

Information Technology Utilization in Library Services: An Assessment of the University Libraries in Lahore

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Abstract: Presently information technology is attractive center step the whole world into a global village with a global economy, which increasingly dependent on the innovative management and sharing of information technology. The objective of this study was to find out the stage of information technology utilization in the library services of the university libraries in Lahore. It is significant that to point out focus of this study was the central libraries of the universities in Lahore. To appreciate this objective, the researcher went through a multiple phase research process. In which the first phase, different sources of literature were reviewed to understand the different aspects of access and use of information technology in the university libraries and the instrument of questionnaire was used in the light of the reviewed literature. In the second phase, data were collected through the questionnaire. The population of this study was the university central libraries in Lahore that had been utilize information technology in library services. In the third phase, the data collected were analyzed by SPSS version 17.0.

Keywords: Information Technology (IT), Utilize Technology, Library Services Use IT

1. Introduction

Libraries take part in a critical role development of the society. These libraries have always tried to update themselves to keep rapidity with the fast shifting times. They have always used up to date technologies in organizing, acquiring, preserving, and disseminate information. The technology grew in field of the librarianship from calligraphy to typewriter then typewriter to computer. In present age, the activities remain same but the ways of doing them have been changed. With the appearance and development of information technologies, internet is the most enveloping information technology that has revolutionized the world in many ways. Information technology (IT) is “a very broad term encompassing all aspects of the management and processing of information by computer, including the hardware and software required to access it... [1].

Information Technology (IT) is widely considered as the most important revolution humankind has experienced since the industrial revolution and the development of movable-type printing techniques. A country's development depends on the extent of use, speed of access, and skillful application of IT systems. The utilization of information technology has

become an indicator of a nation's wealth level. Countries, which fail to prepare for IT and do not use it, are likely to lose their global competitiveness. Dr. Mahatir bin Mohamed, Prime Minister of Malaysia has very rightly said that "In the information age that we are living in... there is today, no wealthy developed country that is information-poor and no information-rich country that is poor and undeveloped [15]".

After an encounter with computer, man was trapped in its attraction. It started work as a calculator and became the most popular device in the business of life. With the passage of time it established its roots in the libraries and others important departments of life. It became an integral part of the life including its hard and software aspects and their requirements. After the great invention of Abacus and the work of Pascal, world became aware of it. It can be said that it illuminated and mesmerized the world with its wonders.

Use of internet by research scholars is an important area of study in today's wired information environment. The internet has become an important component in academic institutions as it plays a pivotal role in meeting information and communication needs of institutions and individuals. "It makes it possible to access a wide range of information, such as journal articles, papers etc., from anywhere in the world. It

also enables scholars and academic institutions to disseminate information to a wider audience around the globe through having web sites and a way to search them and organize the output.”[4]”

The consumption of information technology has become an indicator of a country’s wealth level. Many Think Tanks and the Experts give the vision that a country’s improvement and development sometimes depends upon the modernity of technology. Information Technology in this context plays a vital role. The use, speed and the skills in Information Technology make the way of a country towards development. We can include many good examples from the contemporary world. Firstly to take an overview we have to understand the value of Information Technology. As for as the use of Information Technology is concerned in the academic portion, it has built its roots in many countries that exist on the Map of the World like; Japan, U.S.A., Russia and China etc.

Library education in developing countries such as Pakistan faces problems such as the lack of co-ordination between library schools and professional association, out of date curricula, non-availability of computer technology and the lack of experienced staff. It can be seen that professional education presents a challenge to the faculty of library schools. Each of these factors may well have affected library and information science education. Therefore it is useful to study past and recent developments within the context of present levels of programmes and courses in both countries. [12]

In the final phase, conclusions were drawn and made recommendations on the basis of conclusion and in the light of the study objectives. Findings of the study expose that a good number of university libraries in Lahore are using information technology in library services. Utilize information technology is on the peak not only with the library employees of the universities but in addition among the students and teaching faculty. University libraries utilize information technology used for different library functions i.e., acquisition, cataloging and classification, circulation, reference services and selected dissemination information (SDI) library services. Recommendation of this study may be cooperative for the development of the levels of information technology used in library services of public and private universities in Lahore.

Computers have been an integral part of research and academe for a while, and with the increase in processing power and availability of software, they have also become indispensable tools for business (Abdullah, 1996). The internet has provided a new dimension to the information industry and has emerged as the core of the information infrastructure. Today no one really knows how vast it is all that can be estimated is its growth rate and its impact on society. [14]

Countries, which fail to prepare for information technology and do not use IT are likely to lose their global competitiveness, as IT has changed the way we live, interact, and Communicate with each other...“[3]”. The usage of computers got more implication after the World War I. In

the 1930s the use of Computer was enhanced. Its significance increased day by day in World War II, computers were used to calculate and managed the weapons. This helped the Western allied to get victory over the Rivals. The use of Information Technology has been started in developed countries a long time ago. It has helped them to visit the moon and now in recent time to visit the Mars too.

The biggest technology challenge facing the library profession today is that of preparing our employees to use the technology effectively. The library environment is currently undergoing a rapid and dynamic change. Today library means not only a store house of books and documents but also a service institution. [6]

The countries that took keen interest in Information Technology, they crossed all the barriers of fictitious and conservative ideas and activities as well, and the nations or countries which ignored its use became far behind as compared to other nations. Electronic business, e-commerce, e-marketing, e-governance, telemedicine, wired money, virtual universities and digital libraries are the buzzwords of these days. Communication channels such as World Wide Web (WWW), internet, Intranet have linked people and information, and have fundamentally changed all the ways of scientific, technical, and even commercial information are transferred and accessed.

Gorman... [2] mentioned that technical services are as important in libraries today as in the past. The imaginative use of technology to enhance and expand library services and resources has, to a great extent, stemmed from innovation in technical services area. The technical services librarian is uniquely placed to have a rewarding career in service to human kind. According to knowledge of every person it was the time when our libraries were without the use of technology. Old and pathetic methods were used to operate libraries. Difficulty was a big hurdle in the way for the client as well as the staff of library. Many people avoided using libraries by themselves, but the positive point is that in the past and presents the importance of the university libraries sustained. In the past more staff was required to handle the library but nor in current times the use of Information Technology has made it easy to a great extent as compared to the past. With a minimum effort maximum result is gained.

User applications on the internet cover a wide range of subject areas. The avenues for exploitation of the internet by Library and Information Centers (LIC) are unlimited. It provides access to a variety of information resources, bibliographic and full-text databases, online journals, tables of contents, books and newsletters, OPACs and multimedia programmes. A number of sites are helpful for technical services including acquisitions, cataloguing, reference services and specialized resources (mujoo-Munshi, 1999). [16]

An essential factor in the use of IT is the realization that technology is not an end in itself but a means to an end. Al-Zahrani... [1] viewed technology as a vehicle to offer more efficient and effective delivery of current services and add new services to meet future needs of its users. He further

stated that without a firm commitment to initial and continued staff Development, the benefits of technology would not be fully realized. Information Technology is busy in spreading its wondrous effects all over the world. According to many critics, Information Technology is a tool that never ends rather it helps to make or go to the end of the things. Moon was a mystery for human, but after the development in technology, this mystery was transformed into a pleasant journey. Critics are of the view that Information Technology performs like a vehicle that serves like a transporter by giving and taking the services from one point to another. It also makes space for the new discoveries and information by keeping old ones.

Information and Communication Technology not only encourage creation and sharing of information but also accounts for automation of library system in which machines (computers) are now used to perform those activities that are hitherto performed manually in a traditional library set-up. The activities include collection development, cataloguing and classification, and Selective Dissemination of Information (SDI). Other benefits of Information and Communication Technology in Libraries and Information Centers include accuracy of information gathering, time saving (thus accomplishing one of the laws of traditional librarianship) and efficient use of space. The issue of space is even more glaring where information centers are the focus. A typical information Centre might not need more than one or two computers with internet connectivity to function efficiently. [9]

They are of the view that Information Technology performs well with all its uses and benefits, when the proper attention is given to its staff and their requirements. It is like a plant that grows with the proper care and attention; similarly the plant of Information Technology is required great attention. It is evident that IT has affected the libraries' processes and its services at large. Powel... [5] mentioned that computers, Networks and other technologies have emerged as indispensable tools for assisting the library in serving its users. However, technology itself does not provide value to library users. It's the technical librarian who uses the technology strategically to organize library resources, services and systems as well as assists the library clients to use library sources more effectively and efficiently.

It is worth mentioning that the use of Information Technology has become the permanent source of information access not only in scientific departments but also in libraries. Computers, networks and other important Technologies have risen as indispensable tool for helping the libraries and its users. It is also worthy to note that as for as libraries and the use of Information Technology is concerned, Information Technology does not give value the library itself. Rather it the librarian who uses it and makes the library and technology worth mentioning by arranging the library with all its assets along with helping the clients.

The library media specialist may seek a middle ground with duplication of resources, purchasing the traditional print resources as well as some of their electronic counterparts.

Cossey (1995) calls this compromise approach a hybrid library that selects paper versus electronic sources on the basis of appropriateness and cost-effectiveness. [13]

Lahore is the provincial capital of the Punjab, the province with largest segment of population of the Pakistan. It is also known as "cultural capital of Pakistan" and "the city of colleges and universities". A large number of academic and research institutions are situated in Lahore. Presently, there are 26 academic institutions which are operational in Lahore. In Pakistan the population is increasing to a great extent at daily basis. It is considered among the most populous countries now. Two big cities i.e. Karachi and Lahore are considered more populous cities of Pakistan. Lahore is the capital city of Punjab, so it has great interaction in it for the residents of other parts that is why it is considered most populous after Karachi; many kinds of cultures exist in the city so it can be called as a multicultural city of Pakistan. Our population consisted of 26 academic universities of Lahore while the sample comprised of the Chief Librarian, Professional Staff and Technical Staff of the same 26 academic institutes Information technology has proliferated at an amazing rate in libraries and information centers.

2. Significance of the Study

The literature on the topic is available on IT applications in all types of libraries. Haider [13] traced the history of computer application in libraries of Pakistan and mentioned that Pakistan Scientific and Technological Information Center (PASTIC) was established in 1968. The centre supports to produce the country's first union catalogue of scientific periodicals, and profile of 100 scientists to start Selective Dissemination of Information service (SDI). History of Pakistan is not very old since its emergence, 67 years have been passed. Experts in the field of Information Technology traced the roots of Information Technology's use in libraries in the decade of 1960s. In the late 60s, its use planted its roots in the academic library that has converted into a plant. Approximately 100 scientists of this field started this program and they were successful in their attempt. In 80s Pakistan found a pleasant change in the form of automation. In start computer was a source of irritation for the university libraries but later on it got popularity.

Measuring the amount and type of technology being used in educational settings is an important but difficult task. The general assessment is that there is not enough computer technology available in our schools. Durham (1997) reported that 80% of the teachers surveyed indicated that they used the computer less than they would have preferred, but they were confounded by the problems of access and availability. In 1996, Mehlinger (1996) maintained: "No one knows for certain what kind of technology exists in schools, how it is used, how much it is used, whether what exists is actually available to teachers, and whether what exists is broken, worn-out, or still in unopened boxes" (p. 403). In a recent examination of technology analyses, Mergendoller (1997) reported that computers are used about one and three-fourth

hours per week per student, with the majority of that time spent in workbook type exercises and drills in basic skills. [11]

After a span of ten years, Agriculture University and research center, libraries started using computers. The University of Sindh, University of Jamshoro installed computers in the library in 1980. National Agriculture Research Council (NARC) Documentation Center also introduced computer applications in the 80s. Idrees mentioned that the 1980s saw a shift towards automation in Pakistani libraries.

Computing and Telecommunications (and also such areas as broadcasting and publishing) used to be quite distinct industries, involving distinct technologies. Now they have covered around certain key activities such as use of the Internet. The pace of adoption of new IT has been very speedy: it is markedly more rapid than that of earlier revolutionary technologies such as the steam engine or electric motor. But in Nigeria, information technology is rather a recent phenomenon. Telecommunications, the oldest element, had a modest beginning with the first trunk telephone service between two towns in 1923 (Ofulue, 1980). [10]

Firstly it was limited to one or few computers but with the passage of time it has transformed into vast area. Now more than 50 percent it has captured the place of computer. The use of internet has helped to a great extent. Online books and catalogue are available now that facilitated the academic persons. Ramzan... [7] Indicated the extent of hardware, software, and electronic databases available, their utilization levels, and degree of changes which have occurred in the use of IT in Pakistan's academic libraries. However, it is founded that the literature presents a scarcity in terms of any study on the use of IT in Technical Services of university libraries in Lahore. This study is an attempt to present a true view of the library technologies in technical services so that library planners and decision makers can identify the current use of IT and devise the way to use the same efficiently. The present study will further identify the hindrances in maximizing the use of IT applications by technical services departments/professionals in university libraries of Lahore.

Since 1998, the government of Pakistan has focused on the use of information technology in both private and public sectors universities. Libraries are considered amongst the major organizations that rely excessively on IT applications. After the 1980s in the decade of 90s Pakistan government took a great interest in this context and took many revolutionary steps at the level of universities in both public and private sector. Information Technology has become so vital that libraries rely on it to a great extent. Hence the research in this area is important as it can provide evidence regarding the extent to which the application of information technology exists in the libraries of Pakistan. The use of IT in all basic departments of Library is evident. IT has been applied in reference services, acquisition and technical services departments etc. of the libraries. The goal of the study with research objectives was to: assess the availability

of IT applications, explore the current use of IT and to find out the major hindrances affecting the use of IT. The study will further make the Recommendations to maximize the use of IT by technical services departments/staff of University libraries of Lahore.

The purposes of this study:

1. Identify current position use Information Technology Library services.
2. Accessibility of (IT) with applications (LCSH, Acquisition, E-DDC etc.) Library services universities of Lahore.
3. Explore major interference moving the exploit of (IT) by library services departments.
4. Explore utilized Information Technology by library services.

3. Methodology

This study is based on survey research design. Keeping the gaps and need of the time in view, the basic purpose of this survey was to get a broad understanding about various aspects of technical services. The survey was limited to all central libraries of HEC recognized universities in Lahore. The questionnaire was distributed in each ULL. The questionnaire contained both open and close ended questions, so it was analyzed both qualitatively and quantitatively to reach at conclusions. Quantitative analysis was done with the help of Statistical Package for social Sciences (SPSS-version 17.0). The questionnaire was used as research tool and its copies were distributed among chief librarian, technical librarian and professional staff in the academic libraries of Lahore. A structured questionnaire was used as data collection instrument. Structured questionnaires are characterized by a group of provided fixed responses. The subjects of this study were Chief Librarian, Technical Services Librarians and Professional Staff working in the university libraries of Lahore. The updated list of public and private universities issued by Higher Education Commission was used to circulate questionnaire by post and by electronic means.

4. Population

University Libraries of Lahore Recognized from HEC were considered as the population for this study; the list of population was developed through electronic as well as physical sources. Address and phone numbers were also found from the HEC Web site. With the help of these sources, a list of 26 academic libraries of Lahore was prepared. Identification of the location of population was a main problem faced by the researcher during the study. Different sources were used to identify the location of libraries such as Dog pill, Google search engines and the official Web sites of libraries. The researcher made numerous phone calls to 1217 (PTCL Inquiry Number) for acquiring the phone numbers of libraries.

5. Survey Instrument

For data collection regarding research objectives, a study tool was designed on the basis of literature review and research questions. The researcher used conversation approach with some professional librarians by personal visits to these libraries to get an approaching of their present practices. The questionnaire was divided into two parts. First part was about Personal information and second part was about accessibility of Information Technology tools and uses of library services in university libraries.

The data quantitative analyzed for interpretation by using SPSS (Statistical Package for the Social Sciences) version 17.0. Various statistical methods were used in the data analysis including frequent sharing and descriptive statistics. Views by respondents were analyzed in qualitative method.

6. Responded

Total questionnaire of 78 participated and among them 58 professionals respond. Acquire results show that among 58 respondents the majority was of the male having 36 (62.06%) in and the female were 22 (37.93%). 42 (72.41%) respondents were the MLIS, 4 (6.89%) MLISc, 3 (5.17%) MLIS, MA, 6 (10.34%) Simple MA, 1 (1.72%) MBA, 1 (1.72%) B. A and 1 (1.72%) B. A / BLIS. In the field of age, 23 (39.65%) persons roundabout of 20-30, 13 (22.41%) persons were about 31-40, 8 (13.79%) were about 41-50, 10 (17.24%) persons were about 51-to above, and the 4 (6.89%) participants did not declare their age.

6.1. Respondent Views

The questionnaire show the views of the participants of research process in different ways by study the cluster of questionnaire. This cluster was having the quantity of 78 questionnaires. In the 78 only 58 questionnaires were responded. Among the quantity of 58 the response rate of the Question Number 31 which statement is "which projects are under to enhance of IT services" was in the strength of 28. The resemblance in the responses of respondents is (RFID, MARC, Digitization of collection, Collection of CDs & DVDs in cataloging, RFI, Conversion of LIMS in to MARC). The miscellaneous answers of other respondents are (Development of Library software, ICT training and workshops of students by HEC digital libraries, researchers and library staff, Designing subject gateway, check and balance system, indexing of library material (books, Journals etc.) Debugging, LOC availability on gateway, Conversion of LIMS in to KOHA. The study of these paradigms enables the researcher to draw a conclusion about the system that are operating in the academic university libraries in Lahore, recognized by the Higher Education Commission there are different types of systems that are using for the convenience of the students and teacher in study and research projects. In the global world the development of the IT in library services has become a necessity.

6.2. Opinion About Use ICTs

Respondents were asked to point out different Information Communication Technologies (ICTs), which they were using for library Services. According to the acquired results, 27 (46.55%) respondents were using Information Technology tools for library, 10 (17.24%) were using online conversation, 8 (13.79%) were using telephone, 13 (22.41%) respondents were using e-mail for this purpose.

7. Data Analysis

Data analysis has been examined in the graphical form and as well as in the form of their expected headings, that are given below: Provision of Digital Services, Networking, Computer Services, E-Cataloging, Qualified Staff in Computer Lab, Digitization, Digitization of Manuscripts, Computer Lab, Internet Facility, Electronic-Service, Internet Services, More than 100 Computers in Lab, Trained Staff, Courses for professional development, Advance Software's, IT services, Electronic-Collections, HEC Digital Library, Up to Date Computer Labs, Facility of Printers, Fax Machine Facility, Data Storage Facility, E-Communication, Library Websites, Online Public Access Catalogue (OPAC), Computers in Library, Antivirus/ Virus check, IT Applications to reduce Labor, User 'Problems, Facility of Scanner, Copy Catalogue, Conversion of Data, Budgeting Provision, Enhance Knowledge, Technical staff, ICT Status, Technical Services etc.

8. Results

Data collected through questionnaires was analyzed and interpreted in this research work. All the University Libraries of Lahore Recognized from Higher Education commission were selected as a population of this study. Data was collected through the distribution of questionnaires among the Chief Librarian and professional staff in their libraries. Fifty eight (58) questionnaires have been analyzed in this research work. For checking the electronic collections, 26 University libraries have been surveyed; the officials who responded from the Libraries are 58 out of 78. According to the collected data, 9 (11.53%) officials did not have own electronic collections and 49 (62.82%) did house own electronic collection.

9. Conclusions

The possibility of this study, the following conclusions is drawn from the data analysis and the review of related literature:

- i. Most of the libraries offer IT facility staff and users.
- ii. Most of the libraries utilize high-speed internet connections.
- iii. A few University libraries do have Web sites.
- iv. A large number of universities libraries in Lahore that have access to Information Technology and using the

IT in library services.

- v. Tiny amount of written literature published with regard to the IT used in university libraries of Pakistan.
- vi. Most of the university libraries face problems with regard to access and use of the IT while a few libraries do not face any difficulty
- vii. University libraries are using Internet for various cataloguing and classification functions.

10. Recommendations

Based on these findings and conclusions, the researcher offers the following Recommendations to get better the IT impact and usage in technical services in university libraries:

1. The majority of the respondents have received IT training through very short courses. Information literacy programs for longer durations (diplomas etc.) are needed to be organized by the departments of library and Information Sciences in Pakistan and the Pakistan Library Association.
2. The competent authorities should raise the libraries budget in order to acquire IT hardware, software and to increase IT based collections.
3. Libraries should have adequate hardware for administration and library services.
4. Most modern IT appreciations and web tools must be opted in the libraries of Lahore.
5. Library schools should modify their curriculum according to market needs

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