

IT Skills Required by Library Professionals Working in the University Libraries of Lahore

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Abstract

Purpose: The major objective of the study was to explore the status of IT skills required by library professionals working in university libraries of Lahore.

Design/methodology/approach: Quantitative approach using survey method was adopted. Instrument (questionnaire) was developed for data collection with the help of reviewed literature. The population of study was permanent professional library staff working in the universities of Lahore. The response rate was 76%. Collected data were tabulated and analyzed with SPSS-24.0.

Key finding (s): Results of the study show that many participants needed sound IT skills to make their libraries user friendly. Service attitude skill is a crucial element to avail the benefits of information technologies. Lack of training opportunities for library professionals is a major bottleneck in the effective utilization of IT.

Research limitation (s): This study is limited to regular library professionals working in the universities of Lahore.

Practical implication (s): Although librarians are aware of the significance of IT, however, they don't implement emerging technologies efficiently in their libraries. There is an urgent need to cultivate required IT skills among librarians so that they can implement latest technologies efficiently in their workplace.

Contribution to knowledge: Findings and recommendations of this study are helpful source for library professionals, educationists, organizational heads, HEC Pakistan, planners, policy makers and decision making bodies for developing required IT skills to make libraries user friendly. Awareness and training programs can be initiated accordingly.

Paper Type: Research

Key Words: IT skills; IT competencies; Librarians; University libraries; Lahore-Pakistan.

Introduction

IT is considered as the most important revolution in the history of mankind. A nation becomes progressive through the effective application and usage of IT systems. A country cannot become prosperous without adopting innovative technological applications

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(Ehikhamenor, 2002). In this age of Information and Communication Technologies (ICTs), no progressive country is poor in information and all information rich countries are also prosperous (Vicziány & Puteh, 2004).

Information technologies provide new avenues for the faculty, researchers and students in the developed world to gather maximum data about almost all topics. They can communicate their thoughts in a creative style. They can perform their work efficiently. They bring completion of their set goals without facing certain barriers. Information technology has left a deep impact upon every walk of life such as e-banking, e-business; electronic media, e-commerce, e-marketing, e-governance, tele-medicine, wired money, virtual universities and digital libraries have become buzzwords these days (Ramzan, 2004). The inventions in the internet, intranet, mobile phones, satellite communication and wireless technology have connected people. IT has changed the ways through which scientific, technical, business, commercial, educational and cultural information is recorded, organized, exchanged and sought.

As the authors observed, ICTs are not being effectively utilized in Pakistan. Libraries lack in adequate funds, organizational support and required skills. They are not inspired to implement latest technologies in their libraries. Shaikh (2009) stated that the institutions of Pakistan were far behind progressive nations. In Pakistan, technology was not properly being implemented and utilized. Pakistani institutions were not facilitated with required IT equipment. There was serious shortage of funds, support, training, positive mindset, and passion. The study recommended an urgent need to formulate information technology policy at national level so that technology could effectively be applied in the institutions of Pakistan like other leading nations of the world.

Library professionals in Pakistan do not have the technical expertise of IT. They are not well aware of the concepts of technology. They cannot manage technologies single-handedly. They depend upon others for the purchase of technology-related equipment. Ramzan and Deljit (2010) found that librarians couldn't handle technology effectively due to fears. They did not understand the terminology of information technology. They were not playing an active role in the application of information technologies. They were not involved in decision making policies related to technology. The study recommended a need of technology awareness to get rid of dependence on computer professionals.

Library professionals lacking IT skills cannot facilitate their users. They need to be innovative in order to meet the information needs of their users. Technology has changed the functionality of libraries. Librarians may not survive without adopting information technologies. Ameen (2011) analyzed the challenges for the library professionals in the age of information and communication technologies. She revealed that librarianship had entirely changed due to digital revolution. Library professionals could not lead in the field without equipping themselves with the latest IT techniques.

Khan (2017) studied factors that influence the adoption of digital reference services among the university librarians in Pakistan. The results revealed that IT had brought a great ease in libraries to embrace it. Librarians should show readiness to adopt latest technologies.

As the reviewed literature suggests, it is very essential to know the status of contemporary IT skills required by the librarians. Librarians are the focal persons. They fulfill the information needs of their users. They must possess required skills in the current digital age. They need to equip their libraries with modern lines so that they may better facilitate their users. They may not promote their libraries without opting latest technologies.

Objectives of the Study

Objectives of this study include:

1. To explore the status of competencies related to current technology required by LIS professionals.
2. To reveal the application value of contemporary ICTs in libraries.

Literature Review

Technology provides ample of learning opportunities to librarians. IT broadens outlook. It enhances skills. It brings a great comfort and ease in working. It replaces old methods of serving library users. It brings more creativity and innovation. Rao and Babu (2002) claimed that a shift of libraries from traditional to electronic had posed threats as well as learning opportunities for library professionals. Library professionals would become far behind in technology if they felt fear of implementing it in their libraries. This move of libraries has also provided learning opportunities to the working libraries. They may lead with using technological skills. They may become leaders. They may bring innovative approaches. They need to grab digital skills. They must develop web-based skills to manage IT in a befitting manner.

They may not meet the desired objectives without getting required skills in IT. Mahmood (2003) reviewed previous studies related to the skills required for library professionals. His study showed that library professionals needed an entire different approach in this age of ICTs. They could not compete with other professions with traditional approaches. They needed web-related skills to serve their organization efficiently.

Library professionals need to polish their skills for leading their libraries nicely. They need to bring a prominent change in their mindset. They should leave old ways of performing library functions. They need to adorn their libraries in line with modern scales. They need to follow footsteps of leading libraries of the world that are technologically rich. They should develop electronic collections to overcome space problems. They should upgrade their services. Warnken (2004) observed that library professionals needed to develop IT-based skills to better serve their users. They must have recent skills of information and communication technologies. They must effectively make the usage of internet. They should be familiar with information literacy expertise. They should conduct information literacy programs for users.

In this age, library professionals need to adopt innovative methods in their libraries so that they can attract their users to utilize library resources and services. They need to change old thinking of conventional routines. They require dynamic methods to satisfy their users. Perry (2005) claimed that Google had brought a great revolution in the field of information technology. Google has now become the most frequently used search engine by users. Google has also launched a huge project of digitizing books. It has also challenged the librarians. They need to build digital collections.

Online marketing is an effective tool of promoting library resources and services. Library professionals with creative approach may promote their libraries through online marketing tools. They can use Web 2.0 tools for public promotional messages. Coyle (2006) stated that it was very essential for library professionals to promote and market their collections and services through online marketing tools. Trained library staff should be recruited. Continuous training and learning programs should be launched.

Library professionals need to change their attitude and this can be possible through the provision of short term training programs. The organizations also need to encourage their librarians by sending them for training programs and through the generous grants to libraries. Mahmood and Khan (2007) conducted research for information communication

technology training of library professionals in Pakistan. The study revealed that libraries of Pakistan were far behind in technology as compared to libraries of progressive nations. They found that most of library professionals in Pakistan had a traditional approach. They needed proper training workshops for the purpose of knowing the advantages of technology and to become innovative. They required training at regular intervals. They needed to flourish practical skills.

Technology has brought a great comfort in providing documents in multiple formats. It has no time and space limitations. Library professionals need to have formal and informal IT training for the purpose of providing electronic services to their users. Heinrichs (2009) observed that technology had proved useful in helping library professionals to provide relevant information to users quickly and efficiently. They urged that library graduates must get practical skills through internship in good libraries. They must focus on technology area for maximum benefit.

Library professionals require advanced practical education to perform well in the field. They need to use online databases themselves. They need to conduct information literacy programs. They require continuous professional learning programs in order to equip themselves with the latest technologies for providing satisfactory services to their users. They can lead their organizations only through an effective utilization of technological tools. Partridge (2010) explored the required ICT skills of library professionals. The study showed that Web 2.0 technologies were being frequently utilized by librarians for the facilitation of their users. Library professionals ought to be technology-minded. They should focus on practical skills.

Raju (2014) described skills for academic libraries in digital era. He urged that technology had changed the concept of traditional libraries. Traditional librarians may not be successful without using technologies. Library professionals need to adopt a radical attitude towards their job. They need to bring versatility. They need to upgrade their knowledge and skills. They need to apply new methods in their job places. Library schools also need to bring changes in curriculum keeping in view the requirements of job market.

Library professionals need to participate in continuous professional development programs. They need to gain updates about emerging technologies. They need to attain skills of open source software. They need to implement cost effective technologies in their libraries. They can gain multiple benefits by utilizing technologies effectively. Smith (2015) conducted a study related to decision making

for the application of emerging technologies in libraries. The findings of the study revealed that library professionals needed a creative thinking in order to lead their organizations. Library schools needed to teach market-oriented courses so that they could produce innovative professionals aligned with contemporary changes. They needed to promote virtual learning so that the graduates might develop relevant skills to perform well on job.

New technologies are casting a great impact in libraries and information centers. Li-Fi technology is taking place rapidly. It is changing the working routines of libraries. Library professionals need to become versatile for serving their users in an efficient manner. They need to utilize all emerging technologies properly. Yuvaraj (2016) claims that wireless technology has emerged recently. It is a visible light communication technology. It utilizes light waves rather than radio technology for the purpose of transmitting data. Li-Fi will provide fast connections for internet. It will be used frequently by the organizations. It will replace other technologies. It will bring a great revolution in the field of technology. It will provide multiple benefits to users and researchers. Library professionals must get knowledge of such innovative emerging technologies to better serve their users.

Boruff (2017) assessed knowledge and skills in information literacy instructions. The study concludes that many changes have taken place in librarianship due to new technologies. Librarians play the role of facilitators and instructors, hence, they need to adopt latest methods of serving their users. They need to develop modern skills to better serve information needs of their users.

Chen (2018) conducted a study “challenges and opportunities: a survey of professionals' perceptions on risks in Chinese library transformation”. The study observes that libraries not only in China but across the world are changing to meet the demands and expectations of users. There are challenges for library professionals in this digital age. They have also ample opportunities for professional development. Traditional libraries are on the brink of obsolescence. Digital libraries are getting popularity everywhere. Librarians can become successful if they embrace new changes open-mindedly. Librarians need to change themselves in line with current changes.

Methodology

A quantitative questionnaire survey was opted to study IT behavior of library professionals. Population of the study consisted of all 120 regular library professionals with MLIS degree working in HEC-

recognized public and private universities of Lahore. A pilot study to ensure the validity of the instrument was conducted. Overall Cronbach Alpha was 0.82 as reliability indicator. Questionnaire was distributed online through Google docs and the target population was reminded through telephone calls. The response rate was 76% (91/120 responses).

Findings of the Study

Demographic information of respondents

From 91 library professionals who participated in this study, 66 (72.5%) were males and 25 (27.5%) were females as shown in Figure 1.

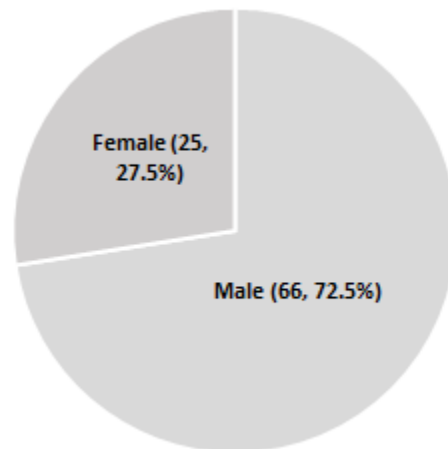


Figure 1. Frequency distribution of respondents' gender (n=91)

Respondents' experience of using information technology

As regards number of persons who were using IT tools with frequency of years, results show 19 persons (20.9%) from 1 to 4 years, 46 (50.5%) from 5 to 8 years, 14 (15.4%) from 9 to 12 years and 12 (13.2%) for more than 12 years as shown in Figure 2.

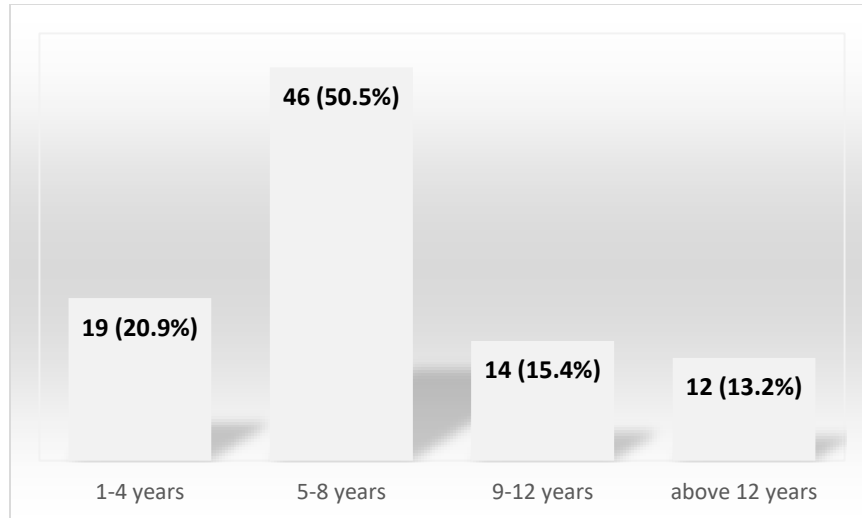


Figure 2. Respondents' experience of using IT tools (n=91)

Level of IT skills among professionals

The participants were asked to rate their IT skill level. These skills included hardware/software and networking skills ms office, library automation, database creation, internet search tools, online databases search, digitization, web based services, information literacy, information resource management, e-serial management, repository building, metadata standards, project management, decision making, communication skill, and service attitude. The participants were asked to tick different options to rate their IT skill level on a five-point scale (Table 1).

Participants had different opinions about different IT skills. About Hardware/Software and Networking skills, 34 (41.8%) respondents were of the view that they had good skills while 2 (2.2%) respondents said that they were not good at all. About MS Office skills, 48 (52.7%) respondents were of the view that they had good skills while 5 (5.5%) respondents said that they were not good. About Library Automation, 48 (52.7%) respondents were of the view that they had good skills while 4 (4.4%) respondents said that they were not good. About Database Creation, 40 (44.4%) respondents were of the view that they had good skills while 4 (4.4%) respondents said that they were not good. About internet search tools, 41 (45.1%) respondents were of the view that they had good skills while 3 (3.3%) respondents said that they were not good. About online database search, 40 (44%) respondents were of

the view that they had good skills while 3 (3.3%) respondents said that they were not good.

Table 1. Description of IT Skills among Professionals (n=91)

IT Skill	Mean	Std. Deviation
Hardware/Software and networking skills	3.97	1.016
MS Office	4.13	.792
Library Automation	4.14	.768
Database creation	3.76	1.078
Internet search tools	4.19	.788
Online databases search	4.11	.809
Digitization	4.02	.869
Web based services	3.96	.829
Information literacy	4.09	.825
Information resource management	4.08	.763
E-serial management	3.90	.943
Building of repository	3.87	.933
Metadata standards	3.95	.923
Project management	3.98	.856
Decision making	3.99	.937
Communication skill	4.00	.843
Service attitude	4.05	.848

Scale: 5=Very good, 4=Good, 3= Neutral, 2=Not good, 1=Not good at all

About digitization, 46 (50.5%) respondents were of the view that they had good skills while 1 (1.1%) respondent said that he was not good. About web based services, 47 (51.6%) respondents were of the view that they had good skills while 6 (6.6%) respondents said that they were not good. About information literacy, 44 (48.4%) respondents were of the view that they had good skills while 5 (5.5%) respondents said that they were not good. About information resource management, 44 (51.6%) respondents were of the view that they had good skills while 3 (3.3%) respondents said that they were not good. About e-serial management, 41 (45.1%) respondents were of the view that they had good skills while 2 (2.2%) respondents said that they were not good at all. About building of repository, 42 (46.2%) respondents were of the

view that they had good skills while 1 (1.1%) respondent said that he was not good at all. About metadata standards, 43 (47.3%) respondents were of the view that they had good skills while 1 (1.1%) respondent said that he was not good at all. About project management, 46 (50.5%) respondents were of the view that they had good skills while 7 (7.7%) respondents said that they were not good. About decision making, 39 (42.9%) respondents were of the view that they had good skills while 9 (9.9%) respondents said that they were not good. About communication skill, 47 (51.6%) respondents were of the view that they had good skills while 1 (1.1%) respondent said that he was not good at all. About service attitude, 43 (47.3%) respondents were of the view that they had good skills, while only 1 (1.1%) respondent said that he was not good at all.

Similar studies were made by other researchers too. Partridge (2010) explored the required skills of library professionals in the age of information and communication technologies. The study showed that researchers needed the skills of emerging technologies to lead from the front in the present age of information and communication technologies (ICTs). They needed software, hardware skills, automation, digitization skills to make their libraries a real house of learning and spreading information. Library professionals ought to be technology-minded. They should focus on the practical skills. Raju (2014) described skills for the academic libraries in a digital era. He said that technology had changed the concept of traditional libraries. Library professionals need to adopt radical attitude towards job. They need to apply new methods in their job places. Smith (2015) conducted a study related to decision making for the application of emerging technologies in libraries. The findings of the study revealed that library professionals needed a creative thinking in order to lead their organizations well. Library schools needed to teach market-oriented courses so that they could produce innovative professionals in the market for coming up to the needs of the present age of ever growing changes. They needed to promote virtual based learning.

Recommendations

The following recommendations are made for the improvement of IT in the libraries of Pakistan on the basis of findings of this study.

- Library professionals should realize the utility of IT in the present age of Information and Communication Technologies (ICTs) as no survival is possible without embracing IT.
- Library professionals should be computer literate as it is the most needed competency of the present age.

- Library professionals should be actively involved in different stages of IT applications rather than other IT staff.
- Library professionals should attend refresher courses to grab required skills of IT.
- Library professionals should have a positive service attitude to avail the benefits of information technologies.
- Library professionals should grab proper skills of library automation, database creation, internet search tools, digitization, E-serial management, information literacy, repository building, meta-data standards, and project management.
- Library professionals need to change their mindset about their job.
- Library schools need to provide education in accordance with market needs.
- Librarians need to become innovative keeping in view the demands of modern age.

Conclusion

Results of this study expose that many participants need sound IT skills to make their libraries user friendly. The participants need hardware/software and networking skills. Majority of respondents was good in MS Office. Some respondents didn't have good skills of library automation. They need the skills of database creation as well. They were good in internet searching tools. Majority was not very good in digitization. Respondents also require the competency of web-based services. They need to grab information literacy skills. Most of them showed a positive attitude towards the utilization of IT applications in their libraries. Service attitude skill is a crucial element to avail the benefits of information technologies. Lack of administrative skill is a major problem in implementing IT in libraries. Lack of innovative attitude of librarians to adopt information technology is a great hurdle in the effective utilization of IT applications. Lack of training opportunities for library professionals is also a great problem in the effective utilization of IT. The study has shown that the respondents should possess sound skills of library automation, database creation, internet search tools, digitization, e-serial management, information literacy, repository building, and meta-data standards.

It may be said in the light of these studies and the current study that there is no survival of the libraries and librarians without adopting

technology and they intensely need to develop skills of the latest technologies.

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