Perceptions of the Faculty Members of Social Science Groups about the Challenges of Using Digital Information Resources and Libraries: A Case Study of Islamic Azad University

Sedigheh Mohammadesmaeil,[1]

Assistant Professor of Department of Library and Information Sciences, Science and Research Branch, Islamic Azad University, Tehran, Iran.

Abstract: *This present article aimed to study the difficulties and obstacles for using digital information resources and libraries in the social science groups of Islamic Azad University, and to study the status of faculty members' skills at these departments. The 40 individuals working in the social science departments of Islamic Azad University in Iran were surveyed by a questionnaire consisting of 34 questions and the collected data has been analyzed using SPSS software (version 16). It was also found that the most important difficulties are the lack of suitable equipment and insufficient training programs. In other words, the multimedia nature of digital information resources requires researchers and faculty members with the ability of combining the services of both traditional and digital skills. Service integration is a required characteristic of such environments. It is expected that with improving of the skills and the solving of the problems highlighted, through suitable training programs, faculty members and researches will contribute more actively and effectively in using digital information resources in the surveyed groups.*

Keywords: *Iran, Islamic Azad University, social science groups, information technology, Internet, digital information resources, digital libraries.*

Introduction

Nowadays, via ICT-assisted dynamic environment, academic groups have very suitable facilities for playing their role. Undoubtedly, one powerful Digital Library is adequate for meeting users' needs of it in anywhere. In addition investing on designing and managing Digital Information Resources and Libraries need to make necessary investments for introducing and making accessible their contents. As Kavulya (2007) has stated, there is no doubt that the future of knowledge creation and information sharing, lies in electronic networks, which are mainly concerned with information gathering, accumulation of information, organizing knowledge and information in digital form. Digital information is efficient and cost-effective in delivering of information. The developments of information and communication technologies (ICT) at the beginning of 21st century impact on all researchers worldwide. The main object of ICT is to facilitate access to global knowledge. Modern ICT makes it possible to gain access to a wide range of classified and organizing information resources. Using of digital information resources and materials is among the methods used in the modern world for accessing to information needs. The importance of digital information is such that without them research centers, academies and their researchers cannot work and achieve satisfactory results (Fayyazi, 2005). However, Results of this research will reveal status of ICT-assisted dynamic environments and highlight their strengths and weaknesses. Obviously, the emergence of new digital information resources provides a variety of challenges and opportunities for researches. As Tammaro (2007, p. 229) says, "With the introduction of digital resources, recent years have witnessed an increasing number of positions requiring advanced skills in information technology. The multimedia nature of new digital information resources and Modern ICT requires employing digital librarians to be able to locate, store and transfer information in various formats.

Statement of the problem

According to the aforesaid brief discussion, so, in order to take a step towards the using new digital information resources in academic areas, and identification of some of the challenges ahead for faculty members and researchers, and to prepare the necessary ground, the present research aims to identify the difficulties in applying digital information resources and libraries in the social science groups of Islamic Azad University, and to study the status of faculty members' skills at these departments.

---

[1] E-mail: m.esmaeili2@gmail.com

Research objectives

This paper aims to provide knowledge about challenges of using digital information resources through a real research environment, consist of:
- Determining of the difficulties and obstacles of using digital information resources and libraries?
- Determining of the status of faculty members' skills of social science departments at Islamic Azad University of Iran?

Methodology

The main theoretical base of this article is that almost all researchers of social science groups conducted to evaluate the usability of digital information resources has used only one of three methods, namely manual, automatic and users' experiences. However, it seems that using a combination of these three methods is actually necessary. Consequently, taking a critical approach this article examines Iranian social science groups of Islamic Azad University using the digital information resources and Libraries.

To do the research, 40 faculty member individuals working in Islamic Azad university (Iran) were surveyed, In order to gather the needed data in line with the objectives and questions of the study, a researcher-made questionnaire consisting of 34 questions was prepared. Additionally, it gathers demographic data on the participants. The questionnaire was reviewed by 10 experts for its validity, as proposed by Saaty and Shih (2009, p. 872), who indicated "no matter how a structure is validated, group participation with knowledgeable people is a good way to ensure its logicality and completeness". The questionnaire was then distributed to the 40 faculty member professionals. The resulting data was analyzed using SPSS software (version 16).

Literature review

Internet, especially the worldwide web (www) is one of the most important information service providers which are vastly growing. The adventure of the worldwide web (the facilities and services offered by the internet) brought with itself a revolution in providing of information services to users across the globe such that today an enormous amount of information is available on the Net. On the other hand, its capability to present colorful graphic images, audio and video along with text and links to other contents can be thought of as the most important reason behind the ever-expanding use of the internet. In the last decade, the usability of digital information resources and libraries has turned into an essential concept, which needs to be taken into account when examining any particular group. Digital information resources usability is defined as ensuring that the information and services provided through the cyber net can easily be accessed and used by a wide variety of people groups, with the environmental factors and other facilities available to them. This would be attained only if all internet users were to have an effective interaction with the internet, web, and cyber environments; including digital information resources and libraries, understand and extract the information provided, find their way around and through the internet (web) and control all its incomes and outcomes. The most fundamental and comprehensive definition given for web accessibility is the ability to access the contents of a web by all visitors (Howell, 2007). Therefore, making the digital information resources and libraries of, say, academic organizations and universities, usable in accordance with global standards is a social duty, which consequently benefits the entire society. It must be set high in the priority of academic institutes to make their web sites accessible for all people in a society (Morse, 2007).

Reviewing the literature, such as the works of Marion (2001), Deegan and Tanner (2002), Bawden *et al.* (2005), and Zhou (2005), concluded that to play an effective and better role in managing and using of digital information resources, individuals should achieve a variety of skills such as:
- search strategy formulation awareness of website links and portals accessibility issues
- understand the integrity of network sources
- ability to categorize digital information
- discussing and interpreting information
- project management
- be familiar with markup languages such as HTML, SGML and XML, the technologies of databases, programming, web technologies, information architecture and web search tools
- understand electronic publication management
- be information literate.

In their studies, Doubleday (1997) and Lindgaard (1994) have gone over some of the obstacles and problems arising when accessibility evaluation method (AEM) is the method used, especially as regards its time consuming consequences. In another article written by Watson (2006), the necessity to make web sites accessible and the advantages of doing so have been reviewed. In this study, automatic and manual evaluations of web site accessibility have been compared while the strengths and weaknesses of each method as well as some common

errors in the web sites have been examined. According to this researcher, some of the major shortcomings in most web sites include broken links, errors in headers, image descriptions, path finding and automatic downloading of the pages

Bawden and his colleagues (2005, p. 96) also compared education and training programs in two countries, UK and Slovenia. They concluded as follows:

   "We have seen that both formal education and continuing development training is adapting to cover aspects of the digital environment, both in the UK and in Slovenia. This is happening as part of the normal process of the redesign of degree programs and of training courses. Digital skills and knowledge are being "embedded" in existing courses, for the most part, rather than in entities labeled digital library. It seems clear that there is general agreement that certain general topics are of importance: typology of resources and domain analysis; computer/network literacy/ information literacy and retrieval skills; analysis of information; etc. But there is considerable scope for choosing which of these to focus on, and how to present them. While it is not desirable to recommend, still less impose, a closely-defined education program and curriculum, some guidance might be helpful".

Research questions

The key research questions were:

- What are the difficulties and obstacles of using digital information resources and libraries?
- How is the status of faculty members' skills of social science departments at Islamic Azad University of Iran?

Findings

- Table 1 shows the response to the question "What are the difficulties and obstacles of using digital information resources and libraries?"

Table (1): The distribution of the main difficulties

| Difficulties and obstacles	Number	Percent (n=40)
Inefficient in English	1	2.5
Lack of enough familiarity with computer science, search strategies, web, data bases technologies …	5	12.5
Lack of digital information specialist for helping them	14	35
Lack of useful training and skill in managing digital environments	20	50
Total	40	100

 In relation to this question, table 1 shows the means of the responses posed by 40 respondents. To determine the rate of each difficulty, according to Five-point Likert scale, an intensity-scaled choice of 1 (very low), 2 (low), 3 (moderate), 4 (high), to 5 (very high) rating items, was employed. It can be seen that the mean of each obstacle is bigger than 3 (moderate), indicating that such difficulties or obstacles hindering the acceptable using of digital information resources and libraries should be considered as well as alleviated radically. According to the data shown in Table I, 50% of the faculty members of social science groups have not provided enough useful training and skill in managing digital environments, and 35% of them have told Lack of digital information specialist for helping them. 12.5% of them are not proficient in computer science, web, portal and data bases technologies, and only 2.5% of them pointed to unfamiliarity with English language as their main problem. Generally, as Cleveland (1998) indicated that the first difficulty in creating effective using is the technical architecture, the most important difficulty from the librarian faculty members of social science groups' perspective is lack of enough technical knowledge in managing digital environments. In response to the question "How is the status of faculty members' skills of social science departments at Islamic Azad University?" the extracted data from the responses is shown in Figure 1.

**Fig. (1): Participation of faculty members in different training courses**
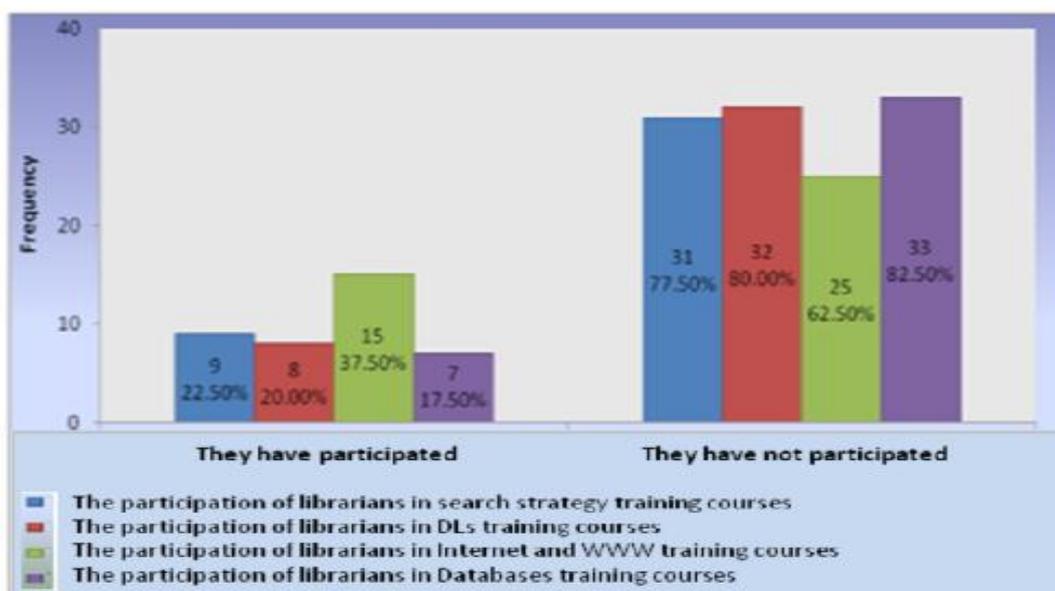
As can be seen in Figure 1, among the 40 questioned faculty members, only 22.5% of them have participated in search strategy training courses. Therefore, the majority of them are not familiar enough with this subject. It is also illustrated that only 20% of the librarians have participated in DL courses and 80% of them have not yet attended these courses. In relation to training courses for the Internet and web search, 37.5% of faculty members have participated, and the majority of them (62.5%) have not participated, yet. Among them, 17.5% have been trained for databases. Therefore, the rest are not familiar with the matters. The importance of the web as a medium for different activities has resulted in the precipitated growth of digital data bases, many of which are used by unprofessional individuals who are not familiar with the basics of usability, which has consequently turned usability of the data bases content in to a difficult task. The means of all variables of familiarity with databases, as shown in Figure 2, are less than 2. It means that the familiarity levels with databases are not enough on the whole.

Figure (2): faculty members' familiarity with databases
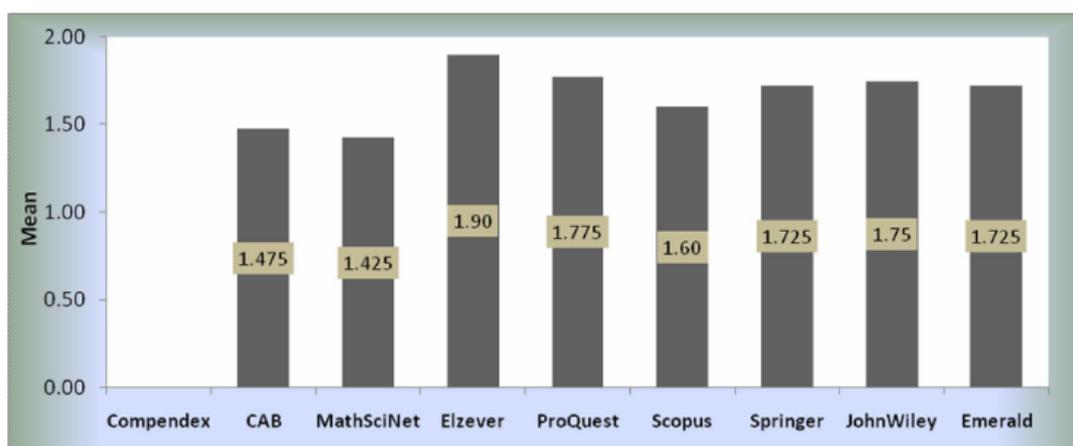
As seen in Figure 3, the average of eight variables of familiarity levels with search engines is less than 2 and the majority of faculty members have a medium level familiarity with the Google search engine.

Figure (3): Faculty members' familiarity with search engines
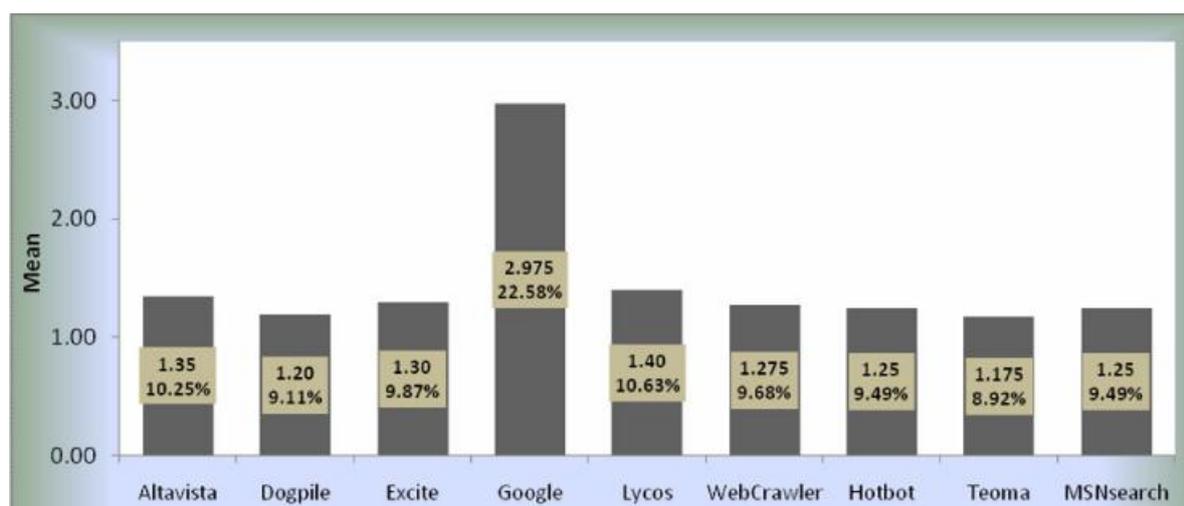
Of course, there are several studies which demonstrate limitations of search engines, but, the importance of search engines is completely obvious for the public views. While in scientific journals, citation indexes are the most important tools for citation studies, in the web environment search engines play partly this role [15]. Moreover, they are important tools for data gathering.

Result

In a word, this research can contribute to existing knowledge in the areas "information technology" and "digital information resources usability" especially in academic arenas, such as their library and information centers helps faculty members do their best in the new environments.

Nowadays and with the increasing role of the worldwide web as one of the most important sources of information on the one hand, and the enhancement of its applicability on the other, it is necessary for the digital information designers and developers to be familiar with the criteria s that make a digital resource, specifically, and a digital library, generally, useable. So, since there is an ever-increasing need in the knowledge, existence of a librarian who is efficient, especially, is necessary.

Discussion

This research finding provides a picture of various faculty members of social science groups' status of Islamic Azad University in terms of their perceptions about Challenges of Using Digital Information Resources and Libraries quality and performance. Results based on this research criteria show that in academic institutions involved in research and knowledge generation, faculty members especially digital ones can have a profound effect and contribution. They, by providing and delivering up-to-date information, have an important role to play in academic institutions. Fully skilled faculty members apply search strategies which may help them to achieve their desired information much sooner and more effectively (Marcum, 2003), and be able to keep their positions in an academic system. The research also reveals that the problem has mainly arisen from who have not paid enough attention to improve the required skills. Obviously, creating effective using of digital information poses serious challenges. The integration of digital media into traditional collections will not be straightforward. New media are less fixed, easily copied, and remotely accessible by multiple users simultaneously.

Moreover, faculty members of Iran universities' social science groups should be proficient and competent in several fields, such as ability to formulate search strategies, familiarity with web search tools and Web technology, Knowing how to evaluate websites and portals, understanding how to integrate network resources and metadata, ability to categorize digital information, Knowledge of the analysis and interpretation of information, familiarity with databases' technology. Project management, awareness of mark-up languages such as SGML, HTML and specially XML (in some how), be information literacy (plus literacy of computer and network) and be aware of management of e-publications, so that they can play an influential role in using new digital information resources in academic areas. It is also hoped that the present study has contributed the field of DL management especially in developing countries like Iran.

According to Igwe (1986) and Abifarin (1995), in Nigeria, the major limitation for establishing DLs are financial sources and lack of required equipment, while the most important difficulties from the faculty members' perspective in the present study are lack of enough sufficient training programs. The skills identified in the literature review should be acquired by all faculty members and social sciences professionals, as this is the most effective way to solve the above problem by educated and expert staff, are essential and absolutely crucial

for doing their best roles. In fact, in competitive and active digital environments, human resources are the most important factors which require to be managed properly and efficiently.

Other studies, such as those by Travica (1999), Chowdhury and Chowdhury (2003), Mohsenzadeh and Isfandyari-Moghaddam (2009), report that the emergence of the digital environment has led to changing individual's traditional skills as well as functions. It is important for academic members to learn new technologies including DLs to continue their activities as real social science researchers and professionals in 21st century

Acknowledgements

References

1. (URLs were checked 3rd April 2011)
2. Abifarin, F.D (1998), "Availability and use of information technologies in Nigerian university libraries", *Library Review*, Vol. 42 No.5, pp. 4-14.
3. Bawden, D., Vilar, P. and Zabukovec, V. (2005), "Education and training for digital librarians: a Slovenia/UK comparison", *Aslib Proceedings: New Information Perspectives*, Vol. 57 No. 1, pp. 85-98.
4. Chowdhury, G., Chowdhury, S. (2003), Introduction to Digital Libraries, Facet, London.
5. Cleveland, G. (1998), "Digital libraries: Definitions, issues and challenges", *IFLA Universal Dataflow and Telecommunications Core Programme*, Occasional Paper No.8, IFLA, Ottawa. Available at: http://ifla.queenslibrary.org/VI/5/op/udtop8/udt-op8.pdf
6. Deegan, M and Tanner, S. (2002), *Digital Futures: Strategies for the Information Age*. London: Library Association Publishing.
7. Doubleday, A., Ryan, M., Springett, M. and Sutcliffe, A. (1997), "A comparison of usability
8. techniques for evaluating design", Proceedings of the Conference on Designing Interactive
9. Systems: Processes, Practices, Methods and Techniques, Amsterdam.
10. Fayyazi, E. (2005), " Digital libraries and evolution in researches", Journal of Abrar, Vol. 23 No.4, pp. 42-51.
11. Howell, J. (2007), Accessibility, available at: www.fortunecookie.co.uk/who-we-are/managementteam/ julie-howell.asp (accessed 3 January 2007). julie-howell.asp (accessed 3 January 2007).
12. Igwe, P.O. (1986), "The electronic age libraries: present and future prospects", *International Library Review*, Vol. 18 No.1, pp.75-84.
13. Kavulya, J.K. (2007), "Digital libraries and development in Sub-Saharan Africa: a review of challenges and strategies", *The Electronic Library*, Vol. 25 No. 3, pp. 299-315.
14. Lindgaard, G. (1999), "Of babies, bath water and usability techniques in web evaluations",
15. OZCHI '99 Interfaces for the Global Community, Wagga Wagga.
16. Marcum, D.B. (2003), "Research questions for the digital era library", *Library Trends*, Vol. 51 No.4, pp. 636-651.
17. Marion, L. (2001), " *Digital Librarian, Cybrarian, or Librarian with Specialized Skills? Who will Staff Digital Libraries*?", Paper presented at the Association of College and Research Libraries, 10th conference, Denver. Available at: http://0-www.ala.org.sapl.sat.lib.tx.us/ala/mgrps/divs/acrl/events/pdf/marion.pdf
18. Mohsenzadeh, F. and Isfandyari-Moghaddam, A. (2009), "Application of information technologies in academic libraries", *The Electronic Library*, Vol. 27, No. 6, pp. 986-998.
19. Morse, J. (2007), "Web accessibility and environment targets", IT Architect..
20. Saaty, T. L., and Shih, H. S. (2009), "Structures in decision making: On the subjective geometry of hierarchies and networks", *European Journal of Operational Research*, Vol. 199 No. 3, pp. 867–872.
21. Sreenivasulu, V. (2000), " The role of a digital librarian in the management of digital information systems (DIS)", *The Electronic Library*, Vol. 18, No.1, pp.12-20.
22. Tammaro, A. M (2007), "A curriculum for digital librarians: A reflection on the European debate", *New Library World*, Vol. 108 No. 5/6, pp. 229-246.
23. Travica, B. (1999), " Organizational aspects of the virtual library: a survey of academic libraries", *Library and Information Science Research*, Vol. 21 No.2, pp.173-203.
24. Yamazaki, H. (2007), " Changing society, role of information professional and strategy for libraries", *IFLA Journal*, Vol. 33 No. 1, pp. 50-8.
25. Zhou, Q. (2005), " The development of digital libraries in China and the shaping of digital librarians", *The Electronic Library*, Vol. 23 No. 4, pp. 433-41.