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RESEARCH ARTICLE

IMPACT AND USE OF ELECTRONIC INFORMATION SERVICES BY THE RESEARCH SCHOLARS AND FACULTY MEMBERS AT Dr. ZAKIR HUSSAIN LIBRARY: JMI, NEW DELHI

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ABSTRACT

Purpose: The purpose of this paper is to find out the Impact and use of electronic information services by the research scholar and faculty members at Dr. Zakir Hussain Library, Jamia Millia Islamia, New Delhi.

Design/methodology/approach: Primary data were collected by using questionnaire method accompanied by interview and observation method as techniques of data collection. The data collected through questionnaire, organized and tabulated by using statistical method, tables and percentage.

Findings: Majority of the Research Scholar and Faculty Members are well aware about Internet Services, CD-ROM Database Service, Online Database Service and E-Mail Service. It is also found that Research Scholars and faculty members make awareness approach to Electronic Information Services available in the library through Membership and through their Colleagues respectively. Boolean logic search is generally used by researchers to find the required document.

Practical implication: The findings can be utilized to improve the ICT services which boost the research work in the universities.

Originality/value: This study is totally based on the primary data collected by questionnaire and observation method.

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INTRODUCTION

The present era is called the era of information explosion, which simply means that knowledge is being generated at a tremendous pace. As per a recent survey conducted by organization of economic cooperation (2004), Knowledge doubles every seven years. In such a situation user is so much confused, as he does not know where and how to access the required information. The collection, storage, retrieval and dissemination of large amounts of information application of new technologies create a new challenge for libraries to disseminate required information to right users. Libraries disseminate the desired information to Scholars and faculty members for their day-to-day education, research and teaching.

The use of the new technologies provides better ways of transmission of information. Information technology helps libraries in creating database of their collection and making them available for easy access to users inside as well as outside through networks. It also enables libraries to provide most efficient and specialized information services. An electronic information service is any library system whose primary purpose is to provide access to, reference from, or otherwise utilize information from one or more databases stored electronically on online data storage media such as magnetic disk or optical disc. The storage information could be bibliographic or citation record, abstract, full-text, documents, numerical data, image records, sound records, inventory records, personnel records, financial records, or any other types of records that can be stored in digital form. Common examples of electronic information services providing direct services to library clients include mediated searching of remote databases, end-user searching of remote databases and end-user searching of local databases, including online public

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access catalogs, CD-ROM citation databases, and community information files. Examples of other electronic services providing indirect or internal services include acquiring or creating information in electronic databases, organization and preserving electronic information, and providing information and services to library management and staff as well as to external governing authorities and agencies. There is a commonly of competencies that are, or will be required in providing any of these electronic information services.

RELATED STUDY

Mamun Mostofa (2013) founds in his study under title "Use and Impact of E-Resources at Some Selected Private Universities in Bangladesh" that use of e-resources is very common among the university and majority of the students are dependent on e-resources to get the desired and relevant information. But practical use of e-resources is not up-to the worth in comparison to investments made in acquiring these resources; secondly infrastructure and training programs should also be revised as per requirements. It is observed that the availability of e resources on the campus is almost sufficient for all the existing disciplines but the infrastructure to use these resources is not adequate and can hinder the ability to meet the requirements of users.

Adeniran, Pauline (2013) conducted a study under title "Usage of electronic resources by undergraduates at the Redeemer's University, Nigeria". The findings of this study revealed that the respondents even though were aware of the different types of electronic information resources available in the university library; their use rate of these resources is low. It was also discovered that a large proportion of the respondents made use of the electronic resources mostly for research, assignment, current awareness, information acquisition, and e-mail and news acquisition. Various factors that militate against effective utilization of electronic resources by undergraduate students were discovered during the course of the study. Among the factors are: large mass of irrelevant information, the need to filter the results from search, download delay, failure to find information, inadequate or lack of search skills, high cost of access, inaccessibility of some electronic resources, difficulties in navigating through electronic resource etc.

Halima Sadia Egberongbe (2011) the study had sought to investigate the use and impact of electronic resources on productivity of lecturer's researchers and students of university of Lagos. The study revealed that majority of the respondents used electronic resources, were aware and have become familiar with electronic resources. The study also revealed that both faculty and students used e-resources to access information available worldwide for teaching, learning and research. The study revealed the extent of training in both access to and usage of electronic resources. There was a general indication that scholars (i.e, students and researchers) did not receive training in the use of electronic resources. They rather resorted to the trial and error techniques of usage. **Sirje Virkus Tallinn, Estonia (2008)** in his study revealed that Web 2.0 is influencing the way in which people learn access information and communicate with one another. The Institute of Information Studies of Tallinn University has a long history

in using ICT in its teaching and learning. Experiences with open and distance learning and e-learning have transformed teaching and learning, provided new alternative delivery modes, and helped to reach new target groups. Recently the staffs have been experimenting with Web 2.0 technologies and a few have successfully adopted them in teaching and learning. **Karen A. Coombs (2005)** conducted a study under the title "Lessons Learned from analyzing Library Database Usage Data." The findings of the study were that through examining the usage data the library discovered that users were utilizing particular types of resources, from specific physical locations, and accessing those resources from specific pages in the library's web site; and by examining usage data for electronic resources, libraries can learn more than which resources are being used. Usage data can give libraries insight into where, when, how, and possibly why their users are accessing electronic resources.

Andrew Hawitson (2002) conducted a research under the title Use and Awareness of Electronic Information Services by Staff at Leeds Metropolitan University. The findings of the research shows that the internet was the most popular information source but the factors affecting use at the expense of subscription-based services were complex; university staff, especially those with low level IT skills, frequently used the internet because it is easy to access and provides instant results; users who are aware and are confident in using subscription-based services still prefer to use the internet for a variety of reasons; it is clear that for those members of staff who used EISs regularly, the initial impetus had often come from either their own research or after embarking on some form of professional development such as a Ph.D.; and once they have seen the value of these services in their own work, they began to incorporate them into their own teaching.

Selection of the Problem

The problem for the present study is entitled "Impact and use of electronic information services by the research scholar and faculty members at Dr. Zakir Hussain Library, Jamia Millia Islamia, New Delhi".

Scope and Limitations of the Study

In India there are more than 40 central universities out of which Jamia Millia Islamia has its own place in the field of research and innovation. Dr. Zakir Hussain Library is a central library of Jamia Millia Islamia having vast collection of resources including physical as well as electronic resources and provides various electronics and online services. The researchers and faculty members exploit these services for their research and teaching purpose respectively. We have therefore selected Dr. Zakir Hussain Library for the study:

- Users of the Dr. Zakir Hussain Library have been taken for the study, as:
- Research Scholars and
- Faculty Members

Objectives of the Study

The present study attempts to achieve the following objectives:

- To find out the awareness about electronic information services by researchers and faculty members in Zakir Hussain Library.
- To know the availability of electronic information provided by Zakir Hussain Library.
- To know the degree of utilization of existing electronic information services.
- To know the purpose of using electronic information services.
- To know the most frequently used electronic information services by the users.
- To find out the most common electronic information services used by user.
- To find out the problems faced by the users while using electronic information services.
- To find out the users opinion regarding the behaviour of library staff in assistance.
- To know about the view of the users regarding the electronic information services training program.
- To collect suggestions from the users for further development of electronic information services in the library.

Sample Population

The collection of data from the entire Research Scholar and Faculty members is not possible to be covered in a single study. Therefore, the total numbers of 350 questionnaires distributed among Research Scholars and same number of questionnaires were also distributed among faculty members. On the analysis, it is observed that 330 (94.28%) out of 350 Research Scholars followed by 240 (68.57%) out of 350 Faculty Members respectively.

Table 1. Status of Respondents

S. No.	Status	Distributed	No. of Respondents	(%)
1.	Research Scholars	350	330	94.28
2.	Faculty Members	350	240	68.57
	Total	700	570	82.85

- Tools and Techniques Administered: The investigator used questionnaire method accompanied by interview and observation method as techniques of data collection.
- Data Analysis: The data collected through questionnaire, organized and tabulated by using statistical method, tables and percentage.

Data Analysis and Interpretation

The data collected from the questionnaire are tabulated in the following paragraphs for analyses using percentage method in the categories given below:

Awareness of Information Services

The above table indicates awareness about Information Services provided to Research Scholars and Faculty Members by the library.

It is observed that 150 (45.45%) out of 330 Research Scholars aware about the CD-ROM Database Services, followed by

180 (54.54%), 120 (36.36%), 300 (90.90%), 150 (45.45%), 210 (63.63%), 60 (18.18%), 30 (9.09%) and 60 (18.18%) Research Scholars aware about the Online Database, E-Document Delivery, Internet, Web, E-Mail, E-Indexing & Abstracting, E-CAS & SDI and E-Reference Services provided in the library respectively. Similarly, 180 (75) out of 240 Faculty Members aware about the CD-ROM Database Services, followed by 210 (87.5), 60 (25), 240 (100), 120 (50), 210 (87.5), 90 (37.5), 30 (12.5) and 90 (37.5) Faculty Members aware about the Online Database, E-Document Delivery, Internet, Web, E-Mail, E-Indexing & Abstracting, E-CAS & SDI and E-Reference Services provided in the library respectively.

Awareness about Electronic Information Services

In order to know the awareness about Electronic Information Services, the awareness approaches have been classified in four categories as depicted in table 3. It is denoted that 120 (36.36%) out of 330 Research Scholars made awareness approach to Electronic Information Services through library website, while 50 (15.15%), 70 (21.21%) and 90 (27.27%) Research Scholars made awareness approach to Electronic Information Services of the library through Library Websites, through Information Broacher of Library, through their colleagues, and through Staff and Other Sources respectively. Similarly, 40 (37.5%) out of 240 Faculty Members made awareness approach to Electronic Information Services through library website, while 90 (37.5%), 30 (37.5%), 30 (12.5%) and 80 (33.33%) Faculty Members made awareness approach to Electronic Information Services of the library through Library Websites, through Information Broacher of Library, through their Colleagues, and through Staff and Other Sources respectively.

The above table shows the use of various types of Electronic Information Services available in the library. It is noted that 90 (27.27%) out of 330 Research Scholars used CD-ROM Database available in the library, followed by 150 (45.45%), 30 (9.09%), 240 (72.72%), 240 (72.72%), 60(18.18%), 60(18.18%), and 150 (45.45%) Research Scholars used Online Database, E-Document Delivery, Internet, Web, E-Mail, E-Indexing & Abstracting, E-CAS & SDI and E-Reference Services provided in the library respectively. Similarly, 60 (25%) Faculty Members used CD-ROM Database available in the library, followed by 90 (37.5%), 60 (25%), 180 (75%), 150 (62.5%), 30 (12.5%), 90 (37.5%), 60 (25%) and 150(62.5%) Faculty Members used Online Database, E-Document Delivery, Internet, E-Mail, E-Indexing & Abstracting, E-CAS & SDI and E-Reference Services provided in the library respectively.

Table 5 depicted that 150 (45.45%) out of 330 Research Scholars use the Electronic Information Services to update knowledge followed by 150 (45.45%), 180 (54.54%) and 60 (18.18%) Research Scholars used the Electronic Information Services for study purpose, for research work and for teaching purpose respectively. Similarly 150 (62.5%) Faculty Members used the Electronic Information Services to update knowledge, followed by 60 (25%), 90 (37.5%) and 30(12.5%) Faculty Members used for study purpose, for research work and for teaching purpose respectively.

Table 2. Awareness of Information Services

Sl. No.	Information Services	No. of Respondents	
		Research Scholars	Faculty Members
1.	CD-ROM Database Service	150 (45.45)	180 (75)
2.	Online Database Service	180 (54.54)	210 (87.5)
3.	E-Document Delivery Services	120 (36.36)	60 (25)
4.	Internet Services	300 (90.90)	240 (100)
5.	Web Services	150 (45.45)	120 (50)
6.	E-Mail Service	210 (63.63)	210 (87.5)
7.	E-Bulletin Board Service	-	-
8.	E-Indexing & Abstracting Service	60 (18.18)	90 (37.5)
9.	E-CAS & SDI	30 (9.09)	30 (12.5)
10.	E-Reference Service	60 (18.18)	90 (37.5)

(Figures within parenthesis are %age)

Table 3. Awareness about Electronic Information Services

Sl. No.	Awareness about e-services	No. of Respondents	
		Research Scholars	Faculty Members
1.	Through Library Websites	120 (36.36)	40 (16.66)
2.	Through Information Broucher of Library	50 (15.15)	90 (37.5)
3.	Through Your Colleagues	70 (21.21)	30 (12.5)
4.	Through Staff and Other Sources	90 (27.27)	80 (33.33)

(Figures within parenthesis are %age)

Table 4. Use of Various Types of Electronic Information Services available in the Library

Sl. No.	Electronic Information Services	No. of Respondents	
		Research Scholars	Faculty Members
1.	CD-ROM Database Service	90 (27.27)	60 (25)
2.	Online Database Service	150 (45.45)	90 (37.5)
3.	E-Document Delivery Services	30 (9.09)	60 (25)
4.	Internet Services	240 (72.72)	180 (75)
5.	E-Mail Service	240 (72.72)	210 (87.5)
6.	Bulletin Board Service	-	30 (12.5)
7.	E-Indexing & Abstracting Service	60(18.18)	90 (37.5)
8.	E-CAS & SDI	60 (18.18)	60 (25)
9.	E-Reference Service	150 (45.45)	150(62.5)

(Figures within parenthesis are %age)

Table 5. Purpose of Using Electronic Information Services

Sl. No.	Purpose	No. of Respondents	
		Research Scholars	Faculty Members
1.	To Update Knowledge	150 (45.45)	150 (62.5)
2.	For Study Purpose	150 (45.45)	60 (25)
3.	For Research Work	180 (54.54)	90 (37.5)
4.	For Preparing Assignment	-	-
5.	For Teaching Purpose	60 (18.18)	30 (12.5)

(Figures within parenthesis are %age)

Table 6. Sources Used for Locating Different Electronic Information

Sl. No.	Sources	No. of Respondents	
		Research Scholars	Faculty Members
1.	Library Databases	240 (72.72)	180 (75)
2.	Directories	180 (54.54)	90 (37.5)
3.	Indexes	60 (18.18)	120 (50)
4.	Bibliographies	150 (45.45)	120 (50)
5.	Union Catalogue	30 (9.09)	30 (12.5)
6.	OPAC	-	60 (25)

(Figures within parenthesis are %age)

On the analysis of table 6, It is observed that 240 (72.72%) out of 330 Research Scholars used library databases for locating Electronic Information, followed by 180 (54.54%), 60 (18.18%), 150(45.45%) and 30 (9.09%) Research Scholars

used directories indexes, bibliographies and union catalogue for locating Electronic Information respectively. Similarly, 180 (75%) out of 240 Faculty Members used library databases for locating Electronic Information, followed by 90 (37.5%), 120

(50%), 120 (50%), 30 (12.5) and 60 (25%) Faculty Members used directories, Indexes, bibliographies, union catalogue and OPAC for locating Electronic Information.

Search Technique Frequently Used

In order to know the search technique used in Electronic Information Services, the search techniques have been classified in four categories as shown in below table.

Table 7. Search Technique Frequently Used

Sl. No.	Search Technique	No. of Respondents	
		Research Scholars	Faculty Members
1.	Boolean Logic (AND/OR/NOT)	30(9.09)	90 (37.5)
2.	Weighted Term Search	30(9.09)	60 (25)
3.	Subject Term (Truncated) Search	150 (45.45)	60 (25)
4.	Full Text Search	90 (27.27)	60 (25)

(Figures within parenthesis are %age)

Table 8. Problem Faced in Searching/Accessing Online Databases

Sl. No.	Problem	No. of Respondents	
		Research Scholars	Faculty Members
1.	Language	30 (9.09)	-
2.	Command	-	-
3.	Technical	150 (54)	60 (25)
4.	Internet Access	90 (27)	60 (25)

(Figures within parenthesis are %age)

Table 9. Retrieval Performance of OPAC

Sl. No.	Performance	No. of Respondents	
		Research Scholars	Faculty Members
1.	Excellent	-	60 (25)
2.	Good	30 (20)	90 (50)
3.	Fair	-	-
4.	Neutral	60 (40)	30 (16.66)
5.	Average	60 (40)	-

(Figures within parenthesis are %age)

Table 10. Type of Impact of Electronic Information Services

Sl. No.	Impact	No. of Respondents	
		Research Scholars	Faculty Members
1.	Speed in Services	270 (81)	210 (87.5)
2.	Fulfill The Communication Gap	150 (45)	60 (25)
3.	Timeliness	120 (36)	180 (75)
4.	Not Much Effort Required	60 (18)	90 (37.5)
5.	Economical	90 (27)	60 (25)

(Figures within parenthesis are %age)

It is observed that 30(9.09%) out of 330 Research Scholars used Boolean logic, followed by 30(9.09%), 150 (54.54%) and 90 (27.27%) Research Scholars used weighted term, subject term and full text search for searching Electronic Information. Similarly, 90 (37.5%) out of 240 Faculty Members used Boolean logic, followed by 60 (25%), 60 (25%) and 60(25%) Faculty Members used weighted term, subject term and full text search.

Problem Faced in Searching/Accessing Online Databases

It is observed from table 8 that 30 (9.09%) out of 330 Research Scholars faced language problem in searching/accessing online databases, followed by 150 (45.45%) and 90 (27.27%) Research Scholars faced technical and Internet access problem in searching/accessing online databases respectively.

Similarly, 60 (25%) out of 240 Faculty Members faced technical problem, followed by 60 (25%) Faculty Members faced Internet access problem in searching/accessing online databases.

Retrieval Performance of OPAC

Table 9 indicate that 30 (9%) out of 330 Research Scholars indicated good about the retrieval performance of OPAC, followed by 60 (25%) and 60 (25%)

Research Scholars indicated neutral and average about the retrieval performance of OPAC. Similarly, 60 (25%) out of 240 Faculty Members indicated excellent about the retrieval performance of OPAC, followed by 90 and 30 Faculty Members indicated good and neutral about the retrieval performance of OPAC.

Type of Impact of Electronic Information Services

Table 10 reveals that 270 (81%) Research Scholars denoted the Speediness in Services, followed by 150 (50%), 120 (36%), 60 (18%) and 90 (27%) denoted fulfill the Communication Gap, Timeliness, Not much effort required and Economical respectively. Similarly, 210 (87.5%) Faculty Members denoted the Speediness in Services, followed by 60 (25%), 180(75%) 90 (37.5%) and 6(25%) denoted fulfill the Communication

Table 11. Instructions/Assistance Adequacy in Using Electronic Information Services

Sl. No.	Instructions/Assistance Adequacy	No. of Respondents	
		Research Scholars	Faculty Members
1.	Strongly Agree	30 (9.09)	90 (37.5)
2.	Agree	30 (9.09)	120 (50)
3.	Neutral	90 (27.27)	-
4.	Disagree	60 (18.18)	30 (12.5)
5.	Strongly Disagree	120 (36.36)	-

(Figures within parenthesis are %age)

Table 12. Satisfaction with Electronic Information Services

Sl. No.	Satisfaction	No. of Respondents	
		Research Scholars	Faculty Members
1.	Strongly Agree	-	30 (12.5)
2.	Agree	30 (9.09)	150 (62.5)
3.	Neutral	150 (45.45)	30 (12.5)
4.	Disagree	120 (36.36)	30 (12.5)
5.	Strongly Disagree	30 (9.09)	-

(Figures within parenthesis are %age)

Gap, Timeliness, Not much effort required and Economical respectively Instructions/Assistance Adequacy in Using Electronic Information Services Table 11 depict that 30 (9.09%) out of 330 Research Scholars rated as strongly agree, followed by 30 (9.09%), 90 (27.27%), 60 (18.18%) and 120 (36.36%) Research Scholars rated as agree, neutral, disagree and strongly disagree with the instruction/assistance provided by the library in using Electronic Information Services respectively. Similarly, 90 (37.5%) out of 240 Faculty Members rated as strongly agree, followed by 120 (50%) and 30 (12.5%) Faculty Members rated as agree and disagree with the instructions/assistance provided by the library in using Electronic Information Services. Satisfaction with Electronic Information Services Table 12 indicates satisfaction with the Electronic Information Services. It is observed that 30 (9.09%) out of 330 Research Scholars rated as agree, followed by 150 (45.45%) 120, (36.36%) and 30 (9.09%) they rated as neutral disagree and strongly disagree with Electronic Information Services provided by the library respectively. Similarly, 30 (12.5%) out of 240 Faculty Members rated as strongly agree, followed by 150 (62.5%), 30 (12.5) and 30 (12.5%) Faculty Members rated as agree, neutral and disagree with the Electronic Information Services provided by the library respectively.

RESULTS

This study sought to examine the Impact and Use of Electronic Information Services by Research Scholar and Faculty member at Dr. Zakir Hussain Library, Jamia Millia Islamia, Delhi by taking samples from Research Scholar and Faculty member to get an overview of Impact and Use of Electronic Information Services. Most of the objectives are met within the results. Impact and Use of Electronic Information Services is likely differing among Research Scholar and Faculty members. However, the library and information system has the primary responsibility to reach a minimum level of requirement so as to be capable of handling the complex information needs and demand. Over all it is strongly established fact that library and information system is the life blood of a university so it is to be strengthening for information provision and to create important avenues of information circulation within the university and to the outside world.

Based on the analysis of the survey, the following findings can be arrived at

- Majority of the Research Scholar and Faculty Members are well aware about Internet Services, CD-ROM Database Service, Online Database Service and E-Mail Service.
- Majority of the Research Scholars and faculty members make awareness approach to Electronic Information Services available in the library through their Colleagues respectively, while Faculty Members make awareness approach to Electronic Information Services of the library through Information Broacher of Library, through their Colleagues, and through Staff and Other Sources respectively.
- Majority of the Research Scholar use CD-ROM Database, Internet, E-Mail, E-Indexing & Abstracting, and E-Reference Services, while Faculty member use Internet, and E-Reference Services.
- Majority of the Research Scholars use Electronic Information Services for research work and Faculty Members use to update knowledge.
- Majority of the Research Scholar and Faculty member use library databases for locating Electronic Information.
- Majority of the Research Scholars and Faculty Members used full text search, subject term and Boolean logic respectively.
- Majority of the Research Scholars face technical problem while Faculty Members face technical and Internet access problem in searching/accessing online databases.
- Majority of research scholar and Faculty Members feel the impact of Electronic Information Services in regard speediness in services.
- Majority of the Research Scholars rate as strongly disagree, while Faculty Members rate as agree with the instructions/assistance provided by the library in using Electronic Information Services.
- Mostly the Research Scholars rate as neutral, while Faculty Members rate as agree with the Electronic Information Services provided by the library.

Conclusion

It is seen that user's awareness of electronic information services are good among scholars and faculty members and

they frequently use of them. The poor shape of library and information units, the absence of more electronic information services technological application coupled with financial and other reasons obviously are the reasons for the lack of user's awareness so it is suggested that:

- User education programme must be conducted regularly to train the users about using different types of electronic information services, so as to put the valid library resources to optimal use.
- In order to remove the ignorance, the library must come forward to understand the actual needs and exact area of interest of researchers.
- More number of core electronic journals should be subscribed in the library.
- The library should provide more CD-ROM and online data bases services.
- Before providing the electronic information services, it is essential to maintain all the library facilities. Library building also plays an important role in extending efficient services.
- The study can be extended to all the faculties and all the department of the university.

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