

Assessing Training Needs of LIS Professionals: A Prerequisite for Developing Training Programs in University Libraries of Pakistan

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ABSTRACT: This study investigated LIS professionals' perception related to their training needs in university libraries of Pakistan. The study adopted a descriptive survey design and the data were collected using a questionnaire administered to 150 LIS professionals in 59 public and private universities recognized by the Higher Education Commission of Pakistan. The response rate was 84 percent. The results obtained show that LIS professionals need training related to troubleshooting new technologies, endnote, data compression, Internet, social media such as Facebook, Blogger, Flickr, Twitter, and online databases. The respondents considered seminars, web-based training, computer tutorials, ad-hoc training sessions by staff members, and group briefings as effective training programs for improving their professional skills.

I. Introduction

Information has appeared as the “fourth resource” after land, labor, and capital since it involves the very foundations of almost every sector of the society (Kavula, 2007). It has become unique attribute of this modern world. With the development and application of information and communication technologies (ICTs), the library environment has shifted from the traditional library to hybrid library, automated library, digital library, and virtual library. The structure and nature of library and the LIS profession have also changed in a dynamic way. LIS professionals are playing all-round multimodal roles to satisfy the different needs of end users.

Training and development are important tools for successful application of IT in the libraries (Halder, 2009). According to the Economic and Social Commission for Asia and the Pacific of the United Nations (2003), “Training is a means to impart knowledge, and develop skills, and change attitudes and behaviour” (p. 0-3). Training engages the improvement of three basic characteristics: knowledge, skills, and attitudes. 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” (Swist, 2001). These performance problems may be related to knowledge, skills and attitudes (Ocheibi & Lawal, 2002).

“There are three levels of needs assessment: organizational analysis, task analysis and individual analysis” (Miller & Osinski, 2002).

Rouda and Kusy (1995) recognized that “There are several basic Needs Assessment techniques.” And they recommended that “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”

Rossett (1987) observed that “Training needs assessment (TNA) is an umbrella term for the analysis activities trainers use to examine and understand performance problems or new technologies” (p. 14).

According to Miller and Osinski (2002), “The training needs assessment is a critical activity for the training and development function.” They also believed that

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.

The development of society or nation largely depends upon the quality of education and research activities. In Pakistan, there are 135 universities that offer Ph.D. degrees. They are fully recognized by the Higher Education Commission of Pakistan. In Punjab and Islamabad, there are 59 universities in both the public and the private sector offering education in all kinds of disciplines.

II. Literature Review

Buarki, Hepworth, and Murray (2011) deliberated on ICT skills and employability needs at the LIS Program in Kuwait. The purpose of their study was to examine the impact of ICT on librarians and other library staff. Their findings show that librarians need knowledge and competencies related to library system. They recommended that library education programs should be arranged for library professionals and library staff.

Kavulya (2007) emphasized on the training needs of LIS professionals in Kenya. The purpose of that study was to identify the IT problems in current job and performance requirements and to explore the areas of training and critical IT skills required by LIS professionals. The study concluded that the job market exists in Kenya. However, LIS training is not sufficient to meet the job requirements due to inadequate resources in LIS training and inadequate ICT content in the training courses.

Aharony (2009) explored 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, including Web 2.0 applications. The findings of the study showed that the majority of library professionals agreed to adopt new changes in technologies like Web 2.0 applications. However, training programs should be offered to librarians so they could use Web 2.0 applications when providing library services.

Olaniyan and Ojo (2008) conducted a study to examine how staff training and development could effect on the organizational progress. Their study suggested that to achieve the goals and objectives of the organization, training and retraining programs should be made compulsory and that organization should arrange workshops, conferences, and seminars for staff training and development.

Saha, Ghosh, and Mondal (2007) discussed the training and development of library professionals for IT application in university libraries. Their study was conducted to explore the application of information technology in libraries from the perspective of library professionals' training and development. They concluded that the training programs on ICT skills for library professionals should be offered on a continuous base so that LIS professionals could easily upgrade their skills with the rapid changes of new technologies.

Maesaroh and Genoni (2010) investigated the continuing professional development practices in Indonesian academic libraries. The purpose of their study was to examine the present and desired state of academic library staff education and professional development in Indonesia. They concluded that with the development of electronic resources for remote access, librarians have required skills to manage access through library website rather than through the traditional way.

Brown (2002) examined the training needs of library staff in university libraries. A structured questionnaire was administered for data collection. The results showed that most respondents had limited IT skills and that they needed informal training programs but funding is the main issue. The study recommended that informal training programs should be introduced for employees to gain knowledge in various areas of ICT.

III. Objectives of the Study

This study aims to provide an overall picture of training need assessment in university libraries of Pakistan. The objectives of the study are as follows:

- To investigate the new areas of training due to emerging ICTs and Web 2.0 applications in university libraries

- To identify the applicable contents of training modules for LIS professionals
- To explore the factors militating against training in the university libraries

IV. Research Questions

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

- What are the on-the-job training needs of LIS professionals in university libraries of Pakistan?
- Due to the 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 Pakistan?
- What relevant and most recent contents should be taught to LIS professionals and who should provide the training?
- What are the barriers and challenges militating against training in university libraries?
- To which extent has LIS curriculum developed the essential library management and IT skills in LIS professionals?

V. Research Methodology

A questionnaire-based survey method was used in this study to assess the training needs for LIS professionals in the Province of Punjab and the capital city of Islamabad, Pakistan. The questionnaire contained both open- and close-ended questions.

In Pakistan, there are a total of 135 public and private universities, of which 74 are public and 61 are private. The questionnaire was distributed among 150 LIS professionals in 59 public and private universities fully recognized by the Higher Education Commission of Pakistan. All copies of the questionnaire were distributed through e-mail and postal services. The data collected from the survey were analyzed with the Statistical Package for the Social Sciences (SPSS, Version-17). The descriptive statistics, i.e., frequencies, percentages, mean, median, mode, and standard deviation values were used to measure the variables. Five-point likert scales were adopted to obtain the weighted values and rank order.

VI. Data Analysis and Findings

1. General Information about LIS Professionals

Table 1. Sector of Respondents

Sector	Frequency	Percent
Public Sector	104	82.5
Private Sector	22	17.5
Total	126	100.0

Table 1 shows that the questionnaire has been distributed to 150 LIS professionals in 59 public and private universities fully recognized by the Higher Education Commission of Pakistan. 126 library professionals responded to the survey. The response rate was 84 percent.

Table 2. Gender of Respondents

Gender	Frequency	Percent
Male	87	69.0
Female	39	31.0
Total	126	100.0

Table 2 shows that of the 126 respondents, 87 (69.0%) were male and 39 (31.0%) were female.

Table 3. 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 Others (with different designation)	16	12.7
Total	126	100.0

Table 3 shows that 53 respondents (42.1%) were “Librarian”, followed by “Assistant Librarian” (42, 33.3%), “Deputy Librarian” (11, 8.7%), and “Chief librarian” (4, 3.2%). Sixteen respondents (12.7%) had various designations such as library officer, library manager, information officer, cataloguer, classifier, and library assistant, etc.

Table 4. Qualification of Respondents

Qualification	Frequency	Percent
M.A./MLIS	122	96.8
M.PHIL.	3	2.4
Ph.D.	1	0.8
Total	126	100.0

Table 4 shows that out of 126 respondents, 122 (96.8%) were LIS professionals with MLIS degree, 3 (2.4 %) with M.Phil. degree, and 1 (0.8%) with Ph.D. degree.

Table 5. Professional Experience of Respondents

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

Table 5 shows that out of 126 respondents, 63 (50.0%) have 6-15 years experience. On the other hand, 39 (31.0%) have 0-5 years of experience. Besides, 7 (5.5%) respondents have 16-20 years of experience and 17 (13.5%) have 21 or more years of experience.

Table 6. Age of Respondents

Age	Frequency	Percent
21-30	39	31.0
31-40	47	37.3
41-50	13	10.3
51-60	27	21.4
Total	126	100.0

Table 6 shows that 47 (37.6%) respondents were in the age group of 31-40 years, followed by 39 (31.0%) in the age group of 21-30, 27 (21.4%) in the age group of 51-60 years, and 13(10.3%) in the age group of 41-50 years.

2. The On-the-Job Areas of ICT Related Training Needs of LIS Professionals in Pakistani Universities

The respondents were asked “What are the on-the-job training needs of LIS professionals in university libraries of Punjab and Islamabad?”

Table 7. The on-the-Job Areas (ICT-Related) Training Needs of LIS Professionals

Options	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	1.422
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 (Spread sheets)	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

Table 7 shows that the majority of respondents (mean=4.39) agreed that they need training in “Troubleshoot new technologies”, followed by “Windows 7, XP, Vista, LINUX, etc.” (mean=3.98), and “Desktop publishing application” (mean=3.95).

Most respondents agreed that they were interested in improving their skills on “Endnote” (mean=4.37), followed by “Data Compression, i.e., WinZip” (mean=4.25), “Online Journals databases, i.e., Emerald, Science Direct, etc.” (mean=4.16), and “Data analysis software, i.e., SPSS” (mean=4.15).

The respondents agreed that they need to get training about “Internet and online activities” (mean=4.06), followed by “Social networks, i.e., Facebook, Blogger, Flickr, Twitter, etc.” (mean=3.79), “Search and download videos from YouTube” (mean=3.92), “Email, retrieve, attach .doc file, and an image file ” (mean=3.69), and “Instant Messaging, i.e., MSN, Yahoo, Hotmail, etc.” (mean=3.54).

The respondents agreed that LIS professionals need training about “Burn files to a CDR” (mean=3.71), “Erase and reuse a CDRW” (mean=3.65), and “LAN/MAN/WAN” (mean=3.63).

The respondents agreed to some extent about their training needs related to “Database, i.e., MS Access” (mean=3.44), “Web browsers, i.e., Google’s Chrome, Firefox, Opera, etc.” (mean=3.42), “Set up and use a web cam” (mean=3.40), and “Deal with printer queries” (mean=3.40).

The respondents also agreed to some extent that they need training about “Spread sheets, i.e., MS Excel” (mean=3.29), “Computer basics” (mean=3.23), “Presentation work, i.e., MS. PowerPoint” (mean=3.17), “Use of Multimedia” (mean=3.15), “Word documents, i.e., MS Word” (mean=3.03), and “Urdu Documents, i.e., Inpage” (mean=2.98).

3. Latest Areas of ICT Training Needs of LIS Professionals in University Libraries

The respondents were asked “Due to the emergence of new information and communication technologies in library operations and services, what are the latest areas of training needs of LIS professionals in university libraries of Punjab and Islamabad?”

Table 8. Latest Areas of 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
Human Resources 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

Table 8 shows that the LIS professionals need training about “Library electronic tools, i.e., e-DDC, Classification Plus, LCSH, etc.” (mean=4.31), “Managing and maintaining , i.e., digital libraries” (mean=4.29), “Bibliographic works, i.e., MARC, Z39.5, metadata” (mean=4.26), and “Digital libraries software, i.e., Greenstone, DSpace, etc. (mean=4.17).

The respondents expressed training needs in “Human resource management” (mean=4.14), “Communication skills” (mean=4.04), and “Leadership skills” (mean=3.96).

They also agreed that they need training about “Reference interview skills” (mean=3.90), and “Library management systems, i.e., Cataloging, Circulation, Acquisition, etc. (mean=3.53).

4. Preferred Methods for Training Provision

The respondents were asked “What are the convenient places for you for training provision?”

Table 9. 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

Table 9 shows that “Conferences” (mean=4.08) and “Workshops” (mean=4.16) are the most preferred informal training programs, which are more effective as compared to others, as shown in Median (4.0) and Mode (5.0) respectively.

The respondents agreed that “Seminars” (mean=3.92), “Web-based training and computer tutorials” (mean=3.95), “Ad hoc training sessions by staff members” (mean=4.02), and “Group briefings” (mean=4.01) are also effective training programs for the enhancement of LIS professionals.

The respondents agreed to some extent about “Self learning, i.e., Books and references (mean=2.52).

5. The Convenient Places for Training Provision

The respondents were asked “What are the convenient places for you for training provision?”

Table 10. The Convenient Places for Training Provision

Options	Mean	Median	Mode	St. 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

Table 10 shows that the “University main library” (mean=4.34) and “Departmental library” (mean=4.20) are the most convenient places for training.

6. The Convenient Timings for Training Provision

The respondents were asked “What are the convenient timings for training provision?”

Table 11. The Convenient Timings for Training Provision

Options	Mean	Median	Mode	St. Deviation
During library hours	4.2	4.0	5	0.759
Evening program	4.4	4.0	4	0.493
Summer vocation	3.5	4.0	4	0.813
Saturday/Sunday	2.2	2.0	3	0.759

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

Table 11 shows that the majority of the respondents agreed that “During library hours” (mean=4.2) and “Evening” (mean=4.4) are the most convenient time for training provision.

The respondents also agreed to some extent about “Summer vocation” (mean=3.5) but they did not agree about “Saturday/Sunday” (mean=2.2).

7. Institute Responsible for Training Provision

The respondents were asked “Who should be responsible for training provision?”

Table 12. Institute Responsible for Training Provision

Options	Mean	Median	Mode	St. Deviation
Higher Education Commission	4.6	5.0	5	.488
Your library	4.0	4.0	4	.000
Library school	4.4	4.0	4	.491
Pakistan Library Association	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

Table 12 shows that “Higher Education Commission” (mean=4.6) and “Pakistan Library Association” (mean=4.0) are most responsible for LIS professionals training, as shown in median =5.0 and mode=5 respectively.

The respondents agreed that their library management (mean=4.0) and library schools (mean=4.4) are also responsible for librarian and library staff training but they did not agree on the responsibility of any other associations (mean=1.2).

8. Barriers and Challenges Militating against Training in the University Libraries

The respondents were asked “What are the barriers and challenges militating against training in the university libraries?”

Table 13. 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 programs	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

Table 13 shows that “Inadequate funding” is the main barrier or challenge in Pakistan for LIS professionals’ training (mean=4.18), as shown in median=4.0 and mode=4.0.

The respondents indicated that “Limited training programs” (mean=3.84), “Lack of resource persons” (mean=3.42), “Lack of awareness” (mean=3.47) are obstacle on meeting training needs.

The respondents also considered that “Short library internship period” (mean=3.33), “No continuous efforts in monitoring the developments in the discipline” (mean=3.79), “No uniformity in LIS curriculum” (mean=3.47) are barriers on meeting training needs.

The respondents agreed to some extent that “Colleagues and fellows are not cooperative” (mean=2.57).

9. Role of LIS Curriculum in Development of Related Skills

The respondents were asked “To which extent has library and information science curriculum efficiently developed the essential library management and it skills in LIS professionals?”

Table 14. To Which Extent Has Library and Information Science Curriculum Efficiently Developed the Essential Library Management and IT Skills in LIS Professionals?

Topics	Mean	Median	Mode	St. Deviation
Cataloguing and classification skills	4.01	4.00	5	.942
Reference services	3.88	4.00	4	.873
IT skills	3.56	4.00	3	1.084
Information storage and retrieval	3.48	3.00	3	.724
Presentation skills	3.45	4.00	4	1.093
Human resource management	3.33	3.00	3	.912
Leadership skills	3.24	3.00	3	.983
Reference interview skills	3.17	3.00	3	.989
Marketing LIS services	3.15	3.00	3	1.139
Online searching skills	3.14	3.00	3	1.108
Course contents were related to practical approach	3.13	3.00	3	.912
Office communication	3.10	3.00	3	1.106
Management skills	3.08	3.00	3	.873
Database Management	2.99	3.00	3	1.039
Advanced library software	2.94	3.00	2	1.126

Note: 1=Not at all, 2=To a lower level, 3=Just OK, 4=To reasonable level, 5=To great level

Table 14 shows that LIS curriculum has prepared LIS professionals “To reasonable level” only for “Cataloguing and classification skills” (mean=4.01).

It shows that LIS curriculum has prepared LIS professionals only at the “Just OK” level for most skills needed for LIS professionals, including “Reference services “ (mean=3.88), “IT skills” (mean=3.56), “Information storage and retrievals” (mean=3.48), “Presentation skills” (mean=3.45), “Human resource management” (mean=3.33), “Leadership skills” (mean=3.24), “Reference interview skills” (mean=3.17), “Marketing LIS services” (mean=3.15), “Online searching skills” (mean=3.14), “Course contents were related to practical approach” (mean=3.13), “Office communication” (mean=3.10), and “Management skills” (mean=3.08).

It also shows that LIS curriculum has prepared LIS professionals at “a lower level” for “Database Management” (mean=2.99) and “Advanced library software” (mean=2.94).

VII. Conclusion

It is evident from the findings that almost all library professionals are eager to get training for using ICT technologies in libraries. Of the 126 respondents, only 13 (10.3%) are fully competent with ICT applications, and they do not need further training.

Most LIS professionals need training in online journals databases, data compression (WinZip), SPSS (data analysis software), and Endnote urgently. They need skills about Facebook, Blogger, Flickr, Twitter, etc. (social networks), Internet and online activities.

The findings also indicate that most LIS professionals have great interest in advanced library services training programs. They need training for library automation services like e-DDC Classification, LCSH, etc. (Library electronic tools), MARC, Z39.50, metadata (Bibliographic works), Digital libraries (Managing and maintaining), and Greenstone, DSpace, etc. (Digital libraries software).

Almost all LIS professionals agreed that workshops and conferences are most favorite informal training programs, which are more effective as compare to others. Besides, seminars, Web-based training, computer tutorials, ad-hoc training sessions by staff members, and group briefings are also effective training programs for LIS professionals.

The majority of the LIS professionals (83%) agreed that during library hours and evening are the most convenient time for conducting training. Most library professionals (92%) indicated that the Higher Education Commission of Pakistan and the Pakistan Library Association are most responsible for LIS professionals training.

On the other hand, a majority of respondents (83%) believed that inadequate funding is the main obstacle in Pakistan for LIS professionals training. They also indicated that limited training programs, insufficient resource persons for training provision, lack of awareness, short library internship period, no continuous efforts in monitoring the developments in the discipline, and no uniformity in LIS curriculum have negatively affected LIS professionals.

Most of the respondents indicated that their education in LIS has not properly helped them in getting skills in areas like advanced library software, database management, management skills, office communication, online searching skills, and marketing of LIS services. But they have a positive opinion about cataloguing and classification skills, reference services, and some IT skills.

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