

# Reference librarians' use of digital resources to perform reference services: A case study of Tehran University libraries

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## ABSTRACT

*The main aim of this descriptive survey is to determine the frequency of the application of Digital Information resources by reference librarians in Tehran University's libraries. A questionnaire was used in order to gather data completed by reference librarian in every library. Findings indicated that merely 9 libraries among 17 used Digital Information resources in the years between 2006 and 2007. The most important application was for ready reference services. Likewise, of Digital Information resources in line with reference services, the main application was related to electronic journals while digital Dissertations and e-books hit the lowest application. The most important reason for not using such resources was due to the lack of adequate hardware and software equipments and also well- educated librarians. About 89 percent of reference librarians stated the necessity of more training aimed at the effective usage of Digital resources.*

**Keywords:** Digital information resources; Reference services; Reference librarians; Tehran University's libraries.

## INTRODUCTION

Libraries were always the center of storing, utilizing and disturbing human being's knowledge in the bed of history. The very increasing volume of information, internet penetration, creating the various forms of information and the great incentive of researchers to the accessibility of the information electronic forms has made a pressing need for making change in the function and role of libraries across the world (Aminpour, 2004)

Reference services are the main core of the specialized activities related to library and also information centers. In the era of information technology, providing such information in the field of library is of importance. Macler introduced reference services as a light to the darkness of the readers giving a hand to find their own futures' needs. To give more credence to the two factors, namely accessibility to the resources and also the unlimited scope of accessibility is of necessity.

In the new millennium, the role of internet as an effective tool to provide on-line information is becoming more and clear. Likewise, given the fact that the volume of information is too high, using such a tool in the libraries can pave the way for sharing information among the users.

At the present condition, libraries put an emphasis on using on-line information resources aimed at answering to the reference questions instead of using other sources and media specially the printed ones; therefore, in majority of universities, a huge budget is allocated to buying some digital information. In spite of the fact that many efforts made by developed countries in light of studying the Condition of using such digital resources in reference services, there seems to be a paucity of research in developing countries. (Abbdulaye and Majid)

## A REVIEW OF RELATED STUDIES IN IRAN

According to the studies done by the researchers and also surfing in the existing printed and electronic resources in the country, investigations depicted that there is a paucity of literatures in this regard and only two studies rather similar to the work were found to be explained below in much more details. Naghimehrabaie (2005) studied on the service given by the electronic resources in the special libraries and information centers of Tehran city aimed at facility evaluating. The population of this study included 95 centers. Data were collected using questionnaire. The findings depicted that the investigated centers use the information technology to collect, process, store and also disseminate the information on average. Likewise, this investigation depicts that 44% of the studied centers use internet in line with the reference resources in a minimum level and only 24% of them utilize such tools in the maximum level. Findings depicted the fact that 88% these centers use the mixture of two methods to give their services, namely traditional and electronic ones. The mentioned centers did not use the e-mails to distribute the information and also reference services. Such centers were not well equipped with the expertise and skillful human resources. In order to provide on-line and electronic reference resources to their users, such centers were not of any financial support of any respective organization.

Nakhoda (2004) did a research in order to determine the librarians' personal factors affecting on their implementation of Information Technology including library software, World Wide Web, local networks, Microsoft office and e-mail services. The population of the study was 153 librarians employed in Tehran university libraries at least with diploma degree without taking into accounts their field of study. The study was done based on the survey method in which questionnaires were used to collect the data. The finding of the study showed that there was a significant relationship between having different responsibility in the various libraries in Tehran University and also the frequency of application of the technology in such universities. There was no relationship between the experience years and the frequency of using technology.

This study also states that the more educated librarians were the more professional in English language. Based on the findings obtained, the librarians training regarding technology was of an efficient impact on enhancing the technology applications.

## **REVIEW OF RELATED STUDIES ELSEWHERE**

Tenopir and Neufang (1991) researched on the reference services in libraries related to American college and research libraries (ACRL) in order to be informed of the different digital resources used by librarians aimed at giving reference services in such libraries. The findings demonstrated that all the investigated libraries use the intermediary on-line searching and end-user searching and also CD-ROM sites. Majority of those libraries have OPAC. The interview done by the reference librarians illustrated that the users in such libraries were in the pressing need for being trained in order to use the electronic resources better. The librarians also stated that the presence of such services to the libraries changed the expectation and imagination among the users.

Stover (2000) also studied on the accessibility for discovering how to make priority in using the printed or electronic resources among the librarians to answer the reference questions. The findings obtained referred to the fact that majority of the librarians (about 46%) in different libraries believed that the selection of kind of printed or electronic resource was very dependent on the nature of questions posed among them. 22% of the participants made their priorities the printed resources and 32% introduced the electronic resources to find the answers. Of all librarians, 73% was able to use the digital resources to give the reference services and found it helpful. In this study, the investigated sample put much more emphasis on the use of internet to answer the reference questions.

In order to study the available facilities to use the internet in universities and also the higher education organizations, in Pakistan Saeed et al. (1999) did a research. The population in their study was all main libraries of 40 universities and also non-private educational centers focusing on the head librarian in every library to answer the questionnaire provided, about 50% of those investigated sample in 20 libraries answered them. The main findings expressed that about half of the universities in Pakistan were equipped with internet. The deterring factors identified were such issues as the lack of hardware, being disconnected and the necessary education and training for the reference librarians to use the internet.

Keeping in line with the study on the impact of internet on reference services and also librarians' attitude toward its importance on reference services Abdoulaye and Majid (2000) also did a research. The population of study was all reference librarians employed in 9 Malaysian university libraries, including 40 persons without sampling. Findings indicated that all respondent held the view that internet had a positive impact on increasing the efficiency of the users in doing reference services. Majority of them disagreed the point that all electronic resources should be replaced by the printed ones, likewise, they believed that all librarians should be as skillful as possible in internet using to provide all effective reference services for the users.

Reference team of Stetson University (Bradford, 2005) in 2002 decided to study the posed questions concerned with 2 two-month phases during an academic year and also put under scrutiny the characteristics of the resources used by the reference librarians to answer the questions made by the users. The statistics depicted that the frequency of using the on-line resources was 6 times as much as those related to the printed ones. The researchers also found that the reference librarian's training, testing proficiency level of the reference employees to determine the work hours and also providing the appropriate resource to make web pages and also developing library collection were of necessity. In such a study, there existed an over emphasizing on shifting some parts of the budget

allocated to the reference section in the libraries from the printed resources to the electronic ones (Bradford, 2005).

Darries (2004) did a research to identify the availability of conducting internet based reference services by the libraries for their users. Results showed that all investigated libraries have Internet access. the majority of libraries provided electronic reference via e-mail and the library Website. Researcher found that all the reference librarians in the investigated population used internet to answer all the reference questions. Findings indicated that Libraries lacked the sufficient computer facilities and, consequently, provided limited Internet access to students.

## **PROBLEM STATEMENT**

Information needs are always one of the main concern and essential bare- bones of human beings. Human beings use information for various reasons in different forms. University libraries are also the center of attention of different information resources. Given the fact that libraries play a significant role in this regard, they are mentioned as the core of university activities. In order to meet the information's needs of the clientele, university librarians are needed to utilize information resources with reasonable quality in the different forms whether printed or electronic ones.

Internet is one of the common tools among the librarians. Tehran University is one of the biggest university in Iran with 1421 faculty members and 7166 post graduates students in 2005-2006 responsible for doing educational and research affairs.

In 2006, a budget about \$ 900000 has been allocated by the government to the libraries affiliated to this university to provide its electronic information resources. Since the mentioned resources are available via internet and also at present all libraries in this university are equipped with internet and considered to be on-line services therefore aware-making to use on-line information resources in the respective libraries aimed at giving the much better services to the users and also finding the determining factors affecting on using such facilities provided in the associated libraries can be taken into account as a positive step aimed at enhancing the level of service given in such libraries.

## **KEY TERMS DEFINITION**

### **Digital Resources:**

In this study Digital Resources are the electronic information resources subscribed by the university including e-journals, e-books, e-dissertations and thesis, and also digital reference resources. Such resources are provided through university's web site for their respective members and librarians.

### **The users**

In this study users are those who refer to the persons in charge of the reference section of the libraries to meet their information needs.

## **RESEARCH OBJECTIVES**

The objectives of this study are following:

1. To find out the awareness and use of Digital resources by libraries for reference services.
2. To determine the type of questions are answered by using Digital resource for reference services.
3. To determine the significant reasons for the use of Digital resources by libraries for reference services.
4. To identify the mostly frequent used Digital resources by libraries for reference services.
5. To find out librarians' perception regarding their own training needs for using Digital resources.
6. To determine the obstacles to use Digital resources and to suggest ways aimed at providing the more effective use of Digital resources.

## **RESEARCH QUESTIONS**

The main questions related to this study are as follows:

1. To what extent are the libraries aware of Digital resources for reference services and use them in this regard?
2. What types of questions are answered by librarians using Digital resources?
3. What are the significant reasons of librarian's for using Digital resources?
4. What are the most frequently used Digital resources by librarians for reference services?
5. To what extent do the librarians perceive that they need to be trained for using Digital resources?
6. What are the obstacles to use Digital resources for reference services?

## **RESEARCH DESIGN**

This research benefits from survey method using questionnaire. The questionnaire was designed in the two parts: First part of questionnaire was related to non-using of the digital information resources which were answered by the libraries which did not use the above mentioned resources in 2005-2006.

The second part was related to the using of the digital information resources and was answered by the libraries used the respective resources in the same period. It should be noted that in the beginning of the questionnaire some questions were posed to be answered by both groups in a common way. In order to evaluate the reliability of questions, the ideas of some librarians were asked regarding such mentioned questions randomly. To do so ,the preliminary questionnaires were distributed among 10 of the

mentioned persons and then some suggestion posed by them were embedded in the questions .Having evaluated the draft of questionnaire, the final questionnaire was provided, then the data collected in the middle of August to the middle of September were analyzed.

**RESULTS**

The population of the study was all 17 libraries investigated whether main ones or those concerned with faculties of Tehran university in which all respondents were the librarians in charge of the reference section including (88.2% ) female and (11.8 %)male. Regarding their academic education, (88.2%) had under graduate degree, 5.9% had post -graduate degree and the rest, namely (5.9%) had diploma.

According to the results obtained from Table 1 among 17 investigated libraries, 3 libraries were not aware of availability of Digital resources to answer the reference questions and did not use ,while among those libraries which were aware 5 cases did not use them and only 9 libraries use them in this regard .

Table 1: The participants’ awareness of Digital resources (n=17)

Description	Non-Awareness of the existence of Digital resources		Awareness of the existence of Digital resources		Total	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Using Digital resources	-	-	9	100	9	100
Non-using Digital resources	3	5.37	5	5.62	8	100
Total	3	6.17	14	3.82	17	100

According to the obtained data related to Table 2 the majority of users (66.7%) used Digital resources daily to answer the reference questions

Table 2: Frequency of use of Digital resources for reference services by libraries (n=9)

Description	Frequency	Percentage
Daily	6	66.7
Randomly	3	33.3
Total	9	100

According to Table3, the maximum usage of the Digital resources on the first choice was related to answering the ready reference questions(55.6%).The other choices were related to the accessibility to the more update information and also answering to the questions for doing high impact research.

Table 3: Types of questions are answered by using Digital resources. (n=9)

Description	1 <sup>st</sup> Choice		2 <sup>nd</sup> choice		3 <sup>rd</sup> choice		4 <sup>th</sup> choice		No respond	
	Frequency	percentage	Frequency	percentage	Frequency	percentage	Frequency	percentage	Frequency	percentage
To answer to ready reference questions	5	55.6	2	22.2	1	11.1	-	-	1	11.1
To do high impact research	3	33.3	1	11.1	1	11.1	-	-	4	44.4
Access to bibliographical information	1	11.1	4	44.4	2	22.2	-	-	2	22.2

According to Table 4, respondents (33%) stated the main reason for using Digital resources in reference section was related to their accessibility to the more up-dated information.

Table 4: Significant Reasons for using the Digital resources in the reference section (n=9)

Description	1 <sup>st</sup> choice		2 <sup>nd</sup> choice		3 <sup>rd</sup> choice		4 <sup>th</sup> choice		5 <sup>th</sup> choice		No responded	
	Frequency	percentage	Frequency	percentage	Frequency	percentage	Frequency	percentage	Frequency	percentage	Frequency	percentage
To save time	2	22.2	-	-	-	-	2	22.2	-	-	5	55.6
Finding information not found easily in other place	2	22.2	1	-	1	11.1	-	-	-	-	6	66.7
As a compliment for other information resources	2	22.2	3	33.3	-	-	-	-	-	-	4	44.4
Accessibility to more update and efficient information	3	33.3	2	11.1	2	22.2	-	-	-	-	3	33.3
Easy to use	-	-	-	-	-	-	-	-	-	-	9	100

Referring to the Table 5, it is indicated that e- journals are the most frequently used resources and free on-line resources are in the second priority to use. E-dissertation and e-books are the least used resources. Table 6 indicates that the majority of Digital resource users (88.9%) stated there was a pressing need for more training to use the resources more efficiently.

Table 5: Types of Digital Resources used to answer the reference questions (n=9)

Description	Choice 1 <sup>st</sup>		Choice 2 <sup>nd</sup>		Choice 3 <sup>rd</sup>		Choice 4 <sup>th</sup>		No responded	
	Frequency	percentage	Frequency	percentage	Frequency	percentage	Frequency	percentage	Frequency	percentage
e-journal	6	66.7	1	11.1	-	-	-	-	2	22.2
e-books	-	-	-	-	-	-	3	33.3	6	66.7
e-dissertations	-	-	2	22.2	1	11.1	-	-	6	66.7
Free on-line reference resources	3	33.3	3	33.3	2	22.2	-	-	1	11.1

Table 6: Librarians self -reported training needs for using Digital Resources (n=9)

Description	Frequency	percentage
The pressing need for training	-	-
There is a pressing need for more efficient usage	8	9.88
There is no need for being trained	1	1.11
Total	9	100

Table 7 shows the most important barriers to use of Digital resources including lack of human resources, software, hardware and place to do reference services.

Table 7: The obstacles to use Digital resources in reference section (n=8)

The obstacles	Selected reason		Non-selected reasons		total	
	Frequency	percentage	Frequency	percentage	Frequency	percentage
Lack of skilful human resources	4	50	4	50	8	100
Lack of software and hardware	4	50	4	50	8	100
Lack of an appropriate place for giving services	3	5.37	5	5.62	8	100
Total	-	-	8	100	8	100

According to Tables, the maximum usage of the Digital resources on the first choice was related to answering the study reference questions (55.6%). The other choices were related to the accessibility to the more update information and also answering to the questions for doing high-impact research.



Table 8: Suggested ways to provide more effective use of Digital resources in libraries (n=8)

Description	Selected reasons		Not selected		Total	
	f	%	f	%	f	%
	Providing the skilful human resources	5	5.62	3	5.37	8
Making an appropriate place in the library for doing reference services using Digital resources	2	25	6	75	8	100
Providing enough software and hardware facilities	5	5.62	3	5.37	8	100

## CONCLUSION

According to the results obtained from table 8, the majority of the librarians (62.5%) stated providing the skillful human resources and also software and hardware were related as the main significant reason for implementing the reference services using digital resources.

Of 17 libraries affiliated to Tehran University which were investigated, it was reported that 9 ones used Digital Resources in 2005-2006 to do the reference services and the rest of them, namely 8 libraries was reported that they did not use such resources in the same period.

In spite of the fact that all the investigated libraries which could use the digital resources in the web site of such a universities in an equal way, merely, about half of them(47%) did not use such facilities. In other words ,the findings of such an investigation was in controversy with those related to Darries (2003) who did a research on the libraries of higher education institutes in sought Africa and found that all investigated libraries used the digital resources to do give the reference services to the users.

(50%) of the respondents to the questionnaire stated the main reason in lieu with the lack of interest to the use of digital resources was related to shortage of suitable facilities like hardware and software and also lack of skillful human resources to give better services. Likewise, 37.5% of the respondents mentioned that the lack of an appropriate place in the libraries to give reference services through internet or on-line resources was considered to be as the main reason for their lack of interest to use such resources. Such study also depicted that in spite of the fact that about (47%) of librarians did not use the digital resources; they all were informed of the existence of such resources.

In response to the questions posed related to the time interval of their using of digital resources to do the reference services in the libraries, the results depicted that majority of librarian i.e. 66.7% used the digital resources daily to answer the reference questions.

Regarding the type of the reference resources used to answer questions, the respondents mentioned their first priority as e- journals (66.7%). Their other priorities were on-line

reference resources (33.3%) and e- dissertations and e- books had been ranked as the last priorities selected by the librarians.

All in all, of the 9 investigated libraries using digital resources, just three libraries used e-dissertation as their substantial priority. It also should be noted that (44%) libraries in this investigation stated that their main reason was only for using the mentioned resources to meet post-graduate students' information needs. It is also needed to add the fact that such resources are viewed to be as helpful as possible in post-graduate level, the undesirable conditions of such valuable resources in the investigated libraries, is a controversial issue.

In response to the question related to self – evaluating the reference librarians of their skills to use of digital resources, the research indicated that majority of the people were needed to be trained more to make an effective use of the mentioned resources. Likewise, (11.1%) of the respondents mentioned they did not need to be trained.

The findings of such study was in the line with those obtained by Saeed et al (2000), Darries (2004), Tenopir and Neufang (1992) and Abdulaye and Majid (2000) mentioning the necessity of the training for the librarians to use the digital resources in the reference services.

### **Suggestions based on the research findings**

Based on results obtained from this research we have some suggestions as following.

1. To make the libraries equipped with adequate Hardware, software and trained human resources.
2. To allocate an appropriate place in the libraries aimed at using digital resources.
3. To hold workshops aimed at boosting knowledge and efficiency of the librarians in line with using the Digital resources.
4. To make libraries aware of availability of Digital resources for reference services via the educational departments.

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## INTRODUCTION

In principle, an eBook is quite similar to a print book, only the medium is different. An eBook is the digital representation of the printed material (print body); the medium can vary from a computer (laptop/desktop) to a digital eBook reader, PDA, mobile phone or even traditional paper. Usually the content is available in PDF or HTML format, and also plain text or XML formats. This makes the content much more versatile, and flexible than the traditional print book. An eBook is a digital object with textual and/or other contents, which arises as a result of integrating the familiar concept of a book with features that can be provided in an electronic environment, and eBooks typically have in-use features such as search and cross reference facilities, expanded links, bookmarks, annotations, highlights, multimedia objects and interactive tools.

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