

## Access and Use of the Internet in the Libraries of Lahore, Pakistan

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**Abstract:** *This study is to find out the level of the Internet access in libraries, its uses by library staff and the problems regarding access and use of Internet in libraries of Lahore, Pakistan. The research is based on primary data. A structured questionnaire survey was conducted by (n=75) 48 academic libraries (university and college), 21 special libraries, five public libraries and one school library in the city of Lahore. Findings of the study may be useful for policy makers to understand the status of the Internet access and its need as well as for library schools to revise the curriculum to improve the Internet skills of future librarians.*

### I. Introduction

Information and communication technology (ICT) has become an indispensable tool in reducing world poverty. ICT provides developing nations with an unprecedented opportunity to meet vital development goals, such as poverty reduction, basic healthcare, education and research, far more effectively than before. The unequal access to technology between groups due to differences in demography, economic status, and locations, has been suggested to affect worldwide globalization through Internet connectivity (Kamssu, 2004; UNDP, 2000). It has become a challenge for librarians to prove the importance of libraries in the age of easy access to the Internet. To meet this challenge, libraries take the initiative to use the Internet in their public services and internal operations, and make the Internet an integral part of library's infrastructure.

Melchionda (2007) stated that the development of the Internet cast a profound impact on the field of library and information science. It has involved processes, functions, services, media and other information resources of the library as a whole.

Islam (2009) opined that the application of information technology (IT) in libraries is not a sudden movement, but rather a product of continual development of telecommunications and computer technologies.

The exact date of IT applications in libraries is not only unclear but also hard to trace, since no authentic source on the subject is available in LIS literature. It can be said that the use of the Internet in libraries began in the 1970's. However, the use of the Internet to support library functions was initially confined to online searching of databases in large systems such as OCLC and RLIN for reference and interlibrary loan services.

Hundie (2003) stated that as information providers, libraries of all types, and documentation and information centers should be the main beneficiaries of the enormous amount of Internet resources that can be used to noticeably enhance the quality of their services and at the same time to save time and money.

### *1. Access*

Swift growth of Internet set the trend to offer the Internet facility for library staff and users along with library's fundamental services. Odero (2007) explored the Internet access in the universities of Kenya since 1990s and found that in some universities computers connected to the Internet were located in specific rooms under the management and staff needed clearance from library management before using the Internet. Others charged their staff for the Internet use and made sure the limited time access during lunch breaks or after working hours. He also noticed that none of the libraries had proper training program for their staff and if so it was mainly targeted to senior members. The Internet training had largely been left to the individuals' initiatives. Internet access in public libraries started almost in 1990's like in other libraries. Jaeger, Bertot, McClure and Rodriguez (2007) discussed that during 2004 and 2006, 98.9 percent of public library branches were connected to the Internet and 98.4 percent of connected public library branches offered public Internet access in the United States. However, there were differences in the amounts of access, the kinds of access, and

sufficiency of the access available to meet patron demands. Patrons and communities, and now government organizations, relied on the fact that the Internet access would be available to everyone who needed it.

## **2. Services**

Libraries are using the Internet to support their fundamental functions and services: acquisition, circulation, reference, classification, cataloguing and providing access to the Internet as an independent service.

Bertot, McClure and Jaeger (2008) examined the ways in which public libraries' Internet access seemed to have direct impacts on their communities. These areas include technology training and assistance, e-government service delivery, education resources, services for job seekers, and disaster/emergency roles and services, among others.

Jones (2005) observed that reference services in academic libraries traditionally included professional assistance with general reference questions, information-gathering, development of research strategies, resource selection, and mediated database searching. However, the distance reference services, rather than in a face-to-face transaction, called for more "innovative approaches" with focus on the Internet services.

Marry (2005) believed that electronic reference services have rapidly replaced the traditional face-to-face or telephone reference service. Libraries and librarians were perceived to embody in connection with Internet services: lifelong learning, free access to information, literacy, intellectual freedom, privacy, and services to underserved groups. They were also seen as binding society together, providing a public space and protecting children. These values were viewed as rooted in the past functions of libraries and attitude of librarians, as well as being applicable in the age of the Internet (Luyt, 2006).

## **3. Training**

Training of the Internet use for library staff and users is another component of libraries. Education and public libraries arrange are especially keen to provide such services. However,

due to the variety of user communities, it seems difficult for libraries to cope with training issues.

Webb (2002) investigated the Internet training programs for elderly people to bridge that part of “digital divide” and found that 78 percent of the public libraries did not provide Internet training specifically for elderly patrons due to the lack of staff and/or inadequate funding.

Styczynski (2002) examined the changes in the Internet training provided by a corporate library and concluded that the job of librarians will be to stay on top of all the changes so that they can effectively train the users of the future.

King (2006) observed that traditionally library staff have been trained on a “need-to-know” basis, with an initial training concerning basic library procedures such as circulation, and with additional training occurring as and when it is needed; such as training in the use of a new catalogue or management system. In his study, he found that it became the number one choice of library administration to have public library staff trained in ICT competency.

#### ***4. Issues related to Internet in Developing Countries***

Libraries in developing countries face a number of problems in adopting new technologies. Many authors have mentioned slow speed of the Internet, language difficulties, limited time to access the web, information explosion and loss, copyright, access limitations, trust on source authenticity and accuracy, high subscription costs, poor hardware, unskilled staff, users’ inability to access the web, lack of awareness, etc. (Darries, 2003; Mugwisi & Ocholla, 2002; Saeed, Asghar, Anwar & Ramzan, 2000; Younis, 2002).

#### ***5. Internet in Pakistan***

Pakistan is a developing country, facing many internal problems. The government of Pakistan is struggling to develop ICT infrastructure to support research and education. But these efforts are still at the beginning stage. Libraries in Pakistan are slow to respond to the new advancements in society. The Internet was introduced in the non-commercial institutions of Pakistan in 1995. The United Nations Sustainable Development Networking Program (SDNP) developed the first e-mail service in Pakistan. In 1995, the government of Pakistan awarded

the Internet services licenses to 16 companies. In 1996, the ISPs started to provide the Internet services in Pakistan. Digicom was the first Internet services provider in the country connected at the speed of 64kbps (Mahmood, 2005). In June 2009, the Internet users in Pakistan were estimated to be 18.5 million with 10.6 percent penetration rate (Internet World Stats, 2009).

Pakistani libraries responded to the Internet technology more than a decade ago by providing Internet access to their staff and users. Saeed et al. (2000) surveyed 40 university libraries of Pakistan and found that 50 percent had Internet access, of which nine libraries were using Internet for reference services; five for acquisitions, cataloguing and classification; two for interlibrary loan; and four for document delivery. Growth of Internet in Pakistan increased in the last seven years due to the governmental interest in basic IT infrastructure. Governmental institutes, universities and their related libraries were provided with IT equipment and Internet connections.

This study is to reveal the status of Internet access and use in all types of libraries as well as issues faced by the library staff in Lahore, Pakistan.

## **II. Statement of the Problem**

The Internet access and use can enhance the effectiveness and efficiency of library services and functions. It also affects the level, quality and compatibility of library services offered to users. Internet has increased not only the quality of traditional library services but also has made it possible for libraries to pioneer in new services in a constantly changing environment. Today, it is considered the responsibility of libraries to provide the Internet facilities just like books or any other informational sources. The government of Pakistan has taken initiatives to promote ICT in public and private sector organizations such as Virtual University of Pakistan, Higher Education Commission Digital Library, and fund for ICT utilization. Now many libraries across the country have access to the Internet and they are using it for various activities and services. But usually they do not have a clear vision about its importance and usability for library functions. For the last two decades, use of the Internet has become an integral part of Pakistani culture but still the output is not satisfactory.

This study not only presents the current level of access and use of the Internet in the libraries of Lahore but also aims at increasing awareness about the importance and ways of using the Internet to enhance library activities and services.

### III. Objectives of Study and Research Methods

The study was conducted to achieve the following objectives:

1. To find out the level of the Internet access in the libraries of Lahore
2. To determine for which purposes the Internet was being used
3. To find out issues related to access and use of the Internet in libraries

The scope of the study covers all types of libraries (university, college, school, public and special) in Lahore that had access to the Internet. A list of the libraries of Lahore was developed with the help of available directories and other online sources, as an up-to-date comprehensive list was not available. With the help of literature review and some Internet experts in libraries, a questionnaire was developed and tested. The questionnaires were personally administered in 78 libraries. One library refused to cooperate and two gave non-usable responses. Data collected from 75 libraries were analyzed to calculate frequency distribution and descriptive statistics.

### IV. Findings and Analysis

#### 1. Internet access and use in libraries

The respondents were from 48 academic libraries, 21 special libraries, five public libraries, and one school library in Lahore, Pakistan. Frequency and percent scores of various variables showing access and use of the Internet in libraries are given in Table 1.

Table 1. Internet access and use in libraries

Variable		Frequency	Percent
Internet facility	Staff	25	33
	Staff & users	50	67
Year of Internet access	Up to 1990	1	1
	1991-1995	5	7

	1996-2000	28	37
	2001 and after	38	51
Internet terminals (staff & users)	1-5	46	61
	6-10	12	16
	11-15	5	7
	16-20	3	4
	21-above	9	12
Internet terminals (users)	1-5	29	39
	6-10	7	9
	11-15	3	4
	16-20	2	3
	21-above	9	12
Internet connection type	LAN	36	48
	Cable network	13	17
	Dial-up	12	16
	DSL	10	13
	Leased line	2	3
	WiFi	1	1
	Others	2	3
Internet connection speed	128kbps-1.5mbps	24	32
	64kbps-128kbps	15	20
	More than 1.5mbps	14	19
	56kbps	10	13
	Less than 56kbps	7	9
Internet use policy	Yes	50	67
Filtering software	Yes	40	53
Formal training in using Internet	Users	46	61
	Staff	33	44

Thirty-three percent of the libraries under study offered Internet access to their staff and that sixty-seven percent to both staff and users. Internet access for staff was completely free while a very low fee was charged for the users in some libraries. There was only one library which was using Internet since 1990s while most of the libraries have utilized this technology since 2001. The number of terminals dedicated for Internet use varied by library type and parental organization. In university libraries, it ranged from 20 to 100 terminals while in college, school and public libraries, it was as low as one to 20. Type and speed of the Internet

connection also varied. Most of the libraries were using LAN connection with approximate speed of 128kbps. However, an effort to increase the Internet speed was being made at both governmental and intuitional levels.

Sixty-seven percent of libraries had policies on Internet access services in their libraries. Filtering software was used by 53 percent of the libraries. In Lahore, 61 percent of the libraries have arranged formal training for staff while 44 percent offered it to their users. These figures are much higher than that from the universities of Kenya surveyed in 2007 by Odero and Mutula.

## *2. Internet use in library functions*

Libraries were using the Internet for different library operations (Table 2). The study found that 52 percent of the libraries received requests for purchase of library materials through the Internet. Fifty-five percent of the libraries were using the Internet for bibliographical verification and selection of materials. It was observed that the use of the Internet for circulation was not very popular among Pakistani libraries. It may be due to the lack of the state-of-the-art integrated library software in the country. Reservation of materials, overdue lists and notices were made by 25 percent of the libraries. Technical processing (e.g., cataloguing and classification) was often done by librarians using the Internet, including getting information on cataloguing rules and authority control, checking MARC records and classification number, and doing copy cataloguing. There is a growing interest of Pakistani librarians to fulfill their information needs regarding cataloguing and classification through the Internet.

Table 2. Internet use in library functions

<b>Functions</b>	<b>Frequency</b>	<b>Percent</b>
<b>Acquisition</b>		
Receiving requests for purchase	39	52
Bibliographic checking	41	55
Selecting material	41	55
Ordering & renewal	27	36
Purchasing material	21	28
Claiming or cancellation	27	36
Status reports (e.g. status of publication, printing delays)	21	28
<b>Circulation</b>		



Reservation	19	25
Renewal	16	21
Overdue lists & notices	19	25
<b>Cataloguing/Classification</b>		
Information on cataloguing rules, etc.	32	43
Checking MARC records	23	31
Copy cataloguing	28	37
Authority control	19	25
Checking classification numbers	42	56
<b>Reference &amp; other services</b>		
Receiving and answering queries	42	56
Accessing reference sources	32	43
SDI	30	40
CAS	33	44
Interlibrary loan	23	31
Document delivery	34	45
Professional communication	45	60
Library publications	18	24

Reference is one of the functions mostly performed by using the Internet in libraries. Inquiries were received and answered by 56 percent of the libraries. Forty-five percent used this modern technology for document delivery, 44 percent for current awareness services (CAS) and 43 percent for accessing reference sources. Librarians also used the Internet to communicate with other professionals either for their personal or professional assignments (60%).

It is apparent from the results that the Internet use is increasing day by day in the libraries in Pakistan. The Internet use was mostly observed for such functions which can be performed by using the free Internet applications as acquisition, reference, classification and cataloguing. On the other hand, the Internet is less used where some specific library application is required, such as circulation.

### *3. Descriptive data on the importance of the Internet use in library functions*

The respondents were asked to mention how important the use of Internet was in their library functions. A 6-point scale was used to indicate the importance level of the Internet use. Descriptive statistics for this question are presented in Table 3.

Table 3. Descriptive data on the importance of the Internet use in library functions

<b>Level of Importance</b>	<b>Value</b>
N	75
Minimum	3
Maximum	5
Mean	4.43
Standard Deviation	0.825
Mode	5

Note. 0 = Not important, 1 = Less important, 2 =No opinion, 3 = Important, 4 =Moderately important, 5 = Most important

The responses show that the importance levels of using the Internet in library functions range between important and most important. The Mean of the importance of the Internet was 4.43, the Median and Mode for importance level were 5 and the Standard Deviation was 0.825.

#### *4. Problems in Internet use*

A section of the data collection instrument consisted of questions about problems regarding access and use of the Internet faced by the librarians. (See Table 4)

Table 4. Problems in Internet use

<b>Problems</b>	<b>Frequency</b>	<b>Percentage</b>
Slow speed internet	36	48
Internet connection disconnection	24	32
Shortage of funds for internet services	23	31
Staff is unaware of internet benefits	20	27
Users are unaware of internet benefits	20	27
Copyright and access restrictions	17	23
Inadequate hardware support	14	19
Unavailability of support for maintaining internet	21	16

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No time to use internet	15	11
Users are not interested in using Internet	10	8

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The results show that the major problem in access and use of the Internet was the slow speed of the Internet faced by 36 (48%) libraries. Connection cutoff was the second major problem faced by 24 (32%) libraries. Twenty-three (31%) libraries faced the problem of shortage of funds. Staff members as well as users in twenty (27%) libraries were not aware of the advantages to use the Internet. The limitation of access to some Internet information because of copyright or censorship was faced by 17 libraries (23%). Respondents from fourteen (19%) libraries reported that they had inadequate hardware facility. Twenty-one libraries (16%) reported unavailability of support to maintain the Internet facility. Fifteen libraries (11%) had limited time to access the Internet. And users in 10 libraries (8%) seemed not interested in using the Internet.

## V. Conclusion

The results of this study are somehow satisfactory. When these findings were compared with that from the previous study conducted in 2000 on the Internet use in the university libraries of Pakistan by Saeed et al., it is found that the tendency of providing and using the Internet by staff and users in libraries is growing at a faster pace. Saeed et al. (2000) observed that half of Pakistani university libraries were not using the Internet. The university libraries which had Internet connection used the dial-up connection with 28.6kpbs and usually on single terminal. Islam and Panda (2009) studies Internet connectivity in the special libraries of Bangladesh and found it far from satisfactory. The survey revealed that only 34 (28%) special libraries had an Internet connection and the remaining libraries had no future plans of getting Internet connections. Semertzaki (2008) noticed obstacles in accessing the Internet due to slow access speed and low-computer capacity in some of Greek libraries.

The quantitative analysis of the access and use of the Internet in this study provides insightful information regarding the Internet use behavior of librarians in Lahore, Pakistan. It was found that a good percentage of the libraries in Lahore have access to the Internet. Among those, academic libraries have more access to the Internet than any other types of libraries, with school libraries using this facility least. Most of the libraries offer the Internet facility for both staff and users. There is only one library that had access to the Internet for more than two decades. Most of the libraries got access to the Internet facility in the current decade.

Libraries are using the Internet mostly for acquisition, cataloguing, and reference functions. Yet circulation is rarely performed on the Internet. Nearly all libraries face a verity of issues in accessing and using the Internet.

In general, the state of Internet access and use in libraries of Lahore is satisfactory. However, there is still a long way to go as Pakistani libraries are far behind in the use of technology. Planning, awareness and advance skill among librarians are needed. Enhancing the visibility of libraries in an IT-based competitive world should also be stressed. Pakistani libraries can play a vital role in society by promoting the Internet use.

### References

- Bertot, J. C., McClure, R. C., & Jaeger, P. T. (2008). The impacts of free public Internet access on public library patrons and communities. *Library Quarterly*, 78(3), 285-301.
- Darries, F. (2003). Internet access and use in reference services in higher education institutions in South Africa. *South African Journal of Library & Information Science*, 70(2), 72-85.
- Dunsire, G. (2000). The Internet as a tool for cataloguing and classification: A view from the UK. *Journal of Internet Cataloging*, 2(3), 187-195.
- Hundie, K. (2003). Library operations and Internet. *The Electronic Library*, 21(6), 555-564.
- Internet World Stats. (2009). *Asia*. Retrieved September 26, 2010 from <http://www.Internetworldstats.com/asia.htm>
- Islam, A and Panda, K. C. (2009). IT in special libraries in Bangladesh: a case study. *The Electronic Library*, 27(1), 149-161.
- Jaeger, P. T., Bertot, J. C., McClure, R. C., & Rodriguez, M. (2007). Public libraries and Internet access across the United States: A comparison by state 2004-2006. *Information Technology and Libraries*, 26(2), 4-14.
- Jones, M. F. (2005). Internet reference services for distance education. *Internet Reference Services Quarterly*, 9(3), 19-32.
- Kamssu, A. J., Siekpe, J. S., & Ellzy, J. A. (2004). Shortcomings to globalization: Using Internet technology and electronic commerce in developing countries. *The Journal of Developing Areas*, 38(1), 151-169.
- King, S., McMenemy, D., & Poulter, A. (2006). Effectiveness of ICT training for public library staff in the UK: Staff views. *The Electronic Library*, 24(2), 265-276.

Luyt, B. (2006). Internet access in libraries: A comparison of press coverage between Canada and Singapore. *The International Information & Library Review*, 38(4), 205-214.

Mahmood, Z. (2005). Coming of age. *Spider*, 7, 34-39.

Melchionda, M. G. (2007). Librarians in the age of the Internet: Their attitudes and roles: A literature review. *New Library World*, 108(3/4), 123-140.

Mohsenzadeh, F., & Isfandyari-Moghaddam, A. (2009). Application of information technologies in academic libraries. *The Electronic Library*, 27(6), 986-998.

Mudawi, M. S. E. (2005). The use of the Internet and e-mail among Sudanese librarians: A survey report. *Library Review*, 54(6), 355-365.

Mugwisi, T., & Ocholla, D. N. (2003). Internet use among academic librarians in the universities of Zimbabwe and Zululand. *Libri: International Library Review*, 53(3), 194-201.

Murray, J., & Tschernitz, C. (2005). The impact of electronic information delivery on reference enquiries. *Online Information Review*, 29(2), 157-167.

Odero, D., & Mutula, S. M. (2007). Internet access in Kenyan university libraries since 1990s. *Malaysian Journal of Library & Information Science*, 12(1), 65-81.

Saeed, H., Asghar, M., Anwer, M., & Ramzan, M. (2000). Internet use in university libraries of Pakistan. *Online Information Review*, 24(2), 154-160.

Semertzaki, E. (2008). Internet usage in Greek libraries. *The Electronic Library*, 26(5), 735-756.

Styczynski, J. (2002). The evolution of Internet training in a corporate library. *The Reference Librarian*, 35(74), 49-53.

United Nations Development Programme. (2000, October). *Driving Information and Communications Technology for Development: A UNDP Agenda for Action 2000-2001*. New York: Author.

Webb, L. M. (2002). Availability of Internet training programs for elderly public library patrons. *The Reference Librarian*, 37(77), 137-147.

Younis, A. R. M. (2002). The perception and administrative effect of Internet usage in Jordanian university libraries. *Online Information Review*, 26(3), 193-208.

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Submitted to CLIEJ on 3 November 2010.

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Butt, Komal; Qutab, Saima; & Mahmood, Khalid. (2011). Access and use of the Internet in the libraries of Lahore, Pakistan. *Chinese Librarianship: an International Electronic Journal*, 31. URL: <http://www.iclc.us/cliej/cl31BQM.pdf>

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