

Evaluating the Challenges of Materials and Digital Resources at University Libraries in Kerman

Mozhdeh Salaghegheh

Ph.D. in library and information science,
assistant of Kerman Bahonar University,
Kerman, Iran

Corresponding author: msalajgh@gmail.com

Adel Soleimaninezhad

Ph.D. in library and information science,
assistant of Kerman Bahonar University,
Kerman, Iran

adels2004@yahoo.com

Mahbobeh Ghaemaghani

Master of library and information science
ghaemmaghani_ke@yahoo.com

Abstract

The purpose of this study is to identify challenges of digital resources in academic libraries of Kerman province. Research methodology is descriptive- survey, a questionnaire is used for gathering data. Research sample includes 41 librarians of Kerman libraries and their managers. Results show that economic challenges, in order, are: infrastructures and equipment purchasing, printed and digital resources providing, and using license. Libraries technological challenges respectively, are: their inability to compete with printed materials in features like user friendliness and energy consumption. Information services challenges are as follow: information preservation, identification and acquisition of suitable materials and linking electronic resources to printed information resources. It seemed that Kerman libraries are faced with problems more than these, and they were not able to provide their necessary technological infrastructure for keeping and providing access to library resources yet. In addition, financial constraints of resources, and especially, digitization of printed resources made the situation very chaotic for the academic libraries.

Keywords: Digital Resources, Academic Libraries, Information Technology, Kerman Universities

Introduction

The fast growth of different types of information resources and information technologies innovations have faced the world with a phenomenon known as information explosion. Fast development in information processing and information and communication technologies, has changed the role of libraries in proliferation of information to users. Researchers cannot fulfill their studies without using new information and communication technologies which in fact formed the new ways of knowledge transfer. Advanced information and communication technologies have made it possible to access extensive sources of information and provide the possibility of control, and organization of information. The information transfer is become possible by new, fast and blitz communication technology.

People forced to have or obtain information according to changes which occurred in the

new environment and Technological advancement, so it is necessary to find various and better ways for distribution of required information. Researchers should have access to traditional resources in libraries, which no longer can satisfy their information needs. Now, they have access to variety of information resources, such as electronic journals, electronic documents and electronic papers, through digital libraries, Interanet and on a larger scale on the Internet. Moreover, information suppliers found the Internet as a convenient way to disseminate information in its many forms.

There are some challenges in way of using these resources in libraries, which overshadowed their availability and accessibility. Some of Researchers are categorized digital resources challenges as: information challenges, technological challenges and economic challenges and Information challenges as: data protection (Deegan and Tanner, 2002; Guy, 2000; Harvey, 2005; Marcum, 2003; Schwartz, 2000), identifying and providing proper resources (Akeroyd, 2001; Guy, 2000; Marcum, 1997), Supplying and sustaining access to network resources (Guy, 2000; Marcum, 1997), connecting electronic resources to their traditional counterparts. Technology challenges (Guy, 2000; Wilson, 1997) include: inability to compete with printed materials, user- friendliness, and energy consumption. Economic challenges include: purchase of equipments (Wilson, 1997), simultaneous preparation of digital and printed resources (Oppenheim, and Smithson, 1997), providing materials and resources (Schwartz, 2000), getting license to use digital resources (Boyd, 2000), (Alidousti and Sheekhshoae, 2007, 123)

In addition to these three categories of challenges, some authors posed legal challenges which are assumed as a sub-category of information challenges. Since a limited number of studies have been carried out in this area, especially for Iranian academic libraries, and due to the importance of digital resources, researchers decided to identify and evaluate these challenges. The results of this study are very useful and valuable for library managers to improve collection development, investment on library resources, access to library resources, and user satisfaction. The main goal of this research is to answer the following questions:

1. What are the information challenges of digital resources in Kerman academic libraries?
2. What are the technological challenges of digital resources in Kerman academic libraries?
3. What are the economic challenges of digital resources in Kerman academic libraries?

Literature review

Digital age started with the advent of computers and information networks. The increased use of the web and rapid developments in the Internet technology enabled libraries to offer types of services by using digitized materials. Information technology and globalization are the two most influential forces of the modern times. IT has given new meanings to the transmission, dissemination and storage of information; whereas globalization is reducing the importance of geographical boundaries. Libraries as an important social institution have been affected by these changes. Information storage and retrieval, and information transmission are the core competencies of libraries. Though web and ICT are providing new opportunities for libraries, but on the other hand there are some emerging challenges too such as: information, technological and economic challenges. It is important to consider these challenges while

various researchers have examined them.

Oehlerts and Shu (2013) stated that digital protection is as an important part of digital asset management. Hielmcrone (2012) who expressed one of the main problems of electronic resources, is gathering and copyright. Kalusopa and Zulu (2009) maintained that digital protection issues are: shortage of personnel and the lack of standards. While, Anbu and Chibambo (2009) expressed that, challenges of preserving digital material are: the nature of digital materials, obsolescence of used technology in providing, saving and accessing to digital resources, fast development of information and communication technology and having cost for long protection of digital materials. Al-suqri and Afzal(2007) stated that, challenges for libraries in digital age are: information protection, copyright, information safety, and moral challenges. Galyani Moghaddam (2010) mentioned the Challenges of preserving digital resources divided into three areas including: technical, organizing and legal issues. Darini (2005) stated that, some challenges that digital libraries are faced to include: integration and updates, issues related to copyright, safety of personal privacy, and the Internet connection. Linden (2011) said that challenges for electronic materials were: negotiations with vendors, access and management. Salari (2010) expressed that from the managerial point of views there are some challenges regarding building an electronic collection which are: attitudes, personnel, protection and maintenance. Balaji Babu and Krishnamurthy (2013) who studied automation in Indian libraries found that despite the fact that library automation is a prosperous industry in these libraries their software is not satisfactory. Haji Harun (2010) studied the requirements for adoption of digital libraries in Malaysia and stated that libraries faced with some problems to change the situation which were: the lack of budget and trained personnel. According to Mehrtabae (2003) challenges for changing a traditional library to a digital one are: economic, copyright, digital preservation and privacy in the network environment. Fabunmi (2009) studied the landscape of virtual libraries and stated that the main challenges for development of this type of libraries were: cost of computing and weak infrastructures of information and communication technology. Ghafghazeasl (2010) enumerated challenges for digital libraries as: instability of new technologies, digital protection, standardization and nature of electronic data. Finally, Mohsenzadeh and Isfandiari Moghadam (2011) mentioned that one of the challenges in developing digital libraries was the lack of proper equipment.

According to recent works, we see that the greatest challenge is in the area of information itself, including: information protection, security, and legal issues.

Methodology

Research method is descriptive study. Participated people in this research are all 41 librarians and managers of central libraries of Shahid Bahonar University of Kerman, Kerman Medical Science University, Kerman Islamic Azad University and Kerman Payam Noor University. To carry out this study Alidousti and Sheekhshoae's (2007) questionnaire was adopted, and its reliability was measured by carrying out a test and retest. Test result was 0.88 which is very high. The questionnaire had 42 questions in three sections. Data analysis was carried out by using SPSS software and descriptive statistics such as percentage, frequency, and etc.

Findings

According to research findings regarding the first research question, information challenges include: data protection, identifying and providing proper resources, supplying and access, protection, and connecting electronic resources to traditional counterparts. It is observed that data protection with average 3.5 is the most significant challenge. Findings show that technology challenges in Kerman libraries include: inability to compete with printed materials, user- friendliness, and energy consumption. It is observed that the challenge of disability to compete with printed materials with average point 4 is the major challenge in this dimension. Research results in the dimension of economic challenges show that, Kerman libraries economic challenges are : infrastructures and equipment providing, simultaneous preparation of digital and printed resources, providing materials and resources and using license, it is observed that infrastructures equipment purchasing challenge average point is 4.1 which is the major one (see Table 1).

Table 1

Distribution of frequency of challenges for digital resources

		Strongly agree	Agree	Relatively agree	disagree	Strongly disagree	Average
		Frequency	frequency	frequency	frequency	frequency	
Information challenges	Information protection	4.94 (12.06)	14.05 (34.7)	14.68 (35.81)	6.05 (14.76)	1.26 (3.07)	3.5
	Connecting traditional electronic resources	0 (0)	6 (14.6)	21 (51.2)	13 (31.7)	1 (2.4)	3.2
	Identifying and providing proper materials and resources	1.5 (3.65)	10.5 (25.6)	16.5 (40.3)	12 (29.25)	0.5 (2.4)	3
	Supplying and access protection	1 (2.4)	14 (34.15)	18.5 (45.15)	7 (17.05)	0.5 (2.4)	2.8
	Total average						3.17
Technological challenges	Disability in compete with printed hits	3.16 (7.73)	8.83 (21.55)	13.5 (34.15)	11.16 (27.25)	3.83 (9.33)	4
	User- friendliness	5 (12.2)	15 (36.6)	20 (48.8)	0 (0)	1 (2.4)	3.6
	Energy consumption	2	19	10	10	0	3.3
	Total average						3.64
Economic challenges	Purchase of equipments	11.66 (28.05)	22.66 (54.66)	7.66 (15.43)	0.84 (2.84)	0 (0)	4.1
	Simultaneous providing of traditional and digital resources	4 (9.8)	28 (68.4)	9 (22)	0 (0)	0 (0)	4
	Providing materials and resources	8 (19.5)	24.5 (59.75)	7.5 (18.4)	0.5 (2.4)	0.5 (2.4)	4
	Getting license to use	13 (31.7)	19 (46.3)	5 (12.2)	4 (9.8)	0 (0)	4
	Total average						4

Discussion

On the first research question, findings in table 1 show that for the case of information challenges, information protection is the major challenge (average point 3.5). This result is supported by other researchers such as, (Salari, 2010; Ghafghazialasl, 2010; MehrTabaee, 2003; Dareni, 2005; Oehlerts, and Shu 2013; Hielmcrone, 2012; Galyani Moghaddam, 2010; Fabunmi, 2009; Kalusopa and Zulu, 2009; Anbu and Chibambo, 2009; Al-suqri and Afzal, 2007; Fabunmi; Paris and Fabunmi, 2006).

The probable reasons for raising digital protection as a major challenge can be as follows: lack of necessary standards in the departments of management of digital conservation, lack of necessary technologies (software and hardware) for digital protection, lack of standards for digital storage and sharing, not updating standards and medium of this area and etc.

Linking electronic resources to counterparts is the second major factor in the area of information challenge with average point 3.2. Darini (2005) confirms this result. The reasons for these challenges are: lack of a suitable pattern for management of these resources, and lack of infrastructures for storage and conservation.

Regarding the second research question -technology challenges- the main factors are inability to compete with printed material (average point 4), User-friendliness (average point 3.6), and Energy consumption (average point 4.1) respectively (see table 1). Other researchers such as (Ghafghazialasl, 2010, Mohsenzadeh and Isfandiari Moghadam, 2011) confirm the research results. The reasons which can confirm research findings are factors such as: rapid technological change, lack of high quality equipment, low network bandwidth.

In the case of third question of research -economic challenges- findings in table 1 showed that the main challenges are equipment purchase (average point 4.1), simultaneous provision of traditional and digital resources (average point 4), provision of resources and services (average point 4), and getting license (average point 4), respectively (see table 1). Other researchers such as, (Salari, 2010; Naghi Mehrtabaei, 2003; Harun, 2010; Fabunmi, 2009) confirm our findings. Participants' responses show that the main reasons for existing of these challenges are: high cost of buying information technologies, high cost of updating information technologies, costs of maintaining hardware, and high cost of increasing bandwidth.

Conclusion

The results showed that the main challenges of academic libraries in Kerman province regarding digital resources were: economic challenges, technology challenges and information challenges, respectively. It seems that these libraries haven't yet provided a suitable environment for the existence and use of electronic resources, and as a result made difficult access to them. Despite all efforts, users' satisfaction is not high as expected.

Finally, to overcome these challenges academic libraries need to have independent financial resources to buy electronic resources, providing technical infrastructure, and more important than all, a body of high qualified personnel to manage them.

References

Akeroyd, J. (2001). Future of academic libraries. *Aslib Proceedings*, 53(3), 79-84.

- Alidosti, S. and Shekhshoae, F. (2007). *IT and libraries*. Tehran: institute for scientific information and documentation in Iran.
- Al-Suqri, M., and Afzal N. W. (2007). Digital Age :Challenges for Libraries. *Information, Society and Justice* 1(1), pp 43-48.
- Anbu, K. p., and Chibambo, M. L.N. (2009).Digital preservation: issues and challenges. *TRIM* 5(1).
- Balaji Babu, P. and Krishnamurthy M. (2013). Library Automation to Resource Discovery: A Review of Emerging Challenges. *Electronic Library* 31(4), 433 – 451.
- Boyd, J. (2002). A traditional library goes virtual. *Online* 26(3), 41-45.
- Darini, Z. (2005). *Digital libraries: development and challenges*. Newsletter of library association and informing, Khorasan (9).
- Deegan, M., and Tanner S. (2002). *Digital future: strategies for the Informationage*. Library Association Publishing.
- Fabunmi, B.A (2009).Challenges and Prospects of Virtual Libraries in Universities in Nigeria Kenneth Dike Library. *European Journal of Scientific Research*, pp.202-208. Available at: <http://www.eurojournals.com/ejsr.htm>
- Fabunmi, B.A., Paris, M., & Fabunmi, M. (2006). Digitization of library resources: Challenges and implications for policy and planning. *International Journal of African & African American Studies*, 5(2), 23-36.
- Galyani Moghaddam, G. (2010). Preserving digital resources: issues and concerns from a view of librarians. *Collection Building* 29(2),65– 69 .
- Ghafghazialasl, Sh. (2010). *Future of technology in libraries: opportunities and challenges*. Available at: <http://www2.atfmag.info/?p=676>([access in 15/01/1392](http://www2.atfmag.info/?p=676)). {In persian}
- Guy, R. F. (2000). Developing the hybrid library: progress to date in the national library of Scotland. *The electronic library* 18(1), 40-50.
- Harun, Norasiah Haji (2010).Digital Library Initiatives in Malaysia: readiness and perceived conditions for future growth. Doctoral Dissertation. Accessed from: <http://www.dspace.fsktm.um.edu.my/handle/1812/1054.html>.
- Harvey, R. (2005). *Preserving digital materials*. Munchen: K. G. Saure.
- Hielmcrone, H. V. (2012). *E-publishing and the challenges for libraries*. www.eblida.org. (Retrieved 4 Apr 2013)
- Kalusopa, Trywell & Zulu, Saul (2009). "Digital heritage material preservation in Botswana: problems and prospects",*Collection Building*, 28 (3), 98-107
- Linden, S. (2011). *Electronic resources: changes and challenges to collection management and access*. Emporia State University.
- Marcum, D. B. (1997). Digital libraries: For Whom? For What? *Journal of academic librarianship*, 4-81.
- Marcum, D. B. (2003). Research questions for the digital era library. *Library trends* 51(4), 636-651.
- Mohsenzadeh, F. and Isfandyari-Moghaddam, A. (2011).Perceptions of library staff regarding challenges of developing digital libraries:The case of an Iranian university. *Program: electronic library and information systems* 45(3), 346–355.
- Naghi Mehrtabaei, Ashraf(2003). Challenges of transformation the traditional libraries to

- digital. *Faslnameh Ketab Journal*, 14(4), 50-64. {In pesian}
- Oehlerts, B., and Shu, L. (2013). Digital preservation strategies at Colorado State University Libraries. *Library Management* 34(1), 83–95.
- Oppenheim, C. and, Smithson, D. (1999). What is the hybrid library? *Journal of information science* 25(2), 97-112.
- Salari, M. (2010). Challenges and management problems of libraries from traditional libraries to digital libraries with a look at Iran. *Library and informing*, (2), 13.
- Schwartz, C. (2000). Digital libraries: An overview. *The journal of academic librarianship* 26(6), 385-393.
- Wilson, T. (1997). Electronic publishing and the future of the book. *Information research*, 3(2).