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Library Philosophy and Practice (e-journal)

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2018

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salahshoori, faridokht; Ghazi Mirsaeed, seyed javad; and Ghaffari Heshajin, Somayeh, "Survey status of providing Virtual Reference Services in academic libraries of Tehran Universities of Medical Sciences" (2018). *Library Philosophy and Practice (e-journal)*. 2052.  
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## Survey status of providing Virtual Reference Services in academic libraries of Tehran Universities of Medical Sciences

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### Abstract

**Aim and background:** Advent internet and related technologies have changed the way academic libraries provide reference services. One of the new ways providing services is virtual reference services. This study is conducted with the aim of determining the current status of providing virtual references services in college libraries of five medical science universities of Tehran.

**Materials and methods:** this is an applied research, which was carried out through a survey descriptive. Data was gathered using a researcher- developed questionnaire that was answered by 31 library managers of five medical science universities of Tehran. We used SPSS software version 16 to analyze the collected data.

**Results:** the results showed that %90 of the library managers had B.sc degree or higher. 29% of the libraries use email, % 3/2 use chat and %3/2 use short message system (SMS) for providing virtual reference services. None of the libraries use video conference. %40 of ShahidBeheshti University of Medical Sciences and 35% of the Baghiyatollah University of Medical Sciences use email virtual reference services. Overall, ShahidBeheshti University of Medical Sciences has better status.

**Conclusion:** from this study, it can be concluded that a few numbers of the understudy libraries provide virtual reference services and there are not in a good status. In order to provide Modern services to users, library managers should improve virtual reference services.

**Keywords:** Virtual reference, academic library, Health Science University

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## **Introduction**

The first and the foremost objective of the library is to provide various types of services to users in order to meet their various information needs. The various types of library operations including classification, cataloging, shelving, maintenance, serial control etc. are carried out to assist the users so that they can find the pertinent information with the ease that too in the least possible time. In the same scenario, the task of providing personal assistance to users for satisfying their information needs refers to the reference service. Nowadays in modern Information and communications technology (ICT) based environment, the reference service is not confined to only providing personal assistance to users but providing information services to the users/remote users whenever & wherever they need it and that too digitally available at their fingertips (Sabah, 2018).

The terms "virtual reference," "digital reference," "e-reference," "Internet information services," "live reference" and "real-time reference" is used interchangeably to describe reference services that utilize computer technology in some way. Digital reference (or virtual reference) service is a service by which a library reference service is provided online and the reference transaction is a computer-mediated communication between the user and the librarian. (Chandwani, 2010)

In the present era, the library and information profession is facing the challenges of so-called 'electronic age' and being transformed by technology. So the advancement in information technology has brought out incredible changes in almost every aspect of information services. Thus, with the advancement of changing technology the mode of providing reference service in the academic libraries are gradually changing. It is now presented to the user in a new and more

developed form that is “virtual reference service”, which is otherwise known as “digital reference service (Maharana, Panda, 2005).

Users of the medical science universities’ libraries, including medical students, faculty members, staff, nurses and paramedical students, have an urgent need for information based on evidence-based medicine. Information needs of users of medical science universities, especially medical faculties and doctors, are of great importance. Due to their time constraints and the huge amount of information available, the search and retrieval of their related information are associated with difficulties, and librarians in the reference can help them with their active presence. The provision of virtual reference services in the medical science universities' catalogs can serve the purpose of accessing instant and up-to-date information to users of these libraries and it is possible for users to access their information without looking in person to the library reference section and through network facilities.

Considering the mentioned issues and problems such as creating and accessing instant messaging, connecting clients with the network generation, attracting new audiences and synchronizing libraries with modern technologies, the question arises as to the status of the libraries of medical universities of Tehran in terms of providing virtual reference services? So this study was conducted with the aim of determining the current status of providing virtual references services in college libraries of five medical science universities of Tehran.

## **Literature review**

Much has been written about VR transcript analysis in the past decade, but due to the fact that in Iran virtual reference service has very small usage, most studies are for the feasibility of these services.

Qobose and Mologanyi (2015) in the article of examined the Use of “ASK A LIBRARIAN”. In order to determine why this was short-lived, a questionnaire was administered to students and the subject librarians who have used the services in the past five years. The responses from students and librarians plus statistical usage were analyzed to establish its effectiveness or otherwise. The results showed that students’ usage of QP is low, and there are several reasons to explain this. This could be due to a lack of awareness as a result of inadequate training to appreciate the value of QP. Despite everything, students indicated they found it to be a useful tool to communicate with the librarians (Qobose and Mologanyi, 2015).

Chow and Croxton(2014)in their survey examined the usability of five virtual reference services—instant messenger chat, e-mail, telephone, text messaging, and Skype videoconferencing—by having 31 undergraduate and graduate students evaluate the usability of the virtual reference services of two different universities and showed that Online chat was clearly preferred by the majority of participants with the increased proliferation of wireless technologies such as smart phones and tablets, instant messaging chat may continue to grow in popularity as the younger population.( Chow and Croxton,2014).

Sandra L. De Groot (2005) in the article examined and compared the types of questions asked at the current day reference-desk versus the virtual reference desk and showed that Seventy-five percent of all questions were asked in person. Overall, 30% of all the questions asked were directional and approximately 55% were reference questions. Ready Reference questions-were the largest type of reference questions that were asked (33.5%) followed by in-depth/mediated

questions (9.7%) and instructional questions (9.7%). Technical questions also represented a large number of questions that were asked (10%). They concluded that although phone, e-mail, and chat reference services are available, the majority of questions are still asked in person (Sandra and Groote, 2005).

Khodami examined (2014) the feasibility of development of electronic reference services in public libraries and showed that usage of virtual reference tools in studied libraries were low (Khodami, 2014).

Golnaz Jafari Monfared (2012) in her thesis examined the current status of reference services, employees' attitudes towards the use of electronic reference services and the benefits and barriers of them in the libraries of Al-Zahra University. Research findings showed that although the dominant form of providing reference services in these libraries is a traditional form, efforts have been made to provide electronic reference services (Golnaz Jafari Monfared, 2012).

Khaledian (2011) in a study reviewed the status of electronic reference services and the requirements for providing them in the academic libraries. In 63% of libraries, providing reference services were traditionally and video conferencing had no application (Khaledian, 2011).

## **Methods and material**

This is an applied research, which was carried out through a survey descriptive and conducted in 2015. The research population is the faculty library of five universities of medical sciences in Tehran, including Tehran University of Medical Sciences, Iran University of Medical Sciences, ShahidBeheshti University of Medical Sciences, Baqiyatallah University of Medical Sciences, and Tehran University of Social Welfare and Rehabilitation Sciences. In total, the study population is 31 library colleges of medical universities of Tehran.

Data was gathered using a researcher – made questionnaire that was answered by 31 library managers. The validity of the questionnaire confirmed by faculty members and subject experts. The *Coronbach's* Alpha test ( $\alpha = 0/83$ ) was used to determine the reliability of the questionnaire.

In order to collect data, all of the libraries were visited and the researcher-made questionnaire was distributed among all libraries and was completed by the managers of libraries. After data collection, they were entered into SPSS software version 16 and analyzed. Data analysis was performed using descriptive statistics (frequency) and the results were presented in the form of tables and charts.

## Results

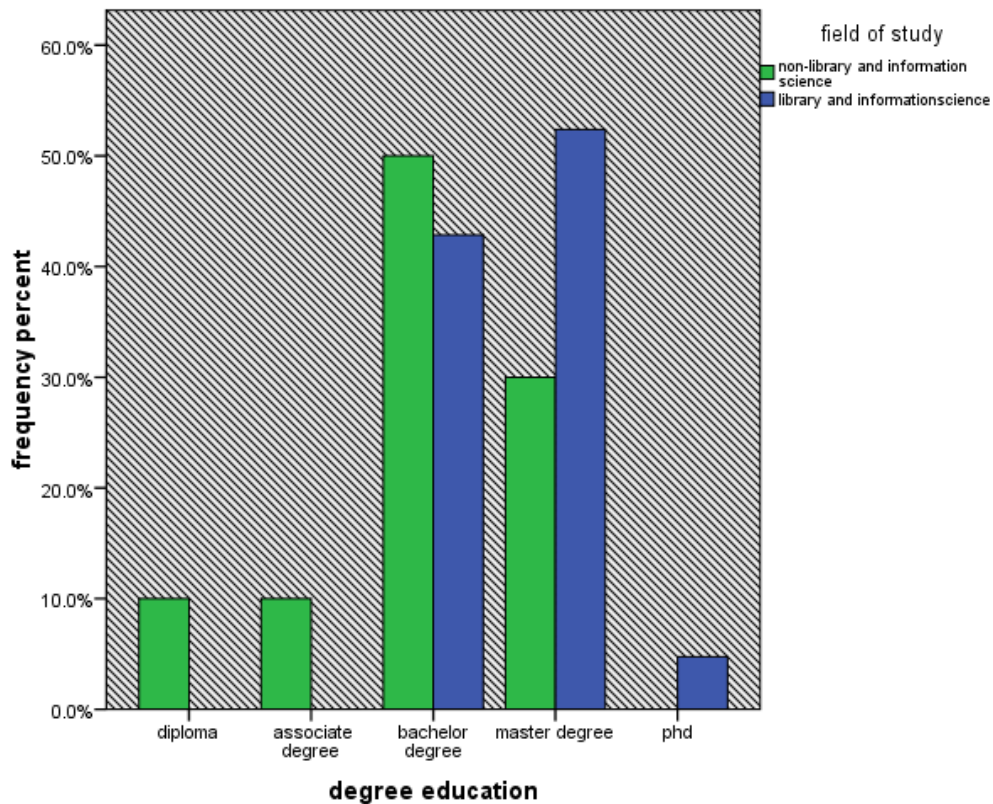
**Table1. Frequency and frequency percentage distribution of degree, the field of study and work experience of library managers**

Work experience			Field of study		degree							
23-29 years	16-22 years	9-15 years	2-8 years	Non-Library and informat	Library and informat	Diploma	Associate degree	Bachelor degree	Master degree	PhD	Frequency	Percent
											frequency	frequency
Percent frequency	Frequency	Percent frequency	Percent frequency	Frequency	Percent frequency	Frequency	Percent frequency	Frequency	Percent frequency	Frequency	Percent frequency	Percent frequency
29/00%	6	12	12/9%	4	32/3%	10	21	3/2%	1	3/2%	14	45/2%
	7/38%	19/4%			67/7%					14	45/2%	

The demographic findings of the research showed that Tehran University of Medical Sciences has 10 college libraries (32.3%), ShahidBeheshti University of Medical Sciences has 10 college libraries (32.3%), Iran University of Medical Sciences has 7 college libraries (22.7%), Baqiyatallah University of Medical

Sciences has three faculty libraries (9.7%), and And Tehran University of Medical Sciences and Rehabilitation Sciences has 1 library.

Data analysis showed that 45.2% of managers have undergraduate degrees and 45.2% have master's degrees. A total of 90.4% of library manager have undergraduate and master degrees.67.7% of managers have a degree in library and information science. Most of the work experience (38.7%) is related to the work experience of 16-22 years and the lowest work experience (12.9%) is related to the work experience of 2-8 year.



**Figure1. Frequency percentage distribution of degree and the field of study of the library managers.**



**Table 2. Frequency and frequency percentage distribution the form of providing reference services**

<b>The form of providing reference services</b>	<b>frequency</b>	<b>Percent frequency</b>
<b>Traditional</b>	<b>4</b>	<b>12/9</b>
<b>Electronic</b>	<b>0</b>	<b>0</b>
<b>Combination of them</b>	<b>27</b>	<b>87/1</b>

Table 2 presents 87.1% of the studied libraries provide their reference services in a combination of electronic and traditional. Only 12.9% of libraries traditionally offer their reference service.

**Table3. Frequency and frequency percentage distribution of the use rate of the virtual reference**

<b>variables</b>	<b>Short message system</b>		<b>Web chat</b>		<b>Video conference</b>		<b>e-mail</b>	
	<b>frequency</b>	<b>Frequency Percent</b>	<b>frequency</b>	<b>Frequency Percent</b>	<b>frequency</b>	<b>frequency Percent</b>	<b>frequency</b>	<b>Frequency Percent</b>
<b>Yes</b>	1	3/2	1	3/2	0	0	9	29
<b>No</b>	30	96/8	30	96/8	31	100	22	71/0
<b>Total</b>	31	100	31	100	31	100	31	100

Findings of the study showed that the use of the electronic library in the studied libraries is the largest with 29%. 3.2% of libraries use chat, 3.2% of libraries use short message system and none of the libraries use video conferencing services.

Among the 9 libraries that use e-mail, the use of "selective dissemination services by sending a document to e-mail" with an average of 3 is "moderate". The rate of use of the "User Requirements and User Requests", "Sending User Response (Document Delivery) Including Specialist and General Information," and "Current

Information by Submitting the Bibliographic Information of the Latest Documents to the Mail" with an average of 2, is "high".

Only one library uses chat services. The rate of use of chat for "user requirements and requests" and "answering reference questions" is "very high" with an average of "1" and Services to special groups (deaf) with an average of 5 "at all" are not used.

Only one library uses short message system. The amount of use of short message system for "ending subscription reminder, book return deadline, library hours, etc." with an average of 4 is "low", for "information services from training courses, conferences, workshops, etc." with an average of 1 is "very high", "for The services of "providing an SMS link to electronic databases, electronic books, newsletters, web content ..." and "holding polls and quizzes" with an average of 5 "at all" are not used and for "Information services on the types of printed and electronic resources of the library (books, scientific journals, etc.)" with an average of 3 is "moderate".

**Table4. Frequency and frequency percentage distribution of intend to providing types of virtual reference in the next year**

variables	Short message system		Web chat		Video conference		e-mail	
	frequency	Frequency Percent	frequency	Frequency Percent	frequency	frequency Percent	frequency	Frequency Percent
<b>Yes</b>	6	20/0	31	0/0	3	9/7	4	18/2
<b>No</b>	24	80/0	27	90/0	28	90/3	18	81/8
<b>Total</b>	30	100	30	100	31	100	22	100

Data suggest that" among 22 libraries that didn't provide " email- services",12.9% of libraries intend to provide "e-mail services in the next year, among 30 libraries that did not provide " chat services", 10% of libraries intend to provide "chat services, among 30 libraries that did not provide " SMS services ", 20% of libraries intend to provide " SMS services", among 31libraries that did not provide " video – conference services", 9/7% of libraries intend to provide " video – conference services".

**Table5. Frequency and frequency percentage distribution the priority of providing types of virtual reference services**

priority Type service		First priority	Second priority	Third priority	Forth priority	Total	Order priority
	<b>e-mail</b>	frequency	<b>18</b>	<b>8</b>	<b>3</b>	<b>2</b>	<b>31</b>
Frequency Percent		<b>58/1</b>	<b>25/8</b>	<b>9/7</b>	<b>6/5</b>	<b>100</b>	
<b>Video – conference</b>	frequency	<b>3</b>	<b>2</b>	<b>4</b>	<b>22</b>	<b>31</b>	<b>Forth</b>
	Frequency Percent	<b>9/7</b>	<b>6/5</b>	<b>12/9</b>	<b>71/0</b>	<b>100</b>	
<b>Chat</b>	frequency	<b>3</b>	<b>3</b>	<b>22</b>	<b>3</b>	<b>31</b>	<b>Third</b>
	Frequency Percent	<b>9/7</b>	<b>9/7</b>	<b>71/0</b>	<b>9/7</b>	<b>100</b>	
<b>Short message system</b>	frequency	<b>7</b>	<b>18</b>	<b>2</b>	<b>4</b>	<b>31</b>	<b>Second</b>
	Frequency Percent	<b>22/6</b>	<b>58/1</b>	<b>6/5</b>	<b>12/9</b>	<b>100</b>	

Data analysis showed that from the point of view of managers the priority of providing e-mail reference services with 58% in the first priority, the SMS system with 58.1% abundance in the second priority, chat (chat) with 71% in the third priority, and Video conferencing services are in the fourth priority with 71%

## Discussion

Results showed that the dominant form of providing reference services in the studied libraries is a combination of electronic and traditional (87%). This indicates

that the studied libraries are moving from the traditional stage to the digital and virtual stage.

Similar studies have been done in this regard. In JafariMonfared and Khaledian research the dominant form of providing reference service has been in person and traditional and was inconsistent with our findings (JafariMonfared 2011 ,Khaledian 2011) .In the study of NaghiMehrtatabahabi (2005), 88% of providing reference services were the combination of electronic and traditional and were consistent with our findings ( NaghiMehrtatabahabi ,2005).

The dominant form of providing reference service in the Chow et al (2014) research was electronic and by virtual reference services and were inconsistent with our findings.

Of the 31 libraries, nine libraries (29%) use e-mail to provide virtual reference services .Four libraries (40%) of ShahidBeheshti University of Medical Sciences use e-mail and one library of this university uses chat services (chat), which their services are better than the rest of the studied universities. None of the studied universities use videoconferencing services and one library from Tehran University of Medical Sciences uses the SMS service. In general, 30% of the studied universities use virtual reference services.

In many studies, the use of virtual reference services was very limited and low (Khodami 2014, Khaledian 2011, Davoodi 2006, Karami2008) and were inconsistent with our findings.

In the research of Dollah (2010), the use of e-mail is relatively favorable, which is consistent with our research (Dollah , 2010).

In accordance with other research, the amount of e-mail usage is more than other virtual reference services (Ilkhani 2014, Khaledian 2011, Dollah 2010, and Dee

2005. In Nicole and Crook research (2013), 61.3% of the questions were asked via chat and inconsistent with our study (Nicole and Crook, 2013).

In Barry research (2010) more than half of the studied libraries do not provide virtual reference services, but in the future, they intend to provide these services and were consistent with our findings ( Barry , 2010).

## **Conclusion**

Most managers with a master's degree have their degree in librarianship, so it can be concluded that specialization is of great importance among managers.

Currently, one-third of libraries (29%) use e-mail reference services. 18% of libraries intend to provide e-mail services and 20% of them intend to provide SMS services in the next year, so it can be concluded that the provision of these two reference services is growing and developing.

Comparing the studied universities, it was concluded that ShahidBeheshti University of Medical Sciences is in a better position than the rest of the universities studied in terms of providing virtual reference services. The final point that is essential to be considered in this study is a small number of libraries currently provide virtual reference services, and few are planning to provide these services in the future and the current status of providing a variety of virtual reference services is not in a desirable situation.

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