lack of online databases subscribed by university on science and technology as well as social sciences. It is noticed that nearly 50 per cent research scholars are satisfied with the infrastructure to support accessing online databases in the AMU campus.

10. SUGGESTIONS

In order to strengthen the research activity in the university, it is suggested that more online databases need to be subscribed these are also the research scholar's expectations. Feedback should be sought from the research scholars and the services need to be evaluated to decide their utility. University should invest more in online databases such as *Web of Science, Science Citation Index,* and *Social Science Citation Index,* etc. If, it is facing lack of funds, a charter of demand should be put before UGC in 11 Plan or also through special and development grants.

The need and use of information are two faces of the same coin. The need is always expressed with the purpose of use. Therefore, in information technology era the research scholars need should be accorded priority, and to know and identify the need, use evaluation studies should be conducted, which will facilitate creation of research oriented products and services.

11. CONCLUSION

The study is confined to awareness and use of online databases in AMU in Uttar Pradesh. From the findings of this study and the personal observation and knowledge of researchers, several major conclusions can be drawn. It was noticed that nearly 50 per cent research scholars are satisfied with the infrastructure to support accessing online databases in the AMU campus. But it also identifies that the main problem faced by research scholars in using online databases are inadequate online databases subscribed by university on their subjects/ researches. The important issue is more financial assistance for online databases. Although the University is a member of UGC-Infonet Consortia and INSPEC for accessing online databases and journals, but it is not enough to fulfill the needs of the research scholars. Therefore, it is recommended that AMU should join Consortia's both at national and international level to share the electronic information resources and services. In order to increase the use of online resources by the AMU users, it is recommended that frequent "information

literacy" programmes should be conducted by the library to educate the users on the effective use of internet and e-resources.

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