**TRAINING NEEDS ASSESSMENT OF LIS PROFESSIONALS IN UNIVERSITY LIBRARIES OF PUNJAB AND ISLAMABAD**

**SUBMITTED BY:**

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**M. Phil Scholar, Roll No. 11**

**SESSION: 2009-11**

**Research Supervisor: Dr. Rubina Bhatti**

*THESIS SUBMITTED TO DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE THE ISLAMIA UNIVERSITY OF BAHAWALPUR IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF DEGREE OF MASTER OF PHILOSOPHY IN LIBRARY AND INFORMATION SCIENCE*



Department of Library and Information Science

The Islamia University of Bahawalpur

Pakistan

2013

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2013

**ACCEPTANCE CERTIFICATE**

**The Islamia University of Bahawalpur**

**Department of Library & Information Science**

The thesis entitled **“*Training Needs Assessment of LIS professionals in University Libraries of Punjab and Islamabad”*** written by Mr. Muhammad Nadeem is hereby approved in the partial fulfillment for the degree of Master of Philosophy in Library and Information Science.

**Research Supervisor External Examiner**

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**Chairperson**

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**DECLARATION**

I, Muhammad Nadeem, M.Phil Scholar, Roll. No. 11, Department of Library & Information Science, The Islamia University of Bahawalpur, hereby solemnly declare that this thesis titled ***“Training Needs Assessment of LIS professionals in University Libraries of Punjab and Islamabad”*** submitted by me in partial fulfillment of the requirements for the award of degree “Master of Philosophy in Library & Information Science, is my own original research work and has not been published or submitted to any other institution for any degree earlier. It is further declared that this work, in future, will never be submitted to any other University in Pakistan or outside for acquiring any degree.

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**SUPERVISION CERTIFICATE**

It is certified that the research work contained in this thesis titled “***Training Needs Assessment of LIS professionals in University Libraries of Punjab and Islamabad***” written by Mr. Muhammad Nadeem, Roll. No. 11, M.Phil Scholar, Department of Library & Information Science, The Islamia University of Bahawalpur, has been carried out under my Supervision. The data presented in this thesis is genuine and fairly collected from the field.

This thesis is submitted to the Department of Library & Information Science, The Islamia University of Bahawalpur as a partial fulfillment of the requirements for the award of degree “Master of Philosophy in Library & Information Science” to Mr. Muhammad Nadeem.

**Dr. Rubina Bhatti**

**Chairperson & Associate Professor**

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**DEDICATION**

To my father,

***Rao Muhammad Subhan***

For his endless love, support and encouragement

**ABSTRACT**

Due to emergence of ICTs in Librarianship, information explosion and ever-changing and increasing demands of library clientele, LIS professionals need to upgrade their knowledge for accomplishment of desired results. Relevant and continues education and training is needed to fit in the constantly changing environment. This study aims to identify the training needs of LIS professionals in university libraries of Punjab and Islamabad. Survey questionnaire (peer-reviewed, pilot tested) was distributed among 150 LIS professionals in 59 HEC recognized Public and Private Sector Universities / Degree Awarding Institutes. The response rate was 84%, Data was analyzed using SPSS version 17.

The findings show that LIS professionals desperately needed training in the use of Online databases, Troubleshoot new technologies, Endnote, Data Compression (Winzip), SPSS, Internet, Windows 7, XP, Vista, LINUX etc (Operating system), Desktop publishing application, and social media. They consider workshops, seminars, web-based training tutorials effective. Majority found University Main Library and Departmental Library are most convenient places and during library hours and Evening are most convenient timings. HEC, PLA, library schools and library management should be responsible for this and should also provide online tutorials

The study suggests that workshops, seminars should be conducted and authorities should provide funding, trained resource persons and written training policy for developing communication and presentation skills and train how to manage with change.

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***Muhammad Nadeem***

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**CHAPTER NO: 1**

**INTRODUCTION**

* 1. **Training Needs Assessment: Overview**

“Information has appeared as the ‘‘fourth resource’’ after land, labour and capital since it involves the very foundations of almost every sector of the society” (Joseph, 2005). Now information has become unique attribute of this modern world. The most significant feature which has changed the Library environment, during this century, is information and communication technology (ICT). The use of computer and Internet has brought many changes in Library and Information profession. It has been observed that in libraries system the major changes were the advent of the digital information storage & retrieval technology, use of different library software and introduction of networking that enable to move the information from one place to another place. Now internet has become the life blood of library and information science environment. (Orenstein, 2005)

It has also been distinguished that new information technologies (IT) have brought many changes in the nature and format of information generating, processing, storage and retrieval in libraries. With the collaboration of computer and information communication and technology mostly libraries are converted into digital libraries and many libraries are building home pages on the World Wide Web from users have access information without physical boundaries (Halder, 2009).

In past, traditionally librarian was a person who perform different task in libraries like acquiring, organizing and preserving printed materials for helping the users to providing the required information in time. But today, Library and Information Service profession has become the most challenging professions in the information society. Librarians face various challenges posed by new development in Information and Communication Technology (ICT). The tools that librarian used in their daily work have changed in 21st century. The role of the Library professional has become more dynamic in the modern environment. Today librarians are known as researcher, information manager, facilitator, multimedia librarians and end-user trainer. In the digital environment, training has become ever more important for developing skills in managing, creating and providing services (Philips, 2003).

“Universities are the top institutions of higher education. Universities have collected the most brilliant minds and the great intellectual leaders in the world. University library is considered the “heart of university” .One of the main goals of university libraries is to support education and research. The main users of university libraries are professors and students, and it is their mission to provide them information necessary for the development of teaching, research, and the extension and preservation of knowledge.” (Poul, 2004).

Due to the rapid growth rate and ever-growing demand of information application of IT and use of web-2 is necessary to supply to the user a right information at the right time is possible when librarian of Universities upgrade themselves on continuous basis at par with ongoing changes (Nimai, 2007).

“In Pakistan, there are 135 fully recognized universities that offer PHD level awards. In Punjab, there are 59 universities in the private and public sectors offering education in all kinds of disciplines with attached centralized and decentralized library systems” (www.hec.gov.pk).

In university libraries, LIS professionals should perform their role effectively and develop their communication and management skills with a competency in ICT use. There will continue to be a need for regular training for LIS professionals in the electronic information environment (Mahmood, 2006).

**1.2 Training:**

“Training is a means of communicating new knowledge and skills and changing attitudes. It can raise awareness and provide people with the opportunity to explore their existing knowledge and skills. There are many different kinds of training for many different audiences, including service providers and service users” (Miller, 2002).

Usually, training is an activity that changes people’s behavior. Training engages the improvement of three basic characteristics: knowledge, skills and attitudes. Generally these three features have to be taken together. Training is not only helps the people in improving the quality of work and work-life, health and safety of institute but also creating the learning environment within the institute (Mahmood, 2002).

“Training is an educational process. People can learn new information, re-learn and reinforce existing knowledge and skills, and most importantly have time to think and consider what new options can help them improve their effectiveness at work. Effective trainings convey relevant and useful information that inform participants and develop skills and behaviors that can be transferred back to the workplace” (Salvi, 2009).

Training refers to instruct the specific skills’ ability and knowledge to staff. A prescribed definition of training and development is:

“It is an effort to develop existing or potential staff performance by increasing staff’s skill to perform through learning, usually by changing the employee’s attitudes or increasing his or her skills and knowledge” (Parkas, 2011)

**1.3 Needs Assessment:**

The term "Needs Assessment" has become strongly associated with education and instructional design. However the same basic process is used to determine user needs and wants for objects and services.

“A need assessment can be described as a process for identifying the knowledge and skills necessary for achieving organizational goals (Gill, 1994).”

“A need assessment is a process for pinpointing reasons for gaps in performance or method for identifying new and future performance needs (Gupta, 1999).”

“In general, a needs assessment is a systematic approach to identifying social problem, determining their extent, and accurately defining the target population to be served and the nature of their service needs (Rossi, 1998)

“It is a learning process that involves the acquisition of knowledge, sharpening of skills, concepts, rules, or changing of attitudes and behaviours to enhance the performance of employees. Training is about the acquisition of knowledge, skills, and abilities (KSA) through professional development (Coilen, 2007)”

For a decision making process, needs assessment is used for identifying gaps and to provide information whether the gaps could be overcome through training. Focusing on identifying and solving performance problems, the assessment is part of a planning process. These concert problems may be related to knowledge, skills and attitudes. Training Needs Assessment (TNA) is usually related to managerial and individual presentation. A needs assessment means that assessed the individual has a defined job performance or defined objectives and goals of an organization has focused

“There are three levels of needs assessment: organizational assessment, task assessment and individual assessment. All three levels of needs assessment are interrelated and the data collected from each level is critical to a thorough and effective needs assessment.

1. Organizational assessment looks at the effectiveness of the organization and determines where training is needed and under what conditions it will be conduct
2. Task assessment provides data about a job or a group of jobs and the knowledge, skills, attitudes and abilities needed to achieve optimum performance.
3. Individual assessment analyzes how well the individual employee is doing the job and determines which employees need training and what kind” (Miller, 2002).

**1.3.1 Basic Needs Assessment Techniques:**

There are several basic Needs Assessment techniques. Use a combination of some of these, as appropriate:

#### • Direct observation

#### • Questionnaires

#### • Consultation with persons in key positions, and/or with specific knowledge

#### • Review of relevant literature

#### • Interviews

#### • Focus groups

#### • Tests

#### • Records & report studies

#### • Work samples (Rouda, 2001).

**1.4 Training Needs Assessment**

“Training Needs Assessment (TNA) is an umbrella term for the analysis activities trainers use to examine and understand performance problems or new technologies” (Allisen, 2002).

“A need is not a want or a desire. It is a gap between “what is” and “what have to be. Needs assessment is used for identifying gaps and to provide information for a decision on whether the gaps could be addressed through training. The assessment is part of a planning process focusing on identifying and solving performance problems. These performance problems may be related to knowledge, skills and attitudes”(Ocheibi, 2002).

“The Training Needs Assessment is a critical activity for the training and development function. The needs assessment is the first step in the establishment of a training and development Program. It is used as the foundation for determining instructional objectives, the selection and design of instructional programs, the implementation of the programs and the evaluation of the training provided. These processes form a continuous cycle which always begins with a needs assessment” (Miller, 2002).

A Training Needs Assessment is the procedure by which we can conclude what kind of information, skills, and/or abilities someone (maybe a worker) has that can be skilled via some type of learning means. It’s a way of building out what requirements the worker has that can be met with training. Training Needs Assessment is usually done by one of several association or persons supporting the association (Klane, 2005).

The main purpose of the Training Needs Assessment is to make sure that there is a need for training and to identify the nature of what a training programmed should contain. For the developing a training plan that is based on the learning needs of the participants, a Training Needs Assessment provides the information. It increases the significance of the training and the commitment of the learners, as they are involved in the research of the training design that reveals their expressed needs (Miller, 2002).

The library environment has shifted from the traditional library to hybrid library, automated library then digital library and then virtual library and presently it is shifted to Library 2.0 with the development and application of information and communication technologies (ICTs), With such changes, LIS profession has also changed in a dynamic way. Training and development is an important tool for successful application of information technology in the libraries. Now the LIS professionals in this present situation are playing all-round multimodal roles to satisfy the different approaches of the end users. (Mehmood, 2003).

**1.5 Statement of the Problem**

In information age, information has become the vital obligation of every human being and it is as important as water and air. Today LIS professionals face challenges due to advances in information and communication technologies the libraries are now changing from traditional to virtual or digital libraries. The conventional concepts of institute, bibliographic description and giving out of information are to be modified to the new environment by the library and information professionals

University is the crown institution of higher education. Again, development of any society / nation has largely depends upon its quality of education and Research & Developmental activities. The user community of University Library includes undergraduate and postgraduate students of different subjects; faculty members, technical and non-teaching staff; research students working for M. Phil. or Ph.D. degree; post-doctoral research scholar working under different schemes. Due to the rapid growth rate and ever-growing demand of information application of IT and Web-2 now libraries do not function that well under manual systems

A comprehensive review of the literature reveals that training need assessment play vital role in the promotion of librarianship. They provide management and guideline for the improvement, endorsement and development of library services, to encourage excellence through continuing educational program, publications, communications and awards, and to undertake other such innovative programs. To improve the traditional skills knowledge, it is a need for additional training to base with a competency in ICT use. To incorporate the requirements of technological advances, LIS professionals must be flexible and get used to traditional skills. Given the current situation, Now traditional formats are being replaced or supplemented due to the continuously updated ICTs and by digital formats (such as e-journals and e-books), it seems likely that there will be a need to continue regular training for library information science professionals.

## **1.6 Objectives of the Study**

This study aims to provide an overall picture of the usage and applications of training need assessment in University libraries of Pakistan. The main objectives of this research are as follows:

* To assess the on-the-job training needs LIS professional in university librarians of Punjab and Islamabad.
* To investigate the new areas of training due to emerging ICTs and Web-2 usage in university libraries of Punjab and Islamabad.
* To identify the applicable contents of training modules for LIS professionals and to determine who should be responsible for training provision.
* To explore the factors militating against training in the university libraries

**1.7 Research Questions**

To achieve the above- mentioned objectives, this study seeks to explore the answer of following important research questions:

1. What are the on-the-job training needs of LIS professional in university librarians of Punjab and Islamabad?
2. Due to emergence of new information and communication technologies in library operations and services, what are latest areas of training needs of LIS professionals in university libraries of Punjab and Islamabad?
3. What relevant and most recent contents should be taught to LIS professionals and who should provide training?
4. What are the barriers and challenges militating against training in the university libraries?
5. Which extent Library & Information Science curriculum has efficiently developed the essential library management and IT skills among LIS professionals?

**1.8 De-limitation and Limitation of the Study**

This study is limited to those LIS professionals that perform their duties in the university libraries of the Punjab and Islamabad. The main intention of this investigation is to define the status of the application of Training Needs Assessment of LIS Professional in HEC recognized public and private university libraries of Punjab and Islamabad. The researcher could not cover most of the university due to his departmental restrictions, time and cost problems, therefore researcher use convenience sampling method to collect data and the researcher follow them by sending questionnaires with covering letter through e-mail and by postal mail questionnaires accompanied by return envelope. For some pending questionnaires, researcher sent many remainders through email and phone calls to the respondents. The Researcher also face problems in literature review because there is lack of research work on the related topics especially in Pakistan.

## **1.9 Research Methodology**

This study is based on survey method. A survey questionnaire was prepared with the help of comprehensive literature search. Data was collected from LIS professionals, working in the university libraries in Punjab and Islamabad. Pilot study was also conducted in order to ensure reliability and validity of the study. The findings of the survey were analyzed using descriptive statistics: frequency counts, percentages and SPSS (Statistical package for Social Sciences) software.

**1.10 Significance of Study**

The present study is an attempt to assess the training needs of those LIS professionals who serve in university libraries of Punjab. This study is a significant effort in promoting good work environment in the libraries and motivations of its librarian. This study is also being beneficial to assess the training need of LIS professionals in information management and information access. (Khalid, 2004)

The needs assessment is the first step in the organization of training and upgrading Program. For determining instructional objectives, it is used as the institution, the design and selection of training programs, the accomplishment of the programs and the assessment of the training provided. These procedures form a continuous cycle which always begins with a needs assessment. (Miller, 2002)

Moreover, this study is helpful to create Co-operation and resource sharing between university libraries and also support university community for research and reference. After this study LIS professionals of universities of Punjab are able to assess their training needs in communication/training skills, IT skills and Managerial skills. This study also Identifying the difficulties, challenges and problems related to the training need for LIS professionals in university libraries. (Charya, 2008)

The study stresses the urgent need for managers and library educators to assess the effectiveness of present day library education in forming the library professionals to meet the demands of future information work. It is the responsibility of the employers to provide opportunities for library and information professionals to update their skills, knowledge and competencies to keep pace with the rapidly changing environment of academic libraries. (Dyuthi, 2010)

**1.11 Organization of the Study**

The study is designed into five chapters.

**Chapter 1: Introduction**

First chapter of present research study provides introduction to show the background of the study, objectives, statement of the problem, significance of the problem, research problems, delimitation and limitation of the study, definitions of the terms and the outline of the proposed chapters.

**Chapter 2: Literature Review**

# The second chapter gives the review of the related literatures, concepts and different aspects of training needs assessment of LIS professional in university libraries.

Chapter 3: Research Methodology

This chapter describes the design of the study and research methodology.

**Chapter 4: Data Analysis & Interpretation**

Chapter four discusses the quantitative interpretation of the data.

**Chapter 5: Summary of Findings, Conclusions and Recommendations**

Chapter five includes the summery of findings, conclusions of the study and

also recommendations and topics for the further research.

**1.12** **Definitions of Terms:**

**Training:**

“A process to share skill and knowledge to extend and develop capabilities for better job performance” (Miller, 2002).

**Need:**

“A need is not a want or a desire. It is a gap between “what is” and “what have to be.” (Ocheibi, 2002).

**Assessments:**

“A systematic process to acquire an accurate, thorough picture of a system's strengths and weaknesses, in order to improve it and meet existing and future challenges” (Dectionery.com’s).

**Training needs assessments:**

“An umbrella term for the analysis activities trainers uses to examine and understand performance problems or new technologies” (Allisen, 2002).

**LIS Professionals:**

“All those individuals who have acquired their undergraduate or postgraduate qualification in a formal education programme of library and information science” (Dyuthi, 2010)

**Information Communications Technologies (ICT)**

“The technologies that enable society to create, collect, consolidate, communicate, manage and process information in multimedia and various digital formats for different purposes, i.e., computing and telecommunications technologies like the person” (David, 2001).

**CHAPTER NO: 2**

**LITERATURE REVIEW**

A literature review is an account of the literature related to a specific field or topic. Literature reviews give us with a useful guide to a exacting subject. If we have limited time to carry out research, literature reviews can give us an impression or act as a stepping stone (Lie).

**2.1 Introduction**

“Training needs assessment is a process through which a trainer gathers and examines information, then constructs a training plan. This procedure finds out the need for the training; identities training needs; and examines the type and scale of resources needed to support training. Conducting an effective assessment ensures that training is the appropriate solution to a performance deficiency.” (Sorenson,2002). A large quantity of literature is available regarding application of Information Communication Technology (ICT) in libraries, professional development and continuing education needs of library professionals at national and international level. But studies as regards the Assessment of Training needs of ICT & management skills for LIS professionals in university libraries was conducted in small number at international level and few no. of studies were carried out in Pakistan.

A survey of the literature found that most of the studies are reported by Dr.Khalid Mehmood, Dr.Kanwal Ameen and Muhammad Arif in Pakistan. An attempt is made in this chapter to present a survey of the literature available in Pakistan and in a foreign country. The studies are further grouped under national, international. The researcher used different sources such as books, journals, websites, and online databases like Emerald, ScienceDirect, etc.

**2.2 ICT Skills and Training Needs of LIS Professionals**

Information Communication Technology (ICT) has changed the libraries environment and handles libraries function more efficiently and fulfill users require properly. In this changing library scenario, the library and Information professionals must possess adequate ICT skills to manage the modern libraries, it is important for library professionals to be well informed and updated regarding developments in ICT. This section deals with different studies regarding the use of ICT based applications by library professionals, their attitudes towards ICT, skills in handling new technologies, need for training in the new technologies etc.

**2.2.1 Related Studies in International Context**

Satpathy (2011) conducted a study on ICT skills of LIS professionals in engineering institutes of Orissa, India: A case study. The aim of the study was to examine the most demanding areas of training and ICT skills required by LIS professionals in modern libraries. A survey method was used and a questioner was designed for data collection and population was LIS professionals of 76 engineering institutes of Orissa. Finding shows that all LIS professionals have computer skills and mostly interested in library automation programs but tight work schedule of libraries, poor infrastructural facilities and lake of cooperation from authorities are main hurdles in getting latest ICT skills. The study concluded in digital age, that the role of LIS professional change from custodian of books to knowledge manager so librarian must be well equipped in ICT skills to perform the library activities in better way. The study suggested that the library authorities should provide opportunities to upgrade the ICT skills of LIS professionals and LIS professional associations should arrange different ICT training programs to improve their ICT skills.

Okiy (2010) reported a study of Globalization and ICT in Academic Libraries in

Nigeria: The way forward. The purpose of the study was to examine the impact of ICT technology on librarians and other library staff. The survey method was used. Finding shows that today librarians need knowledge and competencies related to library system. The study concluded that new changes have been occurred during past few decades in library environment as a result of the advances in Information Communication Technology (ICT). The library staff must acquire adequate knowledge of ICT like, library automation, management of information through internet and web based library services etc. The study recommended that library education programs must be arranged for library professionals and library staff.

Buarki (2011) examined ICT Skills and Employability Needs at the LIS Programme Kuwait. The purpose of the study was to compare the ICT skills of Library and Information Science students with those skills need by the job market in Kuwait. Researcher describes the LIS educational situation in Kuwait after comprehensively reviewing the previous published literature and articles. For further documentation and interpretation, researcher evaluates the web sites contents and LIS syllabus. Study described that LIS education in Kuwait facing the challenges and barriers like; lack of human resources, lack of resources and the need for an accreditation body, lack of formal training of ICT skills. Researcher concluded that LIS curriculum should be revised as new ICT applications and Web 2.0 applications emerging in the libraries. Researcher suggested that this study will help to library professionals and administration in reviewing and adding changes in the curriculum and will also help employers and stakeholders to understand the ICT skills needed for LIS employability. It will also help the students to improve their ICT skills to meet the needs of the job market.

Aharony (2009) reported the results of a questionnaire survey to determine Web 2.0 use by librarians. The purpose of the study was to explore whether Israeli librarians accept changes in technologies and make use of these technologies as Web 2.0 applications. Library professionals were randomly selected from all over the country to collect data. Library professionals from academic, school, and public libraries were selected for this study. Most of the respondents were academic librarians and majority of the respondents were bachelor’s degree holders. Different types of questions were declared like as importance, motivation, capacity, threat, challenges, and computer expertise to explore web 2.0 uses by Israeli librarians. Result of the study shows that computer literate library professionals were using more web 2.0 applications than others having less computer skills. Majority of library professionals accept these new changes in technologies in the shape of Web 2.0 applications and make use these applications. Library managers understand the new technological changes and include these technologies in their services. Researcher concluded that library directors should understand the benefits of these technologies and hire people with positive attitudes towards these new technologies. Researcher suggested that library directors should offer training programmes to overcome the negative inclination and train the librarians to adopt web 2.0 applications in their library services.

Saha (2007) studied the training and development of library professionals for IT application in university libraries. This study made an attempt to investigate the application of information technology in libraries from the training and development point of view. IT application is an essential consideration for all libraries because now libraries do not function under manual system. Due to rapid growth of information and development in IT sector, LIS professionals must have LIS technical skills and IT skills for smooth running of library functions automatically. The study concluded that the training programmes regarding ICT skills for library professionals should be offer on continuous bases so that LIS professionals easily adjust themselves with the rapid changes of new technologies.

Paroutis and saleh (2009) reported a study undertaken to determinants of knowledge sharing using web 2.0 technologies. The main intend of this research study was to explore the usage of web 2.0 applications in knowledge sharing and identifying the barriers in using web 2.0 tools within a large multinational firm. Researcher conducted interviews and a total of eleven employees were interviewed. Only five were using web 2.0 technologies and six were not using web 2.0 technologies. Researcher highly recommended that firm managers should take interest towards introducing, adopting and using web 2.0 technologies in organization. Top management should also provide necessary training to their employees to use web 2.0 technologies in achieving their organizational objectives.

James, Garrett and krevit (2009) conducted a study on “discovering discovery tools Evaluating vendors and implementing web 2.0 environments”. The purpose of the study was to share experience of the HAM-TMC (Houston Academy of Medicine, Texas Medical Center) Library. Texas Medical Center Library is implementing and creating web 2.0 tools on library web site. That study was divided into two parts: Two groups were determined: first team identified the scope of the project and evaluate the new developed web 2.0 tool, second group develop web 2.0 training programs and examine the implementation of that tool. The library also selected one of the vendors, Vivisimo, as a partner for the in-house development of a library-specific discovery tool. Texas Medical Center Library chooses Vivisimo’s search platform, Velocity6.0, which consist on three components: search engine, federate search tool, and a clustering engine. That was search tool was named “Discovery” tool which help users to find sources of information they might not have discovered before in their separate searches. A librarian was selected as administrator for new data discovery tool and gives him training to handle that tool. During the process of developing new tool and implementing; library users were invited to view the redesigned library site via a link on existing page and encourage the library users to use the new tool. Velocity team was serving as advisor and was also exploring issues related to the implementation of this new tool.

Babu (2007) in his article on ICT skills of LIS professionals in Tamil Nadu: A case study, discussed the training needs of library professionals in Tamil Nadu. The purpose of the study was to examine the most demanding areas of training and ICT skills required by LIS professionals in modern libraries. A survey method was used and a questioner was designed for data collection and population was LIS professionals of 76 engineering institutes of Orissa. Finding shows that all LIS professionals have computer skills and mostly interested in library automation programs but tight work schedule of libraries, poor infrastructural facilities and lake of cooperation from authorities are main hurdles in getting latest ICT skills. The study concluded in digital age, that the role of LIS professional change from custodian of books to knowledge manager so librarian must be well equipped in ICT skills to perform the library activities in better way. The study suggested that the library authorities should provide opportunities to upgrade the ICT skills of LIS professionals and LIS professional associations should arrange different ICT training programs to improve their ICT skills.

Edwed (1999) did a survey to determine The Changing Role of Librarians in the Digital era. The aim of the study was to explore training needs to adoption of Web 2.0 technologies in libraries. A survey was conducted through questionnaire and the respondent were the library professionals serving in the university, college, school, special and public libraries. The study also shows that majority of the respondents were serving in the academic libraries. Data analysis of the study shows that mid career respondents were using Web 2.0 technologies as compare to senior level positions. The study concluded that the young mid career library professionals have excellent skills of using internet and have desire to learn Web 2.0 technologies for using in libraries. Lack of training programmes and ICT specialist, Lack of computer literacy, unavailability of computers and internet facility were found big hindrances toward adoption of Web 2.0 technologies in the libraries. Training of using Web 2.0 technologies in libraries can enable the librarians to adopt Web 2.0 technologies. The study recommended that training programmes of Web 2.0 technologies should be on regular basis and libraries upgrade their ICT infrastructure.

Somaretna (2011) examined the Service quality in University of Colombo libraries: an assessment. The purpose of the study was to find out quality library services of academic libraries of university according to users satisfaction. Web survey was conducted through questioner. The finding of the study shows that overall services of libraries were found to be good but librarians have lack of ICT skills. The study conclude that lake of computer literacy and ICT skills librarian ware not be able to satisfied the well aware users needs. The study recommended that training need assessment should be repeated with regular interval for feedback. Improvement of service quality in the light of assessment is the next step of this process.

Abdelrehman (2009) evaluated the state of ICT implementation and training at the university of Khartoum library system (UKLIS). The aim of the study was to investigate the present condition of ICT at university library system and identifies the training programmes available for the library system. Survey was conducted through interview and document examination and analysis. The population was university library staff. The finding shows that University have develop a good ICT infrastructure but university libraries have lake of ICT structure due to lake of sufficient funding and lake of skilled and experienced ICT workforce. The study recommended that top management of university should provide suitable funds for staff training and for clear ICT strategy. The study also suggests that department of library science should add in more ICT base courses.

Thompson (2009) studied “Core Technology Competencies for Librarians and Library Staff.” The purpose of the study was to investigate the LIS professional’s need of ICT skills and main problems in acquiring ICT skills and knowledge. The survey method was used and data was collected through interview and structured questionnaire. Finding shows that respondents ware interested in technical expertise like, computer hardware, Internet, troubleshooting and library automation but respondents indicated some troubles like, lack of training workshops, colleagues are not cooperatives and short library internships periods. The study concluded that library professionals need advance ICT skills and training to perform advanced technical information services in library environment. The study recommended that LIS curriculum must be updated according to modern development in library professionals. More library workshops and seminars should be arranged for LIS professionals in university.

**2.2.2 Related Studies in National Context**

Mahmood (2007) investigated ICT training for LIS professionals in Pakistan: a need assessment. This study was based on an assessment survey of continuing education needs for ICT of library and information science professionals. The purpose of the study was to investigate the educational background of LIS practitioners regarding ICT and what skills are required to learn. The study concluded that there is the need of continuing professional education in various areas of ICTs. LIS schools and professional associations organize such training programmes. Study recommended that government of Pakistan should take interest in this regard through its Higher Education Commission and department of libraries and there must be co-ordination between various continue education providers in the country to share their experiences and plans.

Arif (2004) reported a study of the training and development of library professionals for IT application in university libraries. This study made an attempt to investigate the application of information technology in libraries from the training and development point of view. IT application is an essential consideration for all libraries because now libraries do not function under manual system. Due to rapid growth of information and development in IT sector, LIS professionals must have LIS technical skills and IT skills for smooth running of library functions automatically. The study concluded that the training programmes regarding ICT skills for library professionals should be offer on continuous bases so that LIS professionals easily adjust themselves with the rapid changes of new technologies.

**2.3** **Professional development and Training Needs of LIS professionals.**

In information and technology society, library and information science (LIS) education focuses on developing a skillful librarian that handling the information activities in better way. Training needs assessment can help determine current performance or knowledge levels related to a specific activity, as well as indicate the optimal performance or knowledge needed. This section deals with different studies regarding the professional development and training needs of library professionals, their attitudes towards skills in handling new technologies, need for training in the new technologies etc.

**2.2.1 Related Studies in International Context**

Olaniyan and OJO (2008) reported a survey conducted on Staff training and development: A vital tool for organizational effectiveness. The purpose of the study was to examine how training and development of staff have an effect on the organizational progress. The study shows that in any organization machines, materials and even money are valuable assets but most valuable assets are human resources. Without trained and skillful man power everything is useless. The study concluded that staff training is very essential to any organization and its effectiveness. Staff training reduces the errors and improves the quality of work. The study suggested that to achieving the goals and objectives of the organization training and retraining programmes should be made compulsory and organization should arranged workshops, conferences and seminars for staff training and development.

Effah (1998) carried out a research on training and development of academic librarians in Ghana.” The purpose of the study was to illustrate the different efforts made in Ghana to train the academic librarians. That training programs enable them to play important in distributing information efficiently. The survey method was used. Finding shows that university library is like heart in research environment and librarian work as research manager but unsuitability of courses, lack of opportunities and poor incentive appear to be main limitation in the training and development of academic librarians, The study concluded that university librarians require more knowledge and skills to use human as well as material resources technically and economically. The study recommended that more and more training and development programs for LIS professionals should be explored.

Connor (2009) reported a study conducted on an Introduction to Staff development in academic libraries. The purpose of the study was to illustrate the different efforts made to train the academic librarians. That training programs enable them to play important in distributing information efficiently. The survey method was used. Finding shows that university library is like heart in research environment and librarian work as research manager but unsuitability of courses, lack of opportunities and poor incentive appear to be main limitation in the training and development of academic librarians, The study concluded that university librarians require more knowledge and skills to use human as well as material resources technically and economically. The study recommended that more and more training and development programs for LIS professionals should be explored.

Blankson-Hemans (2004) studied an assessment of LIS curricula and the field of practice in the commercial sector. The main purpose of the study was to explore how well LIS curricula meet the requirements of hiring managers and how the LIS curricula meet the overall developments of LIS professional and the profession itself. The study explored that today’s LIS graduates required ICT skills in the commercial sector to satisfy the hiring managers. Findings of the study indicated that faculty members understand the new developments in IT and new trends of job market and their programmes are addressing the requisite skills but the researcher indicate the LIS curricula is not offering the sufficient course work to prepare graduates and meet the market demands. Study recommended that LIS courses should be more effective and offer more practical experience to work effectively in market.

Halder (2009) conducted a survey on Multimodal roles of library and information science professionals in present era. The purpose of the study was to highlights rapidly changing environment of library and information science profession and new multimodal roles of LIS professionals like consultant, facilitator, and web designer etc. A data was collected through interviews and the respondents are LIS professionals of Academic, special as well as public libraries of India. Results of the studies shows that due to the development of ICTs, the library environment has shifted from traditional to digital and Library-2 environment and LIS professionals are facing lot of challenges to adjust in this develop environment. The study concluded that LIS professionals need talents and training to meet the challenges of future library scene because high rate of information produce in digital format instead of print format. Researcher suggested that LIS professionals should be gather knowledge of Information and Communication technology (ICT) skills to play multimodal role in present era.

Abba (2009) in a study assessment of personnel training needs in the Ibrahim Babaugida library, Federal university of technology, Yale, Nigeria observed that library professionals are increasingly required to adapt their skills to gain awareness about advance changes in digital world. The purpose of the study was to examine the assessment of training needs of library staff in university library. The study take on survey research method and structured questionnaire was prepared for data collection. The target population was library professional and library staff of university. The result shows that most respondent have limited IT skills and they needed informal training programmes but funding is the main issue in skill developing programmes. The study concluded that assessment of training needs is important to provide effective library services to university users. Training is essential for library professionals .The study recommended that informal training programmes must be introduced for employees to gain ICT knowledge. University authorities should provide funding, trained resource persons and written training policy for the university libraries.

Kavulya (2007) investigated the training of library and information science (LIS) professionals in Kenya: A need assessment. The purpose of the study was to identify the IT problems in current job and performance requirements and also explore the areas of training and critical IT skills required by LIS professional. This study used a survey research design to investigate the training needs of LIS professionals in Kenya. There is a general observation of LIS lecturers, professionals and employers that the current LIS training programs in Kenya do not sufficiently address the current job requirements. There is a less number of steps are taken to improve the quality of LIS training in Kenya. LIS functions like ICT related activities (e.g. website, databases design); information consultancy and dissemination, record management, etc are performed by persons who are not LIS professionals. The study concluded that job market is exist in Kenya but LIS training is not sufficient to meet the job requirements due to inadequate teaching resources at LIS training and lack of adequate ICT content in the courses. The study suggested that there is a need for LIS institutions in Kenya to review and design their courses in line with the market requirements.

Maesaroh (2006) studied “An investigation of the continuing professional development practices of Indonesian academic libraries.” The purpose of the study was to examining the present and desired state of academic library staff education and professional development in Indonesia. The questionnaire was used for data collection. The result of the survey shows that science and technology librarians are skillful persons but even they are interested in gaining knowledge about library automation, e-resources, subject resources and reference sources. The study concluded that with the development of electronic resources with remote access, librarian have required skill to manage them easy to access through library web site rather than of through traditional way. The study recommended that committee should analyses that which kind of librarian need which kind of training programmme like, mature librarian need more ICT skill development programmes than more recent graduate. The committee should also provide online guide and tutorials for librarian.

Welch (2010) conducted a survey on the libraries and LIS education in Vietnam. The purpose of the study was documenting some of the developments in libraries, and LIS education in Vietnam. LIS education has been available in Vietnam since 1930s and ICT infrastructure is also developing with the passage of time. Vietnam is a country where rapid change is taken place in all industries, particularly technological developments and ICT across all sectors. In the library and information industry there are exciting challenges ahead for younger professionals. Ministry of culture and information allocated funds for electronic services keeping in view the recent development s in the library and information industry in Vietnam. Researcher indicate the key factors in the future development of the library and information sector in Vietnam like Human Resource Development is a key issue for Vietnamese libraries and it is very difficult to attract quality personnel to libraries because salaries are relatively low as compared with other professions. Library staff have limited IT skills and more IT skills are needed for library staff. Researcher indicate some issues that need to be addressed in order to facilitate development of the library industry in Vietnam that library staff must develop communication and language skills and learn how to manage changes.

Ramaiah (2002) deliberated the impact of continuing education programs on library and information science professionals. Changes in libraries and the expectations of their clientele are related aspects of LIS training. Those changes, like the use of IT, computers, communications, internet and multimedia, etc increase expectations of users about the quality of the library services. These changes needs to update knowledge, acquire new skills, and maintain basic competencies. Today’s LIS professionals deal with flow of information and rapid changes in information technology. With the increase of pressure on information professionals to keep up-to-date, LIS professionals are required to learn and adopt the changes in the field of information technology. Continuing education programmes are better transfer of technology and meet the challenges of coming days of rapid technological and scientific changes and advancements. The study concluded that continuing education programmes are one of the main means through which library professionals are keeping up-to-date in their profession and with latest technologies.

Febunmi (2001) discussed the Challenges and prospects of virtual libraries in universities in Nigeria. The intention of the study was to examine the viability of virtual libraries in universities of Nigerian and updating the librarian in this regard. Researcher conducted a survey of library professionals of different universities of Nigeria to investigate to updating of university libraries. Finding of the survey indicated that university libraries have poor infrastructure due to the lack of funds. Researcher suggested that professionals should be involved in all library projects. Training should be organized for librarians and information professionals to convert the university traditional librarians into virtual librarian. Researcher also suggested that Govt. of Nigeria should provide facilities for new policy making, important information technology training for librarian and development of information infrastructure.

Cassner & Adams (2006) reported a study 0f assessing the professional development needs of distance librarians in academics libraries.” The purpose of the study was to determine the professional development needs of distance librarians. The study was survey based. The web survey was submitted. In response majority of the respondent were pointed out training needs of managerial skills as well as ICT skills. The respondents also reported the challenges they faced in gaining professional skills, the most important is lack of funding. The study concluded that in modern society library professional should be update their skills, knowledge and competencies.

Freese & Brislim (1996) studied Special skills for special librarians: Is current training good enough? The purpose of the study was to explore the training needs for special librarians in the working environment. The study shows that with the information explosion, the complexities of information management system have increased. The study concluded that special librarians need special skills. The study suggested that special librarian should keep information their continuing education for the development of ICT skills. Professional bodies should play role in providing opportunities for training programmes.

Sing (2009) reported a study undertaken to examine the new skills for LIS professionals in technology - intensive environment. The aim of the study was to show the impact of emerging changes on academic librarian and mention the need of new skills of the management. The finding shows that new technologies have created new library environment. But LIS professionals still practice through traditional tools. The study concluded that changing awareness of users and modern eras have forced the librarian to update their managing and working skills. The study recommended that librarians should equip with core competencies and promising skills for to satisfy the multidimensional information needs of their users.

Cloate (2009) deliberated Core technology competencies for librarians and library staff. The purpose of the study was to examine the impact of ICT technology on librarians and other library staff. The survey method was used. Finding shows that today librarians need knowledge and competencies related to library system. The study concluded that new changes have been occurred during past few decades in library environment as a result of the advances in Information Communication Technology (ICT). The library staff must acquire adequate knowledge of ICT like, library automation, management of information through internet and web based library services etc. The study recommended that library education programs must be arranged for library professionals and library staff.

Parkash (2006) identified the role of LIS professionals in the E-information literacy in digital-era. The aim of the study was to show up the skill development programmmes for LIS professionals to play the role in promoting electronic information literacy in digital era. The finding of the study shows that every user needs quality and reliable information in modern age, so the responsibility of the library professional is changing from traditional librarian to information manager. The study concluded that library professionals required ICT and management skills to satisfy users in fast changing modern library environment. The study recommended that Govt. should conduct seminars, workshops or conferences to trained LIS professionals and every library in the country should be attached with internet.

Result of the 2001 STS continuing education committee survey, Desai (2001) described the Continuing education needs of science and technology librarians.The purpose of the study was to assessing the continuing needs of science and technology librarians through survey that conduct every two years. The questionnaire was used for data collection. The result of the survey shows that science and technology librarians are skillful persons but even they are interested in gaining knowledge about library automation, e-resources, subject resources and reference sources. The study concluded that with the development of electronic resources with remote access, librarian have required skill to manage them easy to access through library web site rather than of through traditional way. The study recommended that committee should analyses that which kind of librarian need which kind of training programmme like, mature librarian need more ICT skill development programmes than more recent graduate. The committee should also provide online guide and tutorials for librarian.

Al-Khayyat (1998) explored the training and development Needs Assessment: A Practical model for Partner Institutes”. The purpose of the study was to identify the training needs of their member organization and design action plans to achieve the organizational objectives effectively. Usually member organizations conduct training as a coordination body with founded partner institute. Partner institutes are professional entities responsible for the development of human resources within a particular industry. These institutes have no direct access to their founder organizations. Operating from outside the client’s infrastructure, training needs assessment becomes almost impossible. This study presents practical human resource training and development needs assessment model to successfully overcome obstacles. This dynamic model identifies training needs and makes effective training and development outcomes. This proposed model can easily modify according to the nature of its client’s operations and industry. Training need assessment efforts narrow the gap between training sessions and to improve job performance. Without training needs assessment efforts, no training activity has potential for success.

Newman (2010) conducted the study on training in support of Leadership development at the university of the Wes Indies, Mona Campus Library”. The main purpose of the study was to identify training needs of main and branch libraries at the University of the Wes Indies, Mona Campus. Researcher conducted interviews from library professionals to identify the training needs in their profession. Like other libraries, Mona library is also facing the challenges to provide efficient services for its ever demanding clientele, and researcher believes the Mona library must find creative ways to face and solve the challenges. Mona library has broadly identifies the areas for training in the library’s strategic plan 2007-2012 and the library’s work force plan. Selected persons conduct training sessions as the needs arises from the library professionals. All categories of library staff considered for training, but the focus might be different. The library’ strategic plan for 2007-2012 discusses leadership development of its staff in a number of areas. Researcher’s main focus was to recommend training strategies for development of leaders in the areas of marketing library products, technical skills, customer services, and grant proposal etc. researcher concluded that these areas need a variety of techniques to achieve the desired outcomes.

**2.3.2 Related Studies in National Context**

Chaudhary (2008) deliberated “Continuing professional education of librarians working in the Punjab libraries and Azad Jaammu Kashmir” The purpose of the study was to explore the training needs and practical importance of continuing education of university librarians in Pakistan and Azad Jammu Kahshmir. Researcher conducted survey and use questionnaire tool for collecting data. Population was library professionals of selective universities. Result of the study shows that continuing education is necessary for all professionals and non professionals’ librarians of academic libraries because today users have expected high level of library services. The study concluded that university library professional have good skills of using computer and have desire to get training of ICT skills but lack of funds and poor infrastructure discourage them to take park in continuing education programmes. Researcher suggested that university authority should also take necessary steps to arrange training programmes for librarian. Professionals should perform their role effectively to share their skills as well as cooperation with educational associations for the promotion of continuing education.

Ameen and Arshad (2010) examined the service quality of the University of the Punjab libraries. The purpose of the study was to find out quality library services of academic libraries of university according to users satisfaction. Web survey was conducted through questioner. The finding of the study shows that overall services of libraries were found to be good but librarians have lack of ICT skills. The study conclude that lake of computer literacy and ICT skills librarian ware not be able to satisfied the well aware users needs. The study recommended that training need assessment should be repeated with regular interval for feedback. Improvement of service quality in the light of assessment is the next step of this process.

Batool & Amen (2009) conducted a case study of the Status of technical competencies of university librarians. The purpose of the study was to investigate the LIS professional’s need of information technology skills and main problems in acquiring information technology communication skills and knowledge. The survey method was used and data was collected through interview and structured questionnaire. Population was librarians of university of Punjab. The finding shows that respondents ware interested in technical expertise like, computer hardware, Internet, troubleshooting and library automation but respondents indicated some troubles like, lack of training workshops, colleagues are not cooperatives and short library internships periods. The study concluded that library professionals need advance ICT skills and training to perform advanced technical information services in library environment. The study recommended that LIS curriculum must be updated according to modern development in library professionals. More library workshops and seminars should be arranged for LIS professionals in university

**CHAPTER NO: 3**

**RESEARCH DESIGN AND METHODOLOGY**

**3.1 Introduction**

This section presents an overview of research methodology. The aim of this research was to investigate the training needs assessment for LIS professionals of Universities of Punjab and Islamabad. This study presents the procedure used in different stages of the study i.e. literature review, designing of data collection instrument, collection of the data, data analysis and interpretation.

The Training Needs Assessment is a critical activity for the training and development function. The needs assessment is the first step in the establishment of a training and development Program. It is used as the foundation for determining instructional objectives, the selection and design of instructional programs, the implementation of the programs and the evaluation of the training provided. These processes form a continuous cycle which always begins with a needs assessment (Miller, 2002)

* 1. **Literature Review**

A comprehensive review of the relevant literature was made in order to understand the research problem in the first phase. Training Needs Assessment for library professionals related studies were comprehensively reviewed to understand different theories of Training Need Assessment for LIS professionals. To meet the scope of the study, different searching terms related to the topic and its parameters were used for literature search in published and unpublished forms. Search engine such as Google, Yahoo, Alta Vista, and Answers.com were used. In order to find the relevant material from different databases like Emerald, Science Direct, ASLIB, and Ebsco were thoroughly surveyed to consult peer reviewed journals, articles, proceedings, reposts etc. It helped in developing the research instrument for collecting data.

* 1. **Research Methodology**

It is a descriptive study. Quantitative method was used in this study to investigate the training needs assessments for LIS professionals of Punjab and Islamabad. Questionnaire was formulated and distributed among library professionals of Universities. A questionnaire containing both open and close ended. “The survey based research methodology is most appropriate when investigators do not have direct access to subjects of the survey and/or the size of the sample is large”. (Tripathi and Kumar, 2010). Both these factors were applicable in the present study. The method of sampling was used in this study. The part of the population that is close to the hands of the investigator is selected. According to Tripathi and Kumar (2010) the method of sampling is based on the non-probabilistic sampling technique, where subjects are selected in an unstructured manner from the population frame. The part of the population that is close to the hands of the investigators is selected. This sampling method is often used during preliminary research efforts to get a gross estimate of the results, without incurring the cost of time required to select a random sample.

* + 1. **Population of the Study**

In Pakistan, there are 135 fully recognized universities that offer PhD level awards. In Punjab and Islamabad, there are 59 universities in the public and private sectors offering education in all kinds of disciplines with attached centralized and decentralized library systems (www.answer.com).

To investigate the Training Needs Assessment by library professionals, HEC recognized public and private universities are selected. A detail of the populations is as under:-

Table 1

Summary of Public and Private Sector Universities / Degree Awarding Institutes of Pakistan.

|  |  |
| --- | --- |
| Summary | Quantity |
| Public Sector Universities / Degree Awarding Institutes | 74 |
| Private Sector Universities / Degree Awarding Institutes | 61 |
| Total | 135 |

Table 2

Summary of Public and Private Sector Universities / Degree Awarding Institutes of Punjab and Islamabad.

|  |  |
| --- | --- |
| Summary | Quantity |
| Public Sector Universities / Degree Awarding Institutes | 36 |
| Private Sector Universities / Degree Awarding Institutes | 23 |
| Total | 59 |

**3.3.2 Development of Instrument**

The questionnaire was developed on the basis of different reviewed literatures. Chen & Weng (2009) stated that a questionnaire is a data collection method that a respondent completes in written format.

Various studies on the related topic were comprehensive reviewed and their instruments were critically examined and then a structured and comprehensive questionnaire was designed according to the need and relevance of the topic. Perceptions with respect to training need assessment were determined by using five-point Liker type scale.

**3.3.3 Evaluating the Research Instrument**

After the questionnaire development it was sent to the four experts (having research experience and sufficient knowledge about training needs assessment for LIS professionals) for its evaluation. Appendix “C” shows their names. The experts suggested some changes and the changes were made accordingly

**3.3.4 Pilot Study**

A pilot study was conducted to evaluate the questionnaire. A pilot study is used to pre-test the specific research instrument. Questionnaire was sent to the 15 library professionals working in Bahauddin Zakaria University, Multan. The basic purpose of pilot study was to identify problems or difficulties in understanding the questions. Results of the pilot study exposed that few statements that were not clear to the library professionals in the questionnaire. An effort was made to restructure the questionnaire in an understandable manner for the library professionals.

* 1. **Data Collection Procedure**

To investigation of training needs assessment for LIS professionals of Recognized universities of Punjab and Islamabad, 20 HEC recognized Public and Private Sector Universities / Degree Awarding Institutes of Punjab and Islamabad were selected by using convenience sampling technique

Questionnaires containing both open and close ended, questionnaires were distributed among library professionals. At the first stage, pilot study was conducted on 15 library professionals to check the validity of the survey instrument. After some changes the questionnaire was finalized. At the second stage, 150 questionnaires were distributed to library professionals. All questionnaires were distributed personally, through E-mail and postal services to library professionals at HEC recognized Universities. On the third stage, some pending questionnaires were received through postal services and 16 questionnaire received via E-mail.

* 1. **Response Rate**

Total 150 questionnaires were distributed to the library professionals, whereas 126 library professionals responded the survey. Thus the response rate was 84 per cent.

* 1. **Data Analysis & Interpretation**

Based on data collected from the checklist, statistical techniques were used to analyze data. Data collected from library professionals were analyzed with the Statistical Package for the Social Sciences (SPSS, Version-17). Descriptive statistics i.e. frequencies, percentages, mean, median, mode, and standard deviation values were used to measure the variables. Five point scales adopted to get the weighted values and rank order.

**3.7 Summary of Findings, Conclusions and Recommendations**

At the end of study, the summary of findings regarding research questions, conclusions and recommendations of the study are presented. Contribution to knowledge and topic for future studies are also given at the end of fifth chapter.

**CHAPTER NO: 4**

**DATA ANALYSIS AND INTERPRETATION**

**4.1 Introduction**

The present study was conducted to find out Training Needs Assessment of LIS professionals of universities of Punjab and Islamabad. This chapter presents investigation and interpretation of data collected through survey of main libraries in the universities of Punjab and Islamabad

To achieve objectives of the study, researcher investigated that: whether MLIS curriculum has played effective role in developing the skills, whether library professionals have ICT skills or need training for ICT skills. Will library professionals need training for library services? What types of limitations LIS professionals face on meeting training needs?

A questionnaire containing both open and close ended questions was designed and distributed among 150 library professionals of the 20 public and private university libraries of Punjab and Islamabad.  A covering letter was attached with each questionnaire stating the purpose, significance and objectives of the study. The respondents were also assured that the provided information regarding this research work will be kept highly confidential and use for research purpose only126 library professionals responded to the questionnaire. The total response rate was 84%. The findings of the survey are presented in tables and graphs for a clearer presentation.

**4.2 Personal Information**

First section of the survey tool was used to collect the personal information of the library professionals/respondents from public and private university libraries of Punjab and Islamabad. In this section respondents were asked about their age, gender, designation, qualification and experience. The results of the collected data are discussed below:

***Figure 1***

*Respondents from Public/Private Sector*

The analysis of data shows that majority of the respondents 104(82.5%) were from public university libraries while 22 (17.5%) were from private sector universities of Punjab and Islamabad.

Table 01

**4.2.1** *Designation of Respondents*

| Designation | Frequency | Percentage |
| --- | --- | --- |
| Chief Librarian | 4 | 3.2 |
| Deputy Librarian | 11 | 8.7 |
| Librarian | 53 | 42.1 |
| Assistant Librarian | 42 | 33.3 |
| Any Other (with different designation) | 16 | 12.7 |
| Total | 126 | 100.0 |

The analysis of data shows that the designation of majority of the respondents were librarian 53(42.1%) and assistant librarian 42 (33.3%). Responses received from 4 (3.2%) chief librarians, 11 (8.7%) deputy librarians and a small number of respondents stated their designations as library officer, library manager, information officer, Cataloguer, Classifier, and Library Assistant, etc. 16 (12.7%).

***Figure 02***

*Qualification of Respondents*

The data collected from questionnaire about respondents’ qualification shows that majority of them were M.A/M.LIS 122 (96.8%), while, the MPhil and PhD respondents were only 3 (2.4%) and 1(0.8%) respectively.

Table 02

4.2.2 *Professional Experience*

|  |  |  |
| --- | --- | --- |
| Experience | Frequency | Percent |
| 0-5 | 26 | 20.6 |
| 6-10 | 37 | 29.4 |
| 11-15 | 39 | 31.0 |
| 16-20 | 7 | 5.5 |
| 21 AND ABOVE | 17 | 13.5 |
| Total | 126 | 100.0 |

The analysis of data shows that out of 126 respondents 26 (20.6%) were of 0- 5 year experience, 37 (29.4%) LIS professionals were of 6-10 year experience, while 39(31.0%) were of 11-15 year experience. Whereas, the respondents having experience from 16-20 year was 7 (5.5%) and 21 and above year experience was 17 (13.5%). Results shows that more than half respondents 76 (60.4%) fell in the category 11-15 year’s experience,

***Figure 03***

*Respondents' Gender*

The result concerning the gender of the respondents showed that majority of the respondents were male 87 (69.0%), while the female respondents’ percentage was only 39 (31%).

***Figure 04***

Age of the Respondents

The data in above table shows that the most respondents 47 (37.6%) were of 31-40 year age group, while 39 (31.0%) respondents were of 31-30 year age group. However 13(10.3%) library professionals were of 41-50 age group, 27 (21.4%) were 51-60 age group.

Table 3

4.3.1 **The on-the-job areas of ICT training needs of LIS professional.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ICT Areas | Mean | Median | Mode | St. Deviation |
| Troubleshoot new technologies | 4.39 | 5.00 | 5 | 1.095 |
| Endnote | 4.37 | 5 | 5 | 1.049 |
| Data Compression (WinZip) | 4.25 | 5.00 | 5 | 1.080 |
| Emerald, Science Direct, etc (Online Journals databases) | 4.16 | 5.00 | 5 | 1.293 |
| SPSS (Data analysis software) | 4.15 | 5.00 | 5 | 1.139 |
| Internet and online activities | 4.06 | 4.00 | 5 | 1.122 |
| Windows 7, XP, Vista, LINUX etc (Operating system) | **3.98** | 4.00 | 5 | 1.298 |
| Desktop publishing application | 3.95 | 4.00 | 4 | 1.123 |
| Search and download videos from YouTube | 3.92 | 4.00 | 4 | 1.114 |
| Facebook, Blogger, Flickr, Twitter, etc ( Social networks) | 3.79 | 4.00 | 4 | 0.982 |
| “Burn” files to a CDR (recordable CD) | 3.71 | 4.00 | 4 | 1.219 |
| Email, retrieve, attach .doc file and an image file | 3.69 | 4.00 | 4 | 1422 |
| Erase and reuse a CDRW (rewritable CD) | 3.65 | 4.00 | 4 | 1.248 |
| LAN / MAN /WAN | 3.63 | 4.00 | 5 | 1.434 |
| MSN, Yahoo, Hotmail, etc (Instant Messaging) | 3.54 | 4.00 | 4 | 1.348 |
| Google’s Chrome, Firefox, Opera etc (Web browsers) | 3.45 | 4.00 | 4 | 1.418 |
| MS Access (Database ) | 3.44 | 4.00 | 5 | 1.505 |
| Set up and use a web cam | 3.40 | 4.00 | 4 | 1.460 |
| Deal with printer queries | 3.40 | 4.00 | 4 | 1.534 |
| MS Excel ( Worksheets) | 3.29 | 4.00 | 4 | 1.452 |
| Computer basics | 3.23 | 4.00 | 4 | 1.481 |
| MS. PowerPoint  (Presentation work) | 3.17 | 4.00 | 4 | 1.506 |
| Use of Multimedia | 3.15 | 4.00 | 4 | 1.565 |
| MS Word (Word documents) | 3.03 | 3.00 | 4 | 1,533 |
| Inpage (Urdu Documents) | 2.98 | 3.00 | 4 | 1.422 |

Note: 5=Strongly Agree, 4=Agree, 3=Agree to Some Extent, 2=Disagree, 1=Strongly Disagree

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. But the advent of new technology has brought many changes to the way libraries collect, store, retrieve, disseminate information and serve their users. Computer technology has become increasingly integrated into libraries. Librarians of university need to effectively prepare with the computer literacy competencies to take advantage of all computerized library facilities and develop their work productivity (Safahieh). The responses of the question “What are the on-the-job training needs of LIS professional in university librarians of Punjab and Islamabad?” showed that the respondents were agreed that rapidly changes in the ICT technology affects the work of library professionals. Especially after the use of computer and internet in libraries, LIS professionals desperately need to get ICT skills to face the changes in digital world. The majority of respondents were agreed that they need training in Troubleshoot new technologies, Windows 7, XP, Vista, LINUX etc (Operating system), Desktop publishing application, (Mean values are:4.39, 3.98 & 3.95). In current environment University library has be converted into research center and librarian play their role as researcher so results showed that mostly respondents agreed that they interested to improve their skills in Emerald , Science Direct, etc (Online Journals databases), Data Compression (WinZip), SPSS (Data analysis software) and Endnote (Mean values are: 4.16, 4.25, 4.15 & 4.37) Internet has become main feature of any library, LIS professionals have desired to get skills about Facebook, Blogger, Flicker, Twitter, etc (Social networks), Internet and online activities, Search and download videos from YouTube, MSN, Yahoo, Hotmail, etc (Instant Messaging), Email, retrieve, attach .doc file and an image file (Mean values are: 3.79, 4.06, 3.92, 3.54 and 3.69). The respondents also agreed that LIS professionals required training about “Burn” files to a CDR (recordable CD), Erase and reuse a CDRW (rewritable CD), LAN / MAN /WAN, (Mean values are: 3.71, 3.65 and 3.63). The library professionals agreed to some extent that training needs about MS Access (Database ), Google’s Chrome, Firefox, Opera etc (Web browsers), Set up and use a web cam, Deal with printer queries. (Mean: 3.44, 3.42, 3.40 and3.29). The respondents also agreed to some extent that they required guideline about MS Excel ( Worksheets), Computer basics, MS. PowerPoint (Presentation work), Use of Multimedia, MS Word (Word documents), Inpage (Urdu Documents). (Mean: 3.23, 3.17, 3.15, 3.03 & 2.98).

**Table 4**

**4.3.2 Latest areas of ICT training needs of LIS professionals in university libraries**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Options | Mean | Median | Mode | St. Deviation |
| E. DDC, Classification+, LCSH, etc. ( Library electronic tools) | 4.31 | 5.00 | 5 | 1.216 |
| Digital libraries  (Managing and maintaining) | 4.29 | 5.00 | 5 | 1.165 |
| MARC, z39.5, Metadata  (Bibliographic works) | 4.26 | 5.00 | 5 | 1.208 |
| Management skills | 4.19 | 4.00 | 5 | 1.143 |
| Greenstone, DSpace etc (Digital libraries software) | 4.17 | 4.00 | 5 | 1.139 |
| HR. Management | 4.14 | 4.00 | 5 | 1.157 |
| Communication Skills | 4.04 | 4.00 | 4 | 1.120 |
| Leadership skills | 3.96 | 4.00 | 4 | 1.229 |
| Reference Interview skills | 3.90 | 4.00 | 4 | 0.942 |
| Cataloging, Circulation, Acquisition, etc. Library Management Systems | 3.53 | 4.00 | 4 | 0.927 |

Note: 5=Strongly Agree, 4=Agree, 3=Agree to Some Extent, 2=Disagree, 1=Strongly Disagree

The responses of the question “Due to emergence of new information and communication technologies in library operations and services, what are latest areas of training needs of LIS professionals in university libraries of Punjab and Islamabad?” showed that in digital atmosphere the LIS professionals were agreed and considered that they mightily need training about E. DDC, classification+, LCSH, etc. ( library electronic tools), digital libraries (managing and maintaining), MARC, z39.5, Metadata (bibliographic works), Greenstone, D.Space etc(digital libraries software). As mean values shows that: 4.31, 4.29, 4.26 and 4.19, respectively. The respondents also required training in management skills, Human resource (HR) management, leadership skills, communication skills.( Mean: 4.17, 4.14, 4.04) LIS professionals also agreed that they need coaching about advocacy and reference interview skills, cataloging, circulation, acquisition, serials control (library management systems) as shows its Mean:3.96, 3.90 and 3.53 respectively). Results of the study indicate that mostly librarian having great interest in advance library services training programmes.

***Table 5***

4.3.3 *Preferred Methods for Training Provision*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Options | Mean | Median | Mode | St. Deviation |
| Conferences | 4.08 | 4.00 | 5 | 1.020 |
| Workshops | 4.16 | 5.00 | 5 | 1.274 |
| Seminars | 3.92 | 4.00 | 4 | 1.262 |
| Web-based training and computer tutorials | 3.95 | 4.00 | 4 | 1.273 |
| Ad hoc training sessions by staff members | 4.02 | 4.00 | 4 | 1.008 |
| Group briefings | 4.01 | 4.00 | 4 | 1.000 |
| Books and references (Self-learning) | 2.52 | 3.00 | 3 | 1.052 |

Note: 5=Strongly Agree, 4=Agree, 3=Agree to Some Extent, 2=Disagree, 1=Strongly Disagree

As shown in Table, the respondents were asked to mention “What are the convenient places for you for training provision?” It was found that all respondents were agree that conferences and workshops most familiarinformal training programmes which are more effective as compare to other, as shows in Median and Mode both are 4.0 and 5.0 respectively. And mean vales are: 4.08, 4.16, However, the respondents were also agree that Seminars, Web-based training and computer tutorials, Ad hoc training sessions by staff members and Group briefings are also effective training programms for the enhancement of LIS professionals,(Mean= 3.92, 3.95, 4.02 and 4.01). But the respondents were agree to some extent about self learning (Mean= 2.52)

*Table 06*

4.3.4 *The Convenient Places for Training Provision*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Options | Mean | Median | Mode | Std. Deviation |
| University Main Library | 4.34 | 4.00 | 4 | .476 |
| Departmental Library | 4.20 | 4.00 | 4 | .400 |
| Any Other Place | 1.79 | 2.00 | 1 | .806 |

Note: 5=Strongly Agree, 4=Agree, 3=Agree to Some Extent, 2=Disagree, 1=Strongly Disagree

As shown in Table, the respondents were asked to mention “What are the convenient places for you for training provision?” It was found that all respondents were agree (as median value shows 4.00) that University Main Library and Departmental Library are the most convenient places for training provision (Mean= 4.34 & 4.20). However, mostly respondents were not agree for any other place (Mean=1.79).

***Figure 05***

4.3.5 The Convenient Timings for Training Provision

The responses of the question “What are the convenient timings for training provision?” showed that the majority of the respondents were agreed that during library hours and Evening are the most convenient timings for training provision , as median values shows that 4.0 and Mode=5 (Mean values are: 4.2 & 4.4). However, respondents were also agree to some extent about during Summer Vocation, (Mean=3.5) but they are not agree during Saturday/ Sunday (Mean=2.2)

*Table 07*

4.3.6 Institute Responsible for Training Provision

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Options | Mean | Median | Mode | St. Deviation |
| HEC | 4.6 | 5.0 | 5 | .488 |
| YOUR LIBRARY | 4.0 | 4.0 | 4 | .000 |
| LIBRARY SCHOOL | 4.4 | 4.0 | 4 | .491 |
| PLA | 4.6 | 5.0 | 5 | .491 |
| ANY OTHER CONSORTIUM | 1.2 | 1.0 | 1 | .406 |

Note: 5=Strongly Agree, 4=Agree, 3=Agree to Some Extent, 2=Disagree, 1=Strongly Disagree

The responses of the question “Who should be responsible for training provision?” Showed that all respondents were strongly agreed that HEC & PLA are most responsible for LIS professionals training, as shows in median =5.0 and mode=5.0 whereas (Mean values are: 4.6 and 4.6). While, respondents were agree that their library management and library schools are also responsible for librarian and library staff training (Mean=4.0 & 4.4) but they are not agree to the responsibility of any other association (Mean=1.2)

*Table 08*

4.3.7 What are the barriers and challenges militating against training in the university libraries?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Options | Mean | Median | Mode | St. Deviation |
| Inadequate Funding | 4.18 | 4.00 | 4 | 1.054 |
| Limited Training Programms | 3.84 | 4.00 | 4 | 1.031 |
| Lack Of Resource Persons | 3.42 | 4.00 | 4 | .999 |
| Lack Of Awareness | 3.47 | 4.00 | 4 | 1.056 |
| Colleagues And Fellows Are Not Cooperative | 2.57 | 2.00 | 2 | 1.113 |
| Short Library Internship Period | 3.33 | 4.00 | 4 | .912 |
| No Continuous Efforts In Monitoring The Developments In The Discipline | 3.79 | 4.00 | 4 | .897 |
| No Uniformity In LIS Curriculum | 3.47 | 4.00 | 4 | .999 |

Note: 5=Strongly Agree, 4=Agree, 3=Agree to Some Extent, 2=Disagree, 1=Strongly Disagree

The responses of the question “What are the barriers and challenges militating against training in the university libraries?” showed that all respondents were agreed that Inadequate funding are main limitation in Pakistan for LIS professionals training, as shows in median =4.0 and mode= 4.0 (Mean=4.18). The respondents also judged that limited training programs, lack of resource persons, lack of awareness are obstacle on meeting training needs (Mean values are: 3.84, 3.42 & 3.47). The LIS professionals furthermore considered that short library internship period, no continuous efforts in monitoring the developments in the discipline, no uniformity in LIS curriculum (Mean values are: 3.33, 3.79 and 3.47) are barrier on meeting training needs. The respondents were agree to some extent to consider limitation that colleagues and fellows are not cooperative (Mean= 2.57)

***Figure 05***

4.3.8. Which extent Library & Information Science curriculum has efficiently developed the essential library management and IT skills among LIS professionals?

The responses of the question “Which extent Library & Information Science curriculum has efficiently developed the essential library management and IT skills among LIS professionals?” showed that the respondents assumed that MLIS curriculum were developed their IT skills, Information storage and retrievals, Presentation skills & Human resource management skills at just OK level (Mean values are: 3.56, 3.48, 3.45 and 3.33 respectively). LIS professionals also considered that LIS curricula related to practical approach & improved Reference interview skills, Marketing LIS skills (Mean values are: 3.13, 3.17 and 3.15 respectively). The respondents moreover felt that LIS curricular improved their leadership skills, online searching skills, office communication skills, management skills, at just OK level (Mean values are: 3.24, 3.14, 3.10 and 3.08 respectively). While mostly respondents believed that LIS curricula was not at all meets the needs of advance technology in library profession and helpful in the application of Advance library software’s and Database management (Mean= 2.94 &2.99). However, LIS professionals were agreed that MLIS curriculum has play important role in improving cataloguing and classification skills and reference services at reasonable level as shows in Median= 4.0 and Mode=5.0 (Mean= 4.01 & 3.88).

*Table 09*

*Frequency Distribution of Respondents” Cataloging and Classification Skills”*

| *Cataloging And Classification Skills* | | Frequency | Percent |
| --- | --- | --- | --- |
| Valid | To a little level | 10 | 7.9 |
| Just OK | 25 | 19.8 |
| To reasonable level | 45 | 35.7 |
| To great level | 46 | 36.5 |
| Total | 126 | 100.0 |

As shown in Table 13, majority of the respondents, 46 (36.5%) out of 126 respondents were believe that course contents of LIS were develop their Cataloging and Classification Skills at great level. And 45 (35.7%) respondents were agree that current LIS course were expand their Cataloging and Classification Skills at reasonable level., while, 25 (19.8%) library professionals were considered only Just Ok level, However only 10 out of 126 (7.9%) were consider that LIS curricula grow their Cataloging and Classification Skills at great level .Result shows that mostly professionals feel that LIS curricular improve their Cataloging and Classification Skills.

*Table 10*

*Frequency Distribution of Respondents “Reference Services*”

| Reference Services | | Frequency | Percent |
| --- | --- | --- | --- |
| Valid | To a little level | 7 | 5.6 |
| Just OK | 35 | 27.8 |
| To reasonable level | 50 | 39.7 |
| To great level | 34 | 27.0 |
| Total | 126 | 100.0 |

As shown in Table , majority of the respondents , 50 (39.7%) out of 126 respondents were think that LIS curricula were build up their reference services skills at reasonable level. And 33 (27.8%) respondents agreed that current LIS course was improved their reference services are at just OK level. However, 34 (27.o%) library professionals were considered that reference services skills at great level , while only 07 (5.6%) were consider that LIS curricula grow their skills at a little level .Result shows that mostly professionals think that LIS curricular improve their reference services skills.

*Table 11*

*Frequency Distribution of Respondents about “IT Skills”*

|  | IT Skills | Frequency | Percent |
| --- | --- | --- | --- |
| Valid | Not at all | 3 | 2.4 |
| To a little level | 18 | 14.3 |
| Just OK | 41 | 32.5 |
| To reasonable level | 33 | 26.2 |
| To great level | 31 | 24.6 |
| Total | 126 | 100.0 |

As shown in Table, 31 (24.6%) out of 126 respondents were think that course contents of LIS were develop their IT skills at great level. And 33 (26.2%) respondents agreed that current LIS course was improve their IT skills at reasonable level., 41 (32.5%) library professionals were feel only Just Ok level, However only 03 out of 126 (2.4%) were consider that it was not grow their IT skills according to current requirement .Result shows that majority of professionals feel that LIS curricular improve their IT skills.

*Table 12*

*Frequency Distribution of Respondents about “Presentation skills”*

| Presentation skills | | Frequency | Percent |
| --- | --- | --- | --- |
| Valid | Not at all | 4 | 3.2 |
| To a little level | 27 | 21.4 |
| Just OK | 23 | 18.3 |
| To reasonable level | 52 | 41.3 |
| To great level | 20 | 15.9 |
| Total | 126 | 100.0 |

As shown in Table, 31 (24.6%) out of 126 respondents were believe that course contents of LIS were build up their presentation skills at little level. And 52 (41.3%) respondents were agree that current LIS course were develop their presentation skills at reasonable level. , while only 4 (3.2%) were consider that it was not increased their presentation skills according to recent condition. 48 (38.1%) library professionals were feel only Just Ok level , However only 20 out of 126 (15.9%) were consider that LIS curricula grow their presentation skills at great level .Result shows that majority of professionals feel that LIS curricular develop their presentation skills.

*Table 13*

*Frequency Distribution of Respondents about “Human Resource Management”*

| Human Resource Management | | Frequency | Percent |
| --- | --- | --- | --- |
| Valid | Not at all | 3 | 2.4 |
| To a little level | 17 | 13.5 |
| Just OK | 53 | 42.1 |
| To reasonable level | 41 | 32.5 |
| To great level | 12 | 9.5 |
| Total | 126 | 100.0 |

As shown in Table, 12 (9.5%) out of 126 respondents supposed that course contents of LIS were improved their human resource management skills at great level a. And 41 (16.7%) respondents agreed that current LIS course were develop their human resource management at reasonable level., while only 03(2.4%) were considered that it was not increase their human resource management skills according to recent condition. 53 (42.1%) library professionals were feel only Just Ok level, yet only 17 out of 126 (13.5%) were consider that LIS curricula grow their human resource management little level. Result shows that majority of professionals feel that LIS curricular develop their human resource management skills.

*Table 14*

*Frequency Distribution of Respondents about “Reference interview skills”*

| Reference interview skills | | Frequency | Percent |
| --- | --- | --- | --- |
| Valid | Not at all | 4 | 3.2 |
| To a little level | 26 | 20.6 |
| Just OK | 54 | 42.9 |
| To reasonable level | 28 | 22.2 |
| To great level | 14 | 11.1 |
| Total | 126 | 100.0 |

As shown in Table, 26 (20.6%) out of 126 respondents were believe that course contents of LIS were build up their reference interview skills at little level. And 28 (22.2%) respondents were agree that current LIS course were develop their reference interview skills at reasonable level. , while only 04 (3.2%) were consider that it was not increase their reference interview skills according to recent condition. 54 (42.9%) library professionals were feel only Just Ok level , However only 14(11.1%) out of 126 were consider that LIS curricula grow their reference interview skills at great level .Result shows that majority of professionals feel that LIS curricular develop their reference interview skills.

*Table 15*

*Frequency Distribution of Respondents about “Online searching skills”*

| Online searching skills | | Frequency | Percent |
| --- | --- | --- | --- |
| Valid | Not at all | 6 | 4.8 |
| To a little level | 31 | 24.6 |
| Just OK | 48 | 38.1 |
| To reasonable level | 21 | 16.7 |
| To great level | 20 | 15.9 |
| Total | 126 | 100.0 |

As shown in Table, 31 (24.6%) out of 126 respondents were believe that course contents of LIS were build up their online searching skills at little level. And 21 (16.7%) respondents were agree that current LIS course were develop their online searching skills at reasonable level. , while only 06 (4.8%) were consider that it was not increase their online searching skills according to recent condition. 48 (38.1%) library professionals were feel only Just Ok level , However only 20 out of 126 (15.9%) were consider that LIS curricula grow their online searching skills at great level .Result shows that majority of professionals feel that LIS curricular develop their online searching skills

*Table 16*

*Frequency Distribution of Respondent about* C*ourse Contents were Related to Practical Approach*

| Course Contents were Related to Practical Approach | | Frequency | Percent |
| --- | --- | --- | --- |
| Valid | To a little level | 37 | 29.4 |
| Just OK | 44 | 34.9 |
| To reasonable level | 37 | 29.4 |
| To great level | 8 | 6.3 |
| Total | 126 | 100.0 |

As the table shows that out of 126 only 8 (6.3%) respondents agreed that course contents of LIS were related to practical approach to great level. And 37 out of 126 (29.4%) were disagree and they think it was related to practical approach only a little level, 44 (34.9%) library professionals were feel that It was not so reasonable but just OK level , However 37 (29.4%) respondents were agree that current LIS course were related to practical approach at reasonable level. Result shows that 64 % respondents were feel that LIS course contents were not related to practical approach.

*Table 17*

*Frequency Distribution of Respondents about “Management Skills.”*

|  | IT Skills | Frequency | Percent |
| --- | --- | --- | --- |
|  | To a little level | 37 | 29.4 |
| Just OK | 48 | 38.1 |
| To reasonable level | 35 | 27.8 |
| To great level | 6 | 4.8 |
| Total | 126 | 100.0 |

As shown in Table, 48 (38.1%) out of 126 respondents supposed that course contents of LIS were developed their management skills at just OK level. And 35 (27.8%) respondents agreed that current LIS course were improve their management skills at reasonable level., 6 (4.8%) library professionals were felt that it improved their management skill at great level, However 37 out of 150(29.4%) were considered that it was not grow their management skills according to current requirement .Result shows that majority of professionals judged that LIS curricular improve their management skills. .

*Table 18*

*Frequency Distribution of Respondents* “Information Storage and RetrievalSkills”

| Information Storage and RetrievalSkills | | Frequency | Percent |
| --- | --- | --- | --- |
| Valid | To a little level | 3 | 2.4 |
| Just OK | 73 | 57.9 |
| To reasonable level | 36 | 28.6 |
| To great level | 14 | 11.1 |
| Total | 126 | 100.0 |

As shown in Table 1, majority of the respondents 73 (57.9%) out of 126 respondents were think that LIS curricula were build up their Information storage and retrieval Skills at just OK level. And 36 (28.6%) respondents agreed that current LIS course was improved their Information storage and retrieval Skills at reasonable level. However, 14 (11.1%) library professionals were considered that Information storage and retrieval skill at great level , while only 03 (2.4%) were consider that LIS curricula grow their skills at a little level .Result shows that mostly professionals think that LIS curricular improve their Skills only just OK level.

*Table 19*

*Frequency Distribution of Respondents about “Advance library software”*

| Advance library software | | Frequency | Percent |
| --- | --- | --- | --- |
| Valid | Not at all | 6 | 4.8 |
| To a little level | 49 | 38.9 |
| Just OK | 33 | 26.2 |
| To reasonable level | 22 | 17.5 |
| To great level | 16 | 12.7 |
| Total | 126 | 100.0 |

As shown in Table, only 16 (12.7%) out of 126 respondents were think that course contents of LIS were develop their skills about advance library software at great level. And 33 (26.2%) respondents. were agree that current LIS course were improve their skills of advance library software Just Ok level, 49 (38.9%) library professionals were felt only at reasonable level., However only o6 out of 126 (4.8%) were consider that it was not grow their expertise in advance library software according to current requirement .Result shows that majority of professionals feel that LIS curricular were not developed their expertise regarding advance library software.

**CHAPTER NO: 5**

**SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS**

**5.1 Introduction**

This chapter represents the design of the study and describes the brief summary of conclusions based on finding of this study. It discusses the findings with references to the research questions of the study. It also gives some recommendations for the training needs assessment for LIS professionals in university libraries. This chapter also proposes a few topics for further research.

**5.2 Research Design of the Study**

The main purpose of the study was to explore the overall picture of the training needs assessment for LIS professionals in university libraries of Punjab and Islamabad and also to assess the awareness of library professionals about developments in ICT. In order to investigate the assessment of training needs the population of the study consist of HEC recognized public and private sector universities / Degree awarding institutes of Punjab and Islamabad.

To achieve the purpose of the study, a comprehensive literature of different researchers of the national and international countries were reviewed. On the basis of literature reviewed, the research instrument was developed for the collection of the data and analysis of the collected data. . Questionnaire based survey method was used to assess the training needs of LIS professional of university libraries. Total 150 questionnaires were distributed to library professionals and 126 were received from the respondents. The response rate was 84 % (87 were male and 39 were female). The collected data was analyzed quantitatively with the help of SPSS software (version 17) and data were interpreted and discussed using descriptive statistics.

* 1. **Conclusion Related to the Research Questions**

Major findings and conclusions related to this study, regarding research questions are summarized below:

**5.3.1 What are the on-the-job training needs of LIS professional in university librarians of Punjab and Islamabad?**

Results regarding ICT skills of LIS professionals indicate that majority of respondents’ skill level about computer software and hardware was low. Majority of respondents’ skill level about Microsoft Office was on average level. Respondents’ skill level about internet browsing / searching techniques were on average level. Majority of respondents’ skill level about using Social networks, online searching and data analysis software low. Results indicated that respondents were have sufficient knowledge about Microsoft office and internet browsing but the respondents were not have sufficient knowledge about computer hardware and software and also they were also do not have knowledge about social networks like web 2.0 applications. The responses of the question “What are the on-the-job training needs of LIS professional in university librarians of Punjab and Islamabad?” show that the respondents agreed that rapidly changes in the ICT technology affects the work of library professionals. Especially after the use of computer and internet in libraries, LIS professionals desperately need to get ICT skills to face the changes in digital world. The majority of respondents were agreed that they need training in Troubleshoot new technologies, Windows 7, XP, Vista, LINUX etc (Operating system), Desktop publishing application, (Mean values are:4.39, 3.98 & 3.95). In current environment University library has be converted into research center and librarian play their role as researcher so results showed that mostly respondents agreed that they interested to improve their skills in Emerald , Science Direct, etc (Online Journals databases), Data Compression (WinZip), SPSS (Data analysis software) and Endnote (Mean values are: 4.16, 4.25, 4.15 & 4.37) Internet has become main feature of any library, LIS professionals have desired to get skills about Facebook, Blogger, Flicker, Twitter, etc (Social networks), Internet and online activities, Search and download videos from YouTube, MSN, Yahoo, Hotmail, etc (Instant Messaging), Email, retrieve, attach .doc file and an image file (Mean values are: 3.79, 4.06, 3.92, 3.54 and 3.69). The respondents also agreed that LIS professionals required training about “Burn” files to a CDR (recordable CD), Erase and reuse a CDRW (rewritable CD), LAN / MAN /WAN, (Mean values are: 3.71, 3.65 and 3.63). The library professionals agreed to some extent that training needs about MS Access (Database ), Google’s Chrome, Firefox, Opera etc (Web browsers), Set up and use a web cam, Deal with printer queries. (Mean: 3.44, 3.42, 3.40 and3.29). The respondents also agreed to some extent that they required guideline about MS Excel ( Worksheets), Computer basics, MS. PowerPoint (Presentation work), Use of Multimedia, MS Word (Word documents), Inpage (Urdu Documents). (Mean: 3.23, 3.17, 3.15, 3.03 & 2.98).

**5.3.2 Due to emergence of new information and communication technologies in library operations and services, what are latest areas of training needs of LIS professionals in university libraries of Punjab and Islamabad?**

The Results of the study show that t in digital atmosphere the LIS professionals agreed and considered that they mightily need training about E. DDC, classification+, LCSH, etc. ( library electronic tools), digital libraries (managing and maintaining), MARC, z39.5, Metadata (bibliographic works), Greenstone, D.Space etc(digital libraries software). As mean values shows that: 4.31, 4.29, 4.26 and 4.19, respectively. The respondents also required training in management skills, Human resource (HR) management, leadership skills, communication skills.( Mean: 4.17, 4.14, 4.04) LIS professionals also agreed that they need coaching about advocacy and reference interview skills, cataloging, circulation, acquisition, serials control (library management systems) as shows its Mean:3.96, 3.90 and 3.53 respectively). Results of the study indicate that mostly librarian having great interest in advance library services training programmes.

**5.3.3 What are the convenient place, timing & training methods and who should be responsible for training?**

The responses of the question “What relevant and most recent contents should be taught to LIS professionals and who should provide training?” show that most of the LIS professionals convince that workshops and conferences most familiarinformal training programmes which are more effective as compare to other, as shows in Median and Mode both are 4.0 and 5.0 respectively. And mean vales are: 4.16, 4.08, However, the respondents were also agree that Seminars, Web-based training and computer tutorials, Ad hoc training sessions by staff members and Group briefings are also effective training programms for the enhancement of LIS professionals,(Mean= 3.92, 3.95, 4.02 and 4.01). But the respondents were agree to some extent about self learning (Mean= 2.52)

Results of the study also show that all respondents strongly agree that HEC & PLA are most responsible for LIS professionals training, as shows in median =5.0 and mode=5.0 whereas (Mean values are: 4.6 and 4.6). While, respondents also agree that their library management and library schools are also responsible for librarian and library staff training (Mean=4.0 & 4.4) but they are not agree to the responsibility of any other association (Mean=1.2)

**5.3.4 What are the barriers and challenges militating against training in the university libraries?**

Pakistan is underdeveloped country and every year only 3 to 4 % of total budget was allocated for education. Due to that reason library sector always sacrifice because of funding. So majority of the library professionals 124(83 %) out of 150 agreed that inadequate funding are main limitation in Pakistan for LIS professionals training, as shows in median =4.0 and mode= 4.0 (Mean=4.18). The respondents also judged that limited training programs and lack of resource persons too constraint in LIS training because there was no proper institute in Pakistan that produce quality of resource persons. (Mean values are: 3.84 &3.42) .The LIS professionals moreover considered that lack of awareness is obstacle on meeting training needs (Mean: 3.47). The LIS professionals furthermore judged that short library internship period, no continuous efforts in monitoring the developments in the discipline. (Mean values are: 3.33& 3.79) are barrier on meeting training needs. The respondents also believed that no uniformity in LIS curriculum (Mean: 3.47) are big problem to generate well equipped librarians. The respondents were agree to some extent to consider limitation that colleagues and fellows are not cooperative (Mean= 2.57)

**5.3.5 Which extent Library & Information Science curriculum has efficiently developed the essential library management and IT skills among LIS professionals?**

Results regarding to MLIS curriculum showed that the respondents assumed that MLIS curriculum developed their IT skills, Information storage and retrievals, Presentation skills & Human resource management skills at just OK level (Mean values are: 3.56, 3.48, 3.45 and 3.33 respectively). LIS professionals also considered that LIS curricula related to practical approach & improved Reference interview skills, Marketing LIS skills (Mean values are: 3.13, 3.17 and 3.15 respectively). The respondents moreover felt that LIS curricular improved their leadership skills, online searching skills, office communication skills, management skills, at just OK level (Mean values are: 3.24, 3.14, 3.10 and 3.08 respectively). While mostly respondents believed that LIS curricula was not at all meets the needs of advance technology in library profession and helpful in the application of Advance library software’s and Database management (Mean= 2.94 &2.99). However, LIS professionals were agreed that MLIS curriculum has play important role in improving cataloguing and classification skills and reference services at reasonable level as shows in Median= 4.0 and Mode=5.0 (Mean= 4.01 & 3.88).

* 1. **Converged Findings**

Major findings of the study are as follows:

1. Total 126 library professionals, 87 (69.0%) male and 39 (31.0%) female responded the survey. More than half respondents (76) were fall in the category 0-10 year’s experience.
2. The study shows that majority of the respondents were LIS professionals have librarian 53(42.1%) and assistant librarian 42 (33.3%) designation. While 4 (3.2%) chief librarians, 11 (8.7%) deputy librarians and 7 (4.5%) library assistant category. A small number of respondents have designations as library officer, library manager, information officer, Cataloguer, Classifier, and Library Assistant, etc. 16 (12.7%).
3. LIS professionals having M.LIS degree is 122 out of 126 (96.8%), while 3 (2.4 %) of professionals have M.Phil and only 1 (0.8%) have attained PhD degree.
4. 76 (60.4%) out of 126 LIS professionals have 6-15 years’ experience, however 26 (20.6%) out of 126 were of 0- 5 year experience, whereas, the respondents having experience from 16-20 year was 7 (5.5%) and 21 AND ABOVE year experience was 17 (13.5%).
5. The result shows that the most respondents 47 (37.6%) were of 31-40 year age group. 39 (31.0%) respondents were of 21-30 year age group. However 13(10.3%) library professionals were of 41-50 age group, 27 (21.4%) were 51-60 age group.
6. It is evident from the results that almost all library professionals were ready to get training for using ICT technologies in libraries. Only few13 (8.6%) out of 150 respondents were fully known about ICT application and they do not have further required training.
7. As results showed that most of 61 (41.3%) LIS professionals’ skill about computer basics, Microsoft Office (MS. Word, MS. Excel, MS. Power point ), Inpage and Use of Multimedia at satisfactory level.
8. LIS professionals desperately need training in Emerald , Science Direct, etc (Online Journals databases), data compression (WinZip), SPSS (Data analysis software) and Endnote (Mean values are: 4.16, 4.25, 4.15 & 4.37) Internet has become main feature of any library, LIS professionals have desired to get skills about Facebook, Blogger, Flicker, Twitter, etc (Social networks), Internet and online activities, Search and download videos from YouTube, MSN, Yahoo, Hotmail, etc (Instant Messaging), Email, retrieve, attach .doc file and an image file (Mean values are: 3.79, 4.06, 3.92, 3.54 and 3.69).
9. Results shows that mostly LIS professionals having great interest in advance library services training programmes...Majority of the LIS professionals in all universities have opinion that they have greatly need training bout library automation services like E. DDC Classification , LCSH, etc.( Library electronic tools), MARC, z39.5, Metadata (Bibliographic works), Digital libraries (Managing and maintaining), Greenstone, D.Space etc(Digital libraries software), values of Median=5.0 and Mode=5.0 and (Mean values are: 4.31,4.29,4.26, 4.19 )
10. The study also indicate that LIS professions of all universities need more guidance about Management skills, Human Resource (HR) Management, Leadership skills, Communication Skills, Advocacy and Reference Interview skills as shows its mean values: 4.17, 4.14, 4.04, 3.96 and 3.90 respectively.
11. The study indicates that almost all LIS professionals agree that workshops and Conferences are most familiarinformal training programmes which are more effective as compare to other, as shows in Median and Mode both are 4.0 and 5.0 respectively. And (mean vales are: 4.16 & 4.08).
12. However, the respondents also agree that Seminars, Web-based training and computer tutorials, Ad hoc training sessions by staff members and Group briefings are also effective training programms for the enhancement of LIS professionals,(Mean= 3.92, 3.95, 4.02 and 4.01). but the respondents were agree to some extent about self learning (Mean= 2.52)
13. Results show that majority of the respondents (80%) agree that University Main Library and Departmental Library are the most convenient places for training provision (Mean= 4.34 & 4.20). However, mostly respondents were not agree for any other place (Mean=1.79).
14. Majority of the LIS professionals (83%) agree that during library hours and Evening are the most convenient timings for training provision , as median values shows that 4.0 and Mode=5 (Mean values are: 4.2 & 4.4).
15. Results of the study show that mostly library professionals (92%) consider that HEC & PLA are most responsible for LIS professionals training, as shows in median =5.0 and mode=5.0 whereas (Mean values are: 4.6 and 4.6) . While, respondents also agree that their library management and library schools are also responsible for librarian and library staff training (Mean=4.0 & 4.4 )
16. Results of the study show that mostly respondents (83%) have the same opinion that inadequate funding are main restriction in Pakistan for LIS professionals training, as shows in median =4.0 and mode= 4.0 (Mean=4.18).
17. The respondents were also judged that limited training programms, lack of resource persons, lack of awareness, short library internship period, no continuous efforts in monitoring the developments in the discipline, No uniformity in LIS curriculum ( Mean values are: 3.84, 3.42, 3.47, 3.33, 3.79 and 3.47) are problem on meeting training needs.
18. Results of the study indicate that library professionals are agree that LIS curriculum has developing the IT and library management skill of LIS professionals on reasonable level. Results show that library professionals required trainings to manage the E-libraries system and handling the new technologies.
19. Most of the LIS professionals have the opinion that their education in LIS has not helped in getting skills in topics like advance library software’s, database management, management skills, office communication, online searching skills and Marketing LIS services (mean values: 2.94, 2.99, 3.18, 3.10 and 3.14 respectively). But they have positive opinion about cataloguing and classification skills, and reference services and IT skills (mean: 4.01, 3.88 and 3.56).
20. Majority of the professionals agree that Information storage and retrieval, Presentation skills, Human resource management and Reference interview skills (mean: 3.48, 3.45, 3.33 and 3.17) improved just OK level with the help of formal library education.

**5.5 Recommendation:**

Following recommendations are made on the basis of conclusions of the study:

This recommendation will help to library professionals and administration in reviewing and adding changes in the curriculum and will also help employers and stakeholders to understand the ICT skills needed for LIS employability. It will also help the students to improve their ICT skills to meet the needs of the job market.

1. Assess the training needs and design a complete Training Program for informal training for LIS professionals including objectives of training, method of training, level of training (elementary or advanced), areas of training, during of training, financial and human resources, additional support with PLA, HEC, and International Agencies, impact of training on the success of organization.
2. Mandatory continuing professional development (CPD) programmes should be compulsory part of all the universities and libraries’ mission statements for proper human resource development and management which are the basic pillar of every institution.
3. Library committee of universities should assess that what kind of librarian need which kind of training programmme like, senior librarian need more ICT skill, and library management skill development programmes than junior librarians.
4. Research should be conducted continually by LIS academicians to identify current needs and skills and those that will be required in the twenty first century.
5. University authorities should take immediate and necessary steps to arrange training programmes for librarian on regular basis
6. University authorities should provide funding, trained resource persons and written training policy for the LIS professionals in university libraries.
7. Professional bodies in Pakistan should play role in providing opportunities for training programmes.
8. LIS professional associations should conduct national level surveys for assessing training needs of LIS professionals in determining requisite skills and arrange different ICT training programs to improve their ICT skills.
9. In order to achieve the goals and objectives of the institution training and retraining programmes should be made compulsory and institution should arranged workshops, conferences and seminars for staff training and development.
10. Selected LIS teachers and librarians should be trained to designate them as

Master trainers in different areas of ICT

1. HEC and universities should facilitate LIS professionals with foreign scholarships for higher education and observing the library practices and learning new concepts and advanced skills like other faculty members.
2. There should also be a spirit of self-spending for self-development among LIS professionals in order to develop their skills and competencies due to new emerging paradigms in librarianship.
3. Professionals should perform their role effectively to share their skills as well as cooperation with educational associations for the promotion of continuing education.
4. Library staff must develop communication and presentation skills and learn how to manage with changes.
5. The library schools and professional library associations should also provide online tutorials for continuous education and skills development of LIS professionals.
6. To examine the challenges, obstacles and factors militating against training and give possible solution.
7. There is a need for LIS institutions in Pakistan to review and design their courses in line with the market requirements.
8. Library schools should provide a curriculum that is balanced so that it provides for an education in traditional librarianship as well as ICT knowledge
9. To compare the status of present curricula and new curricula which has been designed and approved by HEC with all the library schools, senior LIS professional, professional library association and Department of Libraries should design pertinent training modules carefully taking into consideration the previous knowledge and skills background of different categories of LIS professionals, changing trends in the profession worldwide and emerging information and communication technologies. education and training organize training courses, and which will be implemented for 4 years B.S program.
10. Core subject contents and skills for information providers must be reviewed repeatedly involving all the stakeholders, such as a national library associations and national experts, should be enlisted in determining such requisite skills

**5.6 Topics for further Research**

* 1. The same study may be conducted in school and college libraries (Training Needs Assessment for LIS Professionals of School and College Libraries of Punjab)
  2. The same study may be conducted in university libraries in other Provinces of Pakistan (Training Needs Assessment for LIS Professionals of School and College Libraries of Sind / Baluchistan )
  3. On-the-job ICT training needs of LIS professional in Pakistan.
  4. Role of PLA in continuing education of LIS professionals in Pakistan.

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**APPENDICES**

**Appendix “A”**

**QUESTIONNAIRE**

**I. Personal Information**

**1.** Name (Optional):\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**2.** Institute Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**3.** Public Sector\_\_\_\_\_\_\_ Private Sector \_\_\_\_\_\_\_\_\_ Other\_\_\_\_\_\_\_\_\_\_\_

**4.** Department: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**5.** Designation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**6.** Qualification:  M.A/M.LIS  M. Phil  Ph. D

**7.** Year of passing last degree: \_\_\_\_\_\_\_\_\_\_\_\_

**8.** No. of years in present position: \_\_\_\_\_\_\_\_\_\_

**9.** Experience:  0-5 Years  5-10 Years  10-15 Years

 15-20 years  20 and above

**10.** Gender:  Male  Female

**11**. Age:  21-30 Year  31-40 Years  41-50 Years  51-60 years

**II-**

**12. Which areas do you think need training for LIS Professionals?**

*Please rate their importance by check mark the appropriate scale below of 1 to 5 where 5 is the highest/most*

5=Strongly Agree, 4=Agree, 3=Agree to Some Extent, 2=Disagree, 1=Strongly Disagree

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sr.#** | Content/Topic | Level of Importance as a Training Need | | | | |
| 5 | 4 | 3 | 2 | 1 |
| 1 | How Computers Work (Computer basics) |  |  |  |  |  |
| 2 | MS Word (Word documents) |  |  |  |  |  |
| 3 | MS Excel ( Worksheets) |  |  |  |  |  |
| 4 | MS PowerPoint (Presentation work) |  |  |  |  |  |
| 5 | MS Access (Database ) |  |  |  |  |  |
| 6 | MS Publisher (Desktop publishing application) |  |  |  |  |  |
| 7 | Inpage (Urdu Documents) |  |  |  |  |  |
| 8 | Windows 7, XP, Vista, LINUX etc (Operating system) |  |  |  |  |  |
| 9 | LAN / MAN /WAN ( Networking Areas) |  |  |  |  |  |
| 10 | Google’s Chrome, Firefox, Opera etc (Web browsers) |  |  |  |  |  |
| 11 | Emerald , Science Direct, Google etc (Searching  Online Journals, bibliographic & Indexing  databases) |  |  |  |  |  |
| 12 | Facebook, Blogger, Flickr, Twitter, Wikis, Myspace ,LinkedIn ,RSS etc ( Social networks) |  |  |  |  |  |
| 13 | MSN, Yahoo, Hotmail, etc (Instant Messaging) |  |  |  |  |  |
| 14 | Email, retrieve, attach .doc file and an image file |  |  |  |  |  |
| 15 | Search and download videos from YouTube |  |  |  |  |  |
| 16 | SPSS (Data analysis software) |  |  |  |  |  |
| 17 | Troubleshoot new technologies |  |  |  |  |  |
| 18 | “Burn” files to a CDR (recordable CD) |  |  |  |  |  |
| 19 | Erase and reuse a CDRW (rewritable CD) |  |  |  |  |  |
| 20 | Internet and online activities |  |  |  |  |  |
| 21 | Data Compression (Winzip) |  |  |  |  |  |
| 22 | Use of Multimedia |  |  |  |  |  |
| 23 | Set up and use a web cam |  |  |  |  |  |
| 24 | Deal with printer queries |  |  |  |  |  |

**13. Which areas of library services do you think need training for LIS professionals?**

5=Strongly Agree, 4=Agree, 3=Agree to Some Extent, 2=Disagree, 1=Strongly Disagree

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Sr. # | Content/Topic | 5 | 4 | 3 | 2 | 1 |
| 1 | E. DDC, Classification+, LCSH, etc.( Library electronic tools) |  |  |  |  |  |
| 2 | Cataloging, Circulation, Acquisition, Serials control (Library Management Systems) |  |  |  |  |  |
| 3 | EndNote (Publishing and Managing bibliographies) |  |  |  |  |  |
| 4 | MARC, z39.5, Metadata (Bibliographic works) |  |  |  |  |  |
| 5 | Digital libraries (Managing and maintaining) |  |  |  |  |  |
| 6 | Greenstone, DSpace etc (Digital libraries software) |  |  |  |  |  |
| 7 | Management skills |  |  |  |  |  |
| 8 | Human Resource (HR)Management |  |  |  |  |  |
| 9 | Leadership skills |  |  |  |  |  |
| 10 | Reference Interview skills |  |  |  |  |  |
| 11 | Communication Skills |  |  |  |  |  |
| 12 | Advocacy |  |  |  |  |  |

**14. What type of informal training programmes do you think more effective, and what level?**

5=Strongly Agree, 4=Agree, 3=Agree to Some Extent, 2=Disagree, 1=Strongly Disagree

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Sr. # | Content/Topic | 5 | 4 | 3 | 2 | 1 |
| 1 | Conference |  |  |  |  |  |
| 2 | Workshop |  |  |  |  |  |
| 3 | Seminars |  |  |  |  |  |
| 4 | Web-based training and computer tutorials |  |  |  |  |  |
| 5 | Ad hoc training sessions by staff members |  |  |  |  |  |
| 6 | Group briefings |  |  |  |  |  |
| 7 | Books and references (Self-learning) |  |  |  |  |  |

**15. What are the convenient places for you for training provision?**

5=Strongly Agree, 4=Agree, 3=Agree to Some Extent, 2=Disagree, 1=Strongly Disagree

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Sr. # | Content/Topic | 5 | 4 | 3 | 2 | 1 |
| 1 | University main library |  |  |  |  |  |
| 2 | Departmental library |  |  |  |  |  |
| 3 | Any other place |  |  |  |  |  |

**16, What are the convenient timings for training provision?**

5=Strongly Agree, 4=Agree, 3=Agree to Some Extent, 2=Disagree, 1=Strongly Disagree

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Sr. # | Content/Topic | 5 | 4 | 3 | 2 | 1 |
| 1 | During library hours |  |  |  |  |  |
| 2 | Evening programmes |  |  |  |  |  |
| 3 | Summer Vocations |  |  |  |  |  |
| 4 | Saturday / Sunday (weekly holidays) |  |  |  |  |  |

**17. Who should be responsible for training provision?**

5=Strongly Agree, 4=Agree, 3=Agree to Some Extent, 2=Disagree, 1=Strongly Disagree

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Sr. # | Content/Topic | 5 | 4 | 3 | 2 | 1 |
| 1 | HEC |  |  |  |  |  |
| 2 | Your Library |  |  |  |  |  |
| 3 | Library School |  |  |  |  |  |
| 4 | PLA |  |  |  |  |  |
| 5 | Any other consortium |  |  |  |  |  |

1. **What kinds of problems faced by LIS professionals on meeting training needs?**

5=Strongly Agree, 4=Agree, 3=Agree to Some Extent, 2=Disagree 1=Strongly Disagree

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Content/Topic | 5 | 4 | 3 | 2 | 1 |
| 1 | Inadequate funding |  |  |  |  |  |
| 2 | Lack of proper policy on training provision by the library |  |  |  |  |  |
| 3 | Limited training programs |  |  |  |  |  |
| 4 | Lack of resource persons |  |  |  |  |  |
| 5 | Lack of Awareness |  |  |  |  |  |
| 6 | Colleagues and fellows are not cooperative |  |  |  |  | ` |
| 7 | Short library internship period |  |  |  |  |  |
| 8 | No continuous efforts in monitoring the developments in the discipline |  |  |  |  |  |
| 9 | No uniformity in LIS curriculum |  |  |  |  |  |

**19.** Which extent Library & Information Science curriculum has efficiently developed the essential library management and IT skills among LIS professionals? As LIS graduate, give your opinion (Using the coding scheme)

mentioned below:

**Likert Scale:**

**1-** Not at all **2-**To a little level **3-**Just OK **4-**To reasonable level **5-**To great level

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Sr. # | Content/Topics | 5 | 4 | 3 | 2 | 1 |
| 1 | Course contents were related to practical approach |  |  |  |  |  |
| 2 | IT skills |  |  |  |  |  |
| 3 | Advanced library Softwares |  |  |  |  |  |
| 4 | Online searching skills |  |  |  |  |  |
| 5 | Cataloging and Classification skills |  |  |  |  |  |
| 6 | Office communication (written) |  |  |  |  |  |
| 7 | Reference services |  |  |  |  |  |
| 8 | Information storage and retrieval |  |  |  |  |  |
| 9 | Management skills |  |  |  |  |  |
| 10 | Human Resource (HR)Management |  |  |  |  |  |
| 11 | Leadership skills |  |  |  |  |  |
| 12 | Presentation skills |  |  |  |  |  |
| 13 | Reference Interview skills |  |  |  |  |  |
| 14 | Database management |  |  |  |  |  |
| 15 | Marketing LIS services |  |  |  |  |  |

20. Any other comments:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Contact Number (Optional)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Email (Optional)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(Thanks for your co-operation)

Muhammad Nadeem

M.Phil (Student)

Dept: Library and Information Science

The Islamia University Bahawalpur

msnrao70@gmail.com

**APPENDIX “B”**

**Covering Letter**

I am currently doing my M.Phil at the Department of Library & Information Science, the Islamia University of Bahawalpur. My thesis topic is on the “**Training Needs Assessment of LIS Professional in University Libraries of Punjab and Islamabad”.** Training Needs Assessment (TNA) is usually related to organizational and individual performance. A needs’ assessment means that the individual assessed has a defined job performance or that an organization has defined objectives and goals (Klane, 2005). The objective of this survey is to appraise the training needs of LIS professionals and the problems they are facing in this regard. The findings of this study will be helpful in relevant training provision to LIS professionals in university libraries. Your co-operation to complete this questionnaire will be highly appreciable. The information provided will be used for study and research purposes only.

Yours sincerely

Muhammad Nadeem

Research Scholar (M.Phil)

Department of Library & Information Science

The Islamia University of Bahawalpur

Email : msnrao70@gmail.com

Cell No.0333-7632355

**APPENDIX “C”**

**List of Experts**

1. Hafiz Aamir Rasool

Asst. Professor, Department of library Science

The Islamia University of Bahawalpur

1. Jamal Abdul Nasir

Lecturer, Department of Statistics

The Islamia University of Bahawalpur

1. Ata ur Rehman

Manager, Library, National Centre of Physics

Islamabad.

1. Muhammad Kamran Butt

Librarian, Central Library

Bahauddin Zakariya University, Multan

**APPENDIX “D”**

**Public Sector Universities / Degree Awarding Institutes**

**Universities/DAI’s chartered by the Government of Pakistan**

|  |  |  |  |
| --- | --- | --- | --- |
| **Sr .No** | **University/DAI Name** | **Main Campus Location** | **Website Address** |
|  | Air University, Islamabad | Islamabad | [www.au.edu.pk](http://www.au.edu.pk) |
|  | Allama Iqbal Open University, Islamabad (AIOU) | Islamabad | [www.aiou.edu.pk](http://www.aiou.edu.pk/) |
|  | Bahria University, Islamabad | Islamabad | [www.bci.edu.pk](http://www.bci.edu.pk/) |
|  | COMSATS Institute of Information Technology, Islamabad | Islamabad | [www.ciit.edu.pk](http://www.ciit.edu.pk/) |
|  | Federal Urdu University of Arts, Sciences & Technology, Islamabad | Islamabad | [www.fuuast.edu.pk](http://www.fuuast.edu.pk/) |
|  | Institute of Space Technology, Islamabad (IST) | Islamabad | [www.ist.edu.pk](http://www.ist.edu.pk/) |
|  | International Islamic University, Islamabad | Islamabad | [www.iiu.edu.pk](http://www.iiu.edu.pk/) |
|  | National Defense University, Islamabad (NDU) | Islamabad | [www.ndu.edu.pk](http://www.ndu.edu.pk/) |
|  | National University of Modern Languages, Islamabad (NUML) | Islamabad | [www.numl.edu.pk](http://www.numl.edu.pk/) |
|  | National University of Sciences & Technology, Rawalpindi (NUST) | Islamabad | [www.nust.edu.pk](http://www.nust.edu.pk/) |
|  | Pakistan Institute of Development Economics (PIDE), Islamabad | Islamabad | [www.pide.org.pk](http://www.pide.org.pk/) |
|  | Pakistan Institute of Engineering & Applied Sciences, Islamabad (PIEAS) | Islamabad | [www.pieas.edu.pk](http://www.pieas.edu.pk/) |
|  | Quaid-i-Azam University, Islamabad | Islamabad | [www.qau.edu.pk](http://www.qau.edu.pk/) |
|  | Foundation University, Islamabad | Islamabad | [www.fui.edu.pk](http://www.fui.edu.pk/) |
|  | National University of Computer and Emerging Sciences, Islamabad | Islamabad | [www.nu.edu.pk](http://www.nu.edu.pk/) |
|  | Riphah International University, Islamabad | Islamabad | [www.riphah.edu.pk](http://www.riphah.edu.pk/) |

**Universities/DAI’s chartered by Government of the Punjab**

|  |  |  |  |
| --- | --- | --- | --- |
| **Sr .No** | **University/DAI Name** | **Main Campus Location** | **Website Address** |
|  | Bahauddin Zakariya University, Multan | Multan | [www.bzu.edu.pk](http://www.bzu.edu.pk/) |
|  | Fatima Jinnah Women University, Rawalpindi | Rawalpindi | [www.fjwu.edu.pk](http://www.fjwu.edu.pk/) |
|  | Government College University, Faisalabad | Faisalabad | [www.gcuf.edu.pk](http://www.gcuf.edu.pk/) |
|  | Government College University, Lahore | Lahore | [www.gcu.edu.pk](http://www.gcu.edu.pk/) |
|  | Islamia University, Bahawalpur | Bahawalpur | [www.iub.edu.pk](http://www.iub.edu.pk/) |
|  | King Edward Medical University, Lahore | Lahore | [www.kemc.edu](http://www.kemc.edu/) |
|  | Kinnaird College for Women, Lahore | Lahore | [www.kinnaird.edu.pk](http://www.kinnaird.edu.pk/) |
|  | Lahore College for Women University, Lahore | Lahore | [www.lcwu.edu.pk](http://www.lcwu.edu.pk/) |
|  | University of Agriculture, Faisalabad | Faisalabad | [www.uaf.edu.pk](http://www.uaf.edu.pk/) |
|  | University of Arid Agriculture, Rawalpindi | Rawalpindi | [www.uaar.edu.pk](http://www.uaar.edu.pk/) |
|  | University of Education, Lahore | Lahore | [www.ue.edu.pk](http://www.ue.edu.pk/) |
|  | University of Engineering & Technology, Lahore | Lahore | [www.uet.edu.pk](http://www.uet.edu.pk/) |
|  | University of Engineering & Technology, Taxila | Taxila | [www.uettaxila.edu.pk](http://www.uettaxila.edu.pk/) |
|  | University of Gujrat, Gujrat | Gujrat | [www.uog.edu.pk](http://www.uog.edu.pk/) |
|  | University of Health Sciences, Lahore | Lahore | [www.uhs.edu.pk](http://www.uhs.edu.pk/) |
|  | University of Sargodha, Sargodha | Sargodha | [www.uos.edu.pk](http://www.uos.edu.pk/) |
|  | University of the Punjab, Lahore | Lahore | [www.pu.edu.pk](http://www.pu.edu.pk/) |
|  | University of Veterinary & Animal Sciences, Lahore | Lahore | [www.uvas.edu.pk](http://www.uvas.edu.pk/) |
|  | National Textile University, Faisalabad | Faisalabad | [www.ntu.edu.pk](http://www.ntu.edu.pk/) |

**Universities/DAI’s chartered by Government of the Punjab**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No** | **University/DAI Name** | **Main Campus Location** | **Website Address** |
|  | Beaconhouse National University, Lahore | Lahore | [www.bnu.edu.pk](http://www.bnu.edu.pk/) |
|  | Forman Christian College, Lahore (university status) | Lahore | [www.fccollege.edu.pk](http://www.fccollege.edu.pk/) |
|  | Global Institute, Lahore | Lahore | [www.global.edu.pk](http://www.global.edu.pk/) |
|  | Hajvery University, Lahore | Lahore | [www.hajvery.edu.pk](http://www.hajvery.edu.pk/) |
|  | HITEC University, Taxila | Taxila | [www.hitecuni.edu.pk](http://www.hitecuni.edu.pk/) |
|  | Imperial College of Business Studies, Lahore | Lahore | [www.imperial.edu.pk](http://www.imperial.edu.pk/) |
|  | Institute of Management Sciences, Lahore | Lahore | [www.pakaims.edu.pk](http://www.pakaims.edu.pk/) |
|  | Institute of Southern Punjab, Multan | Multan | [www.usp.edu.pk](http://www.usp.edu.pk/) |
|  | Lahore Leads University, Lahore | Lahore | [www.leads.edu.pk](http://www.leads.edu.pk) |
|  | Lahore School of Economics, Lahore | Lahore | [www.lahoreschoolofeconomics.edu.pk](http://www.lahoreschoolofeconomics.edu.pk/) |
|  | Minhaj University, Lahore | Lahore | [www.mul.edu.pk](http://www.mul.edu.pk/) |
|  | National College of Business Administration & Economics, Lahore | Lahore | [www.ncbae.edu.pk](http://www.ncbae.edu.pk/) |
|  | The GIFT University, Gujranwala | Gujranwala | [www.gift.edu.pk](http://www.gift.edu.pk/) |
|  | The Superior College, Lahore | Lahore | [www.superior.edu.pk](http://www.superior.edu.pk/) |
|  | The University of Faisalabad, Faisalabad | Faisalabad | [www.tuf.edu.pk](http://www.tuf.edu.pk/) |
|  | University of Central Punjab, Lahore | Lahore | [www.ucp.edu.pk](http://www.ucp.edu.pk/) |
|  | University of Lahore, Lahore | Lahore | [www.uol.edu.pk](http://www.uol.edu.pk/) |
|  | University of Management & Technology, Lahore | Lahore | [www.umt.edu.pk](http://www.umt.edu.pk/) |
|  | University of South Asia, Lahore | Lahore | [www.usa.edu.pk](http://www.usa.edu.pk/) |
|  | University of Wah, Wah | Wah | [www.uw.edu.pk](http://www.uw.edu.pk/) |
|  | Lahore University of Management Sciences (LUMS), Lahore | Lahore | [www.lums.edu.pk](http://www.lums.edu.pk/) |
|  | Pakistan Institute of Fashion and Design, Lahore | Lahore | [www.pifd.edu.pk](http://www.pifd.edu.pk/) |
|  | Pakistan Military Academy,  Abbottabad (PMA) | Abbottabad | Not Available |
| 1. ` | Virtual University of Pakistan, Lahore | Lahore | [www.vu.edu.pk](http://www.vu.edu.pk/) |