

COMPUTER LITERACY SKILLS OF LIBRARIANS: A CASE STUDY OF ISFAHAN UNIVERSITY LIBRARIES, IRAN

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Abstract

We live in a computer-centric information age. The number of computers in-use including in libraries is growing rapidly. Computer literacy, which is the ability to operate a computer system for performing personal and job-related tasks like using web browsers and search engines on the Internet to retrieve needed information and communicate with the others, is considered as a fundamental part of today's librarians skills. Library managers prefer professionals and librarians who are computer literate because they are more productive and efficient at work than those who are not computer literate. This study assesses the levels of computer skills and computer use experience of librarians in one of Iranian university. Furthermore, it will examine their avenue of computer literacy, software use and benefits derived from computer and the problems associated with computer. The findings showed that majority of the respondents don't have yet possess a good level of computer skills and even their long duration experience of computer use has not necessarily improved their level of computer literacy skills. It was suggested that in-house and continuous training programs is needed for librarians to be adequately equipped with the computer literacy skills to take advantage of all computerized library facilities and enhance their work productivity.

Keywords: Computer Literacy; Computer skills; Academic librarians; University library; Iran.

INTRODUCTION

We live in a computer-centric information age. For many centuries pen, pencil, paper and printed books have been the primary mode of writing, reading, recording and transforming the information. But that mode is changing in today's computer –centric society. Now, since every facet of our lives is affected by computers and worldwide number of computers in-use for learning, working and doing the job-related tasks is increasing rapidly. According to Gupta, (2006) this number rose from 820 million PCs in 2004 and is expected to top 1 billion in 2007. The use of computers and communication technologies has arisen as a result of the increased work load involved in coping with information explosion. Computer technologies have enabled individuals to handle information possessing effective with greater speed and accuracy regardless of the time and distance (Aina 2004).

Nowhere the impact of the computer has been felt greater than in the field of library and information services. Before this, libraries were book focused institutions. There were just print card catalogs and library routines such as acquisitions, cataloging and circulation were done via paper or managed by using print ledgers, pens and card pockets. Spreadsheets, internal databases or other productivity software was never used to manage library data. But the advent of new technology has brought many changes to the way libraries collect, store, retrieve, disseminate information and serve their users. Therefore libraries are moving further and faster towards total automation and those libraries that can not adjust to these trends will not survive (Choukhande 2003).

The computer technology holds the promise of increased productivity; however this

promise is not realized due to the limited abilities of those who make use of computers. In fact effective use of computers depends on individual's computer literacy and it has been widely recognized as a vital skill (Liao & Pope 2008). Computer literacy is the knowledge and ability a person has to use computers and technology efficiently. Computer literacy can also refer to the comfort level someone has with using computer programs and other applications that are associated with computers. Another valuable component of computer literacy involves the knowledge of how computers work and operate (Wikipedia 2008).

The ability of operating computer systems to perform personal, job-related tasks, use web browsers and searching on the Internet to retrieve information needs and communicating with others by sending and receiving email is essential part of every one's skill especially librarians. Librarians with the computer literacy are able to communicate information more effectively when they know how to create and use an Excel spreadsheet or a Power Point presentation. Librarians can also reach easily beyond boundaries of their communities when they are able to use HTML to create Web pages so that they can publish their resources, articles, their opinion and documents to the world. Allison (2005) pointed that those without basic computer skill have difficult time finding job and stay connected with the local and global society. Since employees, including librarians, with computer literacy are more efficient and productive and therefore more valuable to their organization. Employers prefer workers who are computer literate to those who are not (Gupta 2006). It has already been demonstrated that the demand for computer-related skills has moved from insignificant to critical for most academic library positions (Zhou 1996).

Many Iranian university libraries have recently installed computerized systems. There are more reasons today than ever before which have necessitated the automation of the Iranian university libraries. These reasons include increased number of users, greater demand for the use of the library materials within and outside the libraries, increase in the amount of materials being published, changes in the nature of reading materials (i.e. more use of CD-ROMs, electronic journals, on-line sources of materials, etc.), development of new and cheaper computers. In order to exploit the current information explosion, which is important for improved library services, utilization of information technology (IT) is necessary. These important facts are convincing many university libraries in the country that computerization is no longer a thing of the past (Davaranah 2001).

Automation of Iranian libraries would not lead to the work productivity and greater efficiency of libraries unless librarians acquire essential skills to use this technology effectively. Hayati and Jowkar (2008) discovered that implementation of computers and information technology in academic libraries of Iran does not mean the final acceptance and work productively. Nickar and Farzin (2001) on investigation of librarians' training needs in Iran found that although librarians use computers in their day to day work but many of them lack the adequate computer literacy skills. Moarefzadeh and Sannei Dehkordi (2006) demonstrated, in order to keep up librarians with the information technology innovations, in-house and continuous training program is needed for them. Therefore it is necessary to ensure that whatever resources expended on information technology acquisition in the libraries are not wasted through inappropriate use, under use or lack of use by unskilled librarians.

This study was designed to assess the computer literacy skill of librarian in Isfahan University which is one of the reputable universities in Iran. Librarians' level of computer skills, their computer use experience, avenues of computer literacy, software used, purpose of computer use in their day to day work, benefits derived from computer usage and problems militating against effective use of computer are examined and discussed in this paper.

METHODOLOGY

The questionnaire-based survey method was used for data collection. A total of 73 questionnaires were self-administered to librarians of the University of Isfahan, Iran (UI); 41 questionnaires (56 per cent) of the entire sample returned were found useful and were analyzed. The questionnaire was used to collect data on computing skills of librarians and their use of Microsoft word, excel, access, power point, library software. Data on librarians' use of computers for different routines, benefits and problems associated with using computers was also collected.

RESULTS AND DISCUSSION

Respondents

General questions relating to gender, educational qualification and LIS experience were asked. Among the 41 respondents 35 (85.4%) were female and 6 (14.4%) were male. Figure 1 shows that a total number 30 (73.2%) of respondents hold either bachelor or master degree. The rest of respondents 11 (26.8%) had high school diplomas or associate degree. This indicates that majority of the participants are professional librarians.

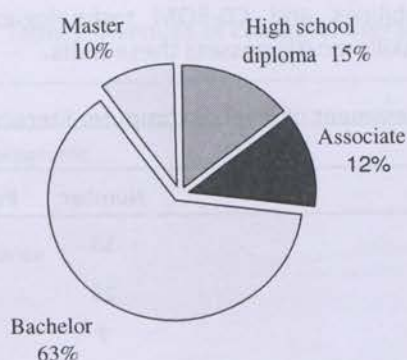


Figure 1: Percentage distribution of respondents by educational qualification

Figure 2 shows that out of 41 respondents, a majority 35 (85.4%) of respondents has worked for more than six years in the library. Therefore most of the respondents have worked long enough to understand and appreciate the roles of computers can play in their official work and in their personal lives.

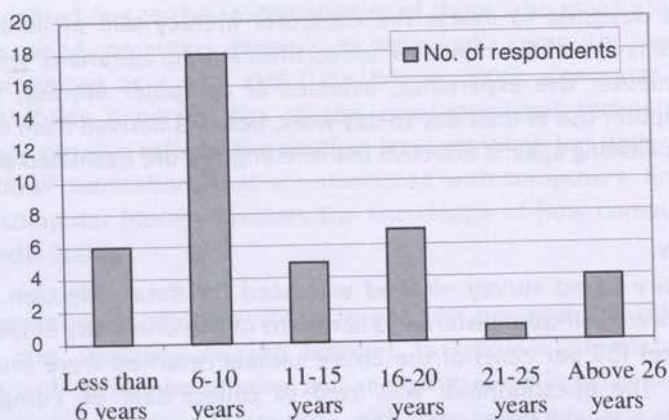


Figure 2: Number of respondents by years of work experience (n = 41)

Computing skills

Knowledge, skills and confidence with computer technology are now an asset for those entering the competitive employment market. Respondents were asked to assess their level of computer literacy skills. The levels of the skills ranged from "very limited" to "very good". Data analyzed revealed that overall a majority 28 (68.3%) of the respondents considered their level of computing skills as "Fair" or lower. In contrast, only 13 (31.7%) of the respondents perceived their level of computing skills as "good". None of the respondents perceived their level as "very good" as indicated in Table 1. Okiy (2005) indicates that in the information age, library staff are expected to be more knowledgeable, forward looking, creative, productive, more focused and more competitive. Therefore it is necessary for them to provide leadership in computer application, internet capabilities and CD-ROM technologies. He emphasized that librarians with adequate IT skills mostly possess these traits.

Table 1: Self assessment of level of computer literacy skills (n=41)

Level	Number	Percentage
Good	13	31.7
Fair	19	46.3
limited	7	17.1
Very limited	2	4.9

Figure 3 clearly shows that overall 26 (63.4%) of the respondents started using computer since seven or more than seven years ago. This implies that although a majority of respondents had a long duration of computer use experience but it does not necessarily improved their level of computer literacy skills. In fact, effective use of computers and information technology in this new era goes beyond buying computers, launching computer labs and connecting libraries to the Internet and expecting that things will automatically improve. Agbonlahor (2006) indicates that universities' investments in information technology can only yield meaningful returns when the technology is used by its intended users in ways that enhance the university's major goals. He added the successful integration of computer and information technology in to the universities including university libraries depends not only on access and availability but also on the

extent which staffs embrace and effective use this technology to increase their performance.

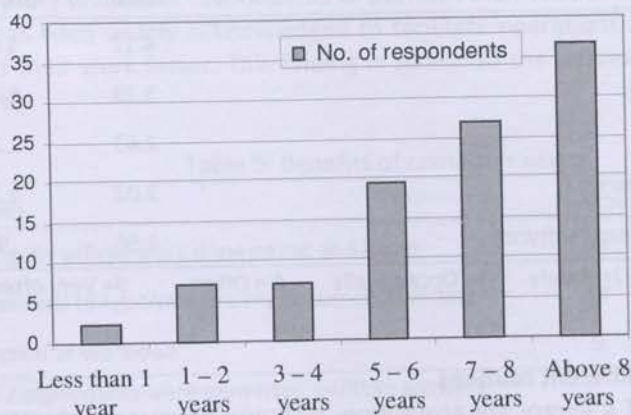


Figure 3: Number of respondents by years of computer use experience (n = 41)

For anyone to use computer technology she/he needs to possess certain computer skills which can be acquired through various means. Of the respondents 20 (48.8%) acquired computing skills by participating in the formal computer/IT programs while 15 (36.6%) were self-taught. A total of 12 (29.3%) of librarians acquired the necessary skills by guidance of friends/colleagues and 10 (24.4%) by computer / IT books (Table 2). The implication of the data is that a majority of the librarians have acquired their computer skill through informal channels.

Table 2: Avenues of computer literacy

Avenue	Number	Percentage
Formal computer/ IT programs	20	48.8
Practical self-teaching	15	36.6
Friend/colleague guidance	12	29.3
Computer/IT books	10	24.4
Error and trail	10	24.4

Note: Respondents were permitted multiple answers

Use of different software

Respondents were requested to rate a scale from one to five (1-5) in which 1 represents never and 5 represents very often, frequency use of following software. As shown in Table 3 library software which is an application software installed by libraries only for circulation and search of libraries' materials, was the most used (mean = 4.12) software followed by word processor (mean = 3.29). In contrast, the less used (mean = 1.56) software was database management software. Therefore library software is the most common used software among librarians.

Table 3 : Frequency of software use (n=41)

Software	Mean	Std. Dev.
Library software	4.12	1.029
Word Processor	3.29	1.453
Spreadsheets	2.63	1.240
Presentation software	2.02	1.193
Database management software	1.56	.950

1= Never 2= Rarely 3= Occasionally 4 = Often 5= Very often

Use of computer for different routines

The main functions of a library are acquisition, technical processing, storage, retrieval, and dissemination of information. The traditional methods of doing these result in slow, laborious and repetitive manual routines. Now, availability of computers has gradually changed the library scene of doing these things. With the advent of modern technologies and their applications in day to day activities such as acquisition, cataloguing, circulation, indexing and administrative, manual routines have transformed into computer manipulated tasks. The computer provides flexibility, speed and accuracy, and it enhances effectiveness and efficiency of library's routine work. Information about use of computer for different routines of librarians was collected and means scores of all items are displayed in Table 4. Data analyzed indicated that respondents often (mean = 4.00) used computers for circulation and occasionally (mean = 3.83) used it to search the Internet/ online databases. On the other hand they used computers very rarely (mean = 1.85) for library administration purposes. Thus respondents use computer more frequently for circulation than other library routines and functions.

Table 4: Use of computer for different routines (n=41)

Routines	Mean	Std. Dev.
Circulation	4.00	1.378
Internet/online search	3.83	1.412
Serials /dissertation	2.61	1.430
Personal use purpose	2.71	1.88
Acquisition	2.17	1.498
Cataloging	2.00	1.245
Administrative	1.85	1.406

1= Never 2= Rarely 3= Occasionally 4 = Often 5= Very often

Benefits of computer use

Computer facilitates librarians routine work processes. It does not only allow them to work with increasing flexibility in less time, it also helps them to do their tasks more

effectively (Jerabeka et al 2001). Librarians were asked to indicate benefits of computer use in day to day work / tasks. Data analyzed in Table 5 revealed that computer has enabled majority (82.9%) of respondents to perform their official tasks easier and faster. Computer has been widely acknowledged to facilitate operations and in fact to enable the users to their work faster. This finding is similar to the pervious finding pointed by Adomi (2006).

Table 5: Benefits of computer use

Benefits	Number	Percentage
Getting my official work done easier and faster	34	82.9
Has assisted to type/prepare my documents/ letters	12	29.3
Reduction of workload	9	22.0

Note: Respondents were permitted multiple answers

Problems against effective usage of computers

Though computerization of libraries has benefits but there are certain problems militating against effective usage of computer by its users. The specific problems faced by the librarians are given in Table 6 below. The most common problem cited was frequent breakdown of system 23(56.1%) followed by electric power failure 19 (46.3%), inadequate computers in the libraries 14 (34.1%), librarians inadequate computer skill 9 (22%). Similarly Emojorho and Adomi (2006) found, unreliable telecommunication infrastructure and electricity power outages are the problems encountered in the use of IT facilities by most members of staff in Delta State University. It seems the above mentioned problems are common in the developing countries.

Table 6 : Problems against effective usage of computers

Problems	Number	Percentage
Frequent breakdown of system	23	56.1
Electric power failure	19	46.3
Inadequate computers in my library	14	34.1
Lack of/inadequate computer skills	9	22.0
Lack of time	7	17.1
Lack of/ inadequate organizational sponsorship to computers/IT training program	6	14.6

Note: Respondents were permitted multiple answers

CONCLUSION

The purpose of this study was to assess the computer literacy skills of librarians at the University of Isfahan, Iran. The findings demonstrated that a majority of the respondents do not yet possess a good level of computer skills and even their long duration experience of computer use has not necessarily improved their level of computer literacy skills. Most of the respondents acquired their computer skills from informal channels such as practical self-teaching, friend/colleague guidance, Computer/IT books, Error and trial. Library software and Word Processor are the most used software in the libraries, while database management software is the less used software. Librarians use computer mostly for circulation and searching Internet or online databases. Based on the findings

of the study computer has enabled librarians to work easier and faster but some problems hamper their effective use of the computer. These problems include frequent breakdown of system, electric power failure, inadequate computers in the library and librarians' inadequate computer skills.

Computer technology has become increasingly integrated into libraries. The findings confirm the need for librarians of university of Isfahan to be adequately equipped with the computer literacy competencies to take advantage of all computerized library facilities and enhance their work productivity. It is recommended that management of the university libraries organize and offer continuous training programs to train or re-train librarians with the latest advancement of information technology. By so doing, inadequate computer skills and lack of/ inadequate computer organizational sponsorship to computers/IT training program will not be seen by libraries staff as the barriers militating against their effective use of computers.

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