

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Library Philosophy and Practice (e-journal)

Libraries at University of Nebraska-Lincoln

2020

Information Literacy Instructions in University Libraries of Lahore, Pakistan: Practices and Methods

Muhammad Rafiq

Department of Information Management, University of the Punjab Lahore, rafiq.im@pu.edu.pk

Sumaira Ali

Department of Information Management, University of the Punjab Lahore, sumaira2801@gmail.com

Muhammad Tufail Khan

Government College University, Lahore Pakistan, mtufail440@hotmail.com

Follow this and additional works at: <https://digitalcommons.unl.edu/libphilprac>



Part of the [Library and Information Science Commons](#)

Rafiq, Muhammad; Ali, Sumaira; and Tufail Khan, Muhammad, "Information Literacy Instructions in University Libraries of Lahore, Pakistan: Practices and Methods" (2020). *Library Philosophy and Practice (e-journal)*. 4511.

<https://digitalcommons.unl.edu/libphilprac/4511>

Information Literacy Instructions in University Libraries of Lahore, Pakistan: Practices and Methods

Muhammad Rafiq
Sumaira Ali
Muhammad Tufail Khan

Abstract

Information literacy (IL) is an essential skill and play a vital role in active participation in the modern society. It is an information and a variety of skills that enable people to know when information is needed and to have the talent to accurately identify, analyse and utilize the information needed. It is knowledge and expertise of individuals to recognize when information is needed and to have the capacity to locate, assess, interpret and use effectively the needed information. This study intended to investigate the IL practices and methods used by professional librarians in university libraries of Lahore, Pakistan. A quantitative method based on a descriptive research design was used. Data were collected through a cross-sectional survey method. The population of the study contained 30 HEC recognized universities (11 public and 19 private) of Lahore. A sample of thirty head librarians was selected as participants for the study and covered through census survey. The questionnaire developed by Ullah and Ameen (2015) was adapted according to the need of the study. The reliability value of the scale was $\alpha = .092$. Descriptive and inferential statistics were applied to analyze the data. The results of the study indicated that most of the academic libraries were using a basic level of information literacy practices. The preferred delivery method of IL instructions was hands-on practice as most of the librarians were conducting IL sessions with the help of computer applications. Results further revealed that professional librarians at government and non-government sector university libraries of Lahore had the same perception regarding the effectiveness of IL instruction methods. The study recommended that universities should integrate IL instructions at all levels as credit or non-credit courses to help students to become life-long and independent learners.

Keywords: Information literacy; IL Practices; IL methods; Digital Information Literacy; Information Skills; Library and Information Literacy; Internet Literacy; Research Literacy; University libraries- Pakistan.

Background of the study and Research Gap

Information literacy (IL) has been considered as an important skill for efficient participation in the modern society. In past, there were many terms used for information literacy such as information literacy, digital information literacy, research skills, information competency, information fluency, library and information literacy, and information skills (Jabeen, Yun, Rafiq, Jabeen, & Tahir, 2016). Similarly, Rader (2003) also noted many terms used for information literacy such as library literacy, research literacy, media literacy, critical thinking skills, computer, and internet literacy which emphasized a combination of literacies. However, information literacy has been commonly defined as “an understanding and set of abilities enabling individuals to recognize when information is needed and to have the capacity to locate, evaluate, and use effectively the needed information” (Rader, 2003, p. 28). To inculcate the IL skills and capabilities among the information users, IL programs and instructions are very much important. In academic environment particularly in college and university sectors, libraries are engaged in IL instructions. It has been considered an area of library work to empower information users in higher education sector by empowering them to be an effective information consumer. IL programs offered by libraries are consist of information instructions that educate their users on how to use the library and information channel more effectiently and effectively.

Higher education sector is considered a largest consumer segment of scholarly information in Pakistan. Higher Education Commission (HEC) of Pakistan established HEC-NDL (National Digital Library) in 2004 to provide required information to users in education and research sector (HEC-NDL, 2004). HEC-NDL offer campus wide access to major

commercial databases of scholarly information such as ScienceDirect, Emerald, Tylor & Francis Journals, Wiley-Blackwell Journals, JStor, Ebrary, McGraw-Hill collection, SpringerLink, ProQuest Theses and Dissertations, etc. HEC spend millions of dollars in purchasing these precious information sources for the researchers of almost all fields of life but it had been found many researchers that these resources had lowest usage (Ansari & Zuberi, 2010; Arif & Kanwal, 2009; Bhatti, 2010; Kaleem & Zaheer, 2019; Warriach & Tahira, 2009) .

The IL education is currently new idea in Pakistan. IL instruction was incorporated as a three-credit hours compulsory course in the Library and Information Science (LIS) curriculum in 2008 by the University of the Punjab and as an optional course in the recommended curriculum by HEC in 2009 (HEC, 2009). However, no permanent place was assigned in the curriculum of all Library and Information Science (LIS) departments and Information Management (IM) departments in Pakistan. A study seems first have been conducted by Anwar (1981) to explore the status of user education in Pakistan and had been found that only Government College University Faisalabad (GCUF) and Institute of Education and Research (IER), University of the Punjab were offering IL type courses in Pakistan. Another significant, writing with the term IL in local perspective was carried out by Ameen and Gorman (2009) which highlighted the different perspective of IL in developing countries' context.

The search for studies on IL instructions in universities of Pakistan shows scarcity of scholarly information. On the other hand, University libraries cater the needs of the largest segment of information consumer in the country. A few studies (Bhatti, 2012; Rafique & Khan, 2018) have recorded that librarians in Pakistan provide library tours and library orientations to new intakes. They engage library users by providing them bibliographic instruction to make awareness about library collection and services. Also to train library users

for searching of their required materials. Thus it was felt necessary to explore this important topic to comprehend the existing status of IL practices in university libraries. The study infer the status of IL practices in university libraries of Lahore by revealing the IL practices, components of such programs and methods of delivery. The findings of the study have theoretical implications for researchers and academia and practical implications for policy makers and university libraries and librarians. The findings may help the librarians to design and implement IL instructions in a better way.

Literature Review

In recent years, some studies have been conducted regarding information literacy in different cultural contexts (Baro, Seimode, & Godfrey, 2013; Naveed & Rafique, 2018; Zeeshan, Idrees, & Siddique, 2020). Jabeen, et. al., (2016) conducted a study to investigate the practices, methods, and problems of information literacy in academic and research libraries of Beijing, China through concurrent mixed-methods research design. A structured questionnaire was used for data collection. Also, ten universities and research libraries professionals were contacted in Beijing, China to conduct in-depth interviews. Findings of the study revealed that IL trainings succesfully executed in both type of libraries by providing library orientations, library visits, and introductory information skills sessions. University libraries lead (80%) research libraries (60%) in face-to-face (F2F) delivery in library orientation programs. All the university libraries incorporated IL program into some subject units however, sixty percent (60%) of the research libraries integrate IL program in their contents. IL programs were successfully executed in university libraries instead of research institutions libraries. However, some gaps between university and research libraries were identified in terms of IL practices. The gaps can be filled by overcoming the identified hindrances such as Professional Library Association (PLA) inactivity, government lack of interest, lack of faculty collaboration and cooperation, and failure to promote IL programs

among the library users/community members. The study results revealed that the Chinese government consider IL program and formulate a national level IL policy.

Aharony and Bronstein (2014) carried out a research study to know the evolution of the concept of IL among librarians, in what setting and whose supervision IL instructions should be taught. The study also proposed to capture the perception of librarians in respect of incorporating web 2.0 while training students of information literacy. IL difference was explored based on students' demographic information. An online survey was conducted with 800 working librarians in Israeli academic libraries. The study demonstrated that the traditional definition of IL is perceived to be more authentic than the requirement of a new definition incorporating web 2.0. The participants in their textual responses recommended that the IL should include the skills of curiosity, ability to manage time, internalization of knowledge, and ability to pass and share the information. The respondents said that technology was a good tool to enhance the effectiveness of IL (Yu, Lin, & Liao, 2017). They pointed out IL and should be taught in the context of students as without context they considered it irrelevant. The participants considered that it was the responsibility of the librarians rather than faculty member to teach IL so they were advised to be more techno-based and techno-equipped librarians to cope up with the expectations of the twenty-first-century library users.

An interesting study was conducted by Yearwood, Foasberg, and Rosenberg (2015) in order to explore librarians' perceptions, practices, and adopted techniques for IL. The study revealed that most of the respondents mention one-on-one research consultation followed by credit-hour courses of IL. Most of the librarians perceived that the important IL skills like searching databases, using different keywords, ability to evaluate information sources as relevant and irrelevant, and further searching information sources make the library users more independent and lifelong learners. The respondents pointed out the students must be

taught to think critically about their research topics and they should take the risk when searching for new topics (Kousar & Mahmood, 2015). Other needed skills mentioned were; curiosity, persistence, and most important was time management. Finally, the authors acknowledged that the study was limited due to focusing on one library system and having a low response rate to generalize the results of the study.

Julien and Breu (2005) conducted a research study to report the information literacy practices among rural and public libraries of Canada. Furthermore, the study desired to explain the attitude of librarians towards these practices and their role in developing information literacy skills among the public of Canada. A pre-tested questionnaire aimed to explore current practices of information literacy was mailed to 836 directors of public libraries of Canada. The sample was gained from the directory of public libraries in Canada. It had been found that most of the participants considered that information literacy was the responsibility of public libraries and almost all participants of the study were considered that information literacy training was necessary for adult Canadians with some respondents indicated people did not require training they just wanted to their work is done. Likewise, almost all participants reported that information literacy training was necessary for children also. Most of the participants were lamented that they did not have the required resources as well as having no finance; however, some of the respondents mentioned that they had such facilities. The study concluded that public libraries were playing no or slight role in promoting instructional strategies and information literacy instructions. It had been evidenced that all respondents were considered information literacy instructions necessary for adults as well as for children.

Anwar (1981) carried out an exploratory study in context of Pakistan on user education. A twenty item questionnaire was distributed among participants in Institute of Chemistry to reveal their skills in using their relevant literature. The study demonstrated that

Faisalabad University was offering a course to the student to familiarize them with bibliographic sources and librarians working there were reported that the program was going on successful. Another course on basics of library science was reported to offer by IER, University of the Punjab. The study revealed that user education was not a new concept in Pakistan but it had not been implemented appropriately and formally. It needed to be implement in systematic way and should be fundamental part of the coursework at all level of education.

An interesting study was designed to explore the Information and Digital Literacy (IDL) in developing countries by Kanwal and Gorman (2009). The study further explore as how IDL suspended the growth of individual as well as whole nation. The study was mainly focused on case of Pakistan as a developing country and further elaborated general drawback of IDL in Asian developing countries. The study was employed previous literature related to information literacy practices in Pakistan and surveys conducted in perspective of Pakistan were used to elaborate the IDL among university students and faculty members. It had been found that web resources, HEC digital library and academic library were considered as important sources of information. By exploring the preferred source of information, respondents reported general web resources at first followed by visiting library physically and searching HEC digital library. The participants claimed that untrained staff, confusing interfaces of databases, no marketing of library resources, lack of interaction between library staff and patrons and slow speed internet facility were considered the major reason for low level of IL. The study concluded that very few universities were found practicing information literacy formally.

Bhatti (2010) proposed a research study by addressing the following research questions: what were the objectives of information literacy programs, what strategies of delivery can be employed and what was the level of staff participation in user education. The

study employed a variety of methods to collect data including survey questionnaire, incorporating personal observation, conducting information discussions with library heads and consulting relevant literature and internet sources. The study demonstrated that more than one quarter of the libraries were organizing formal IL programs while little less than third quarter of libraries were organizing informal programs. The students were reported passive learners having almost no involvement in delivery methods adopted by librarians. Target group for IL program was reported new students followed by undergraduate students. The study recommended in the light of findings that IL should be integrated in curriculum, assignments should be given related to IL skills, librarians should work in collaboration of faculty members and information seeking behavior of students need to be analyzed to better incorporate and develop IL programs.

Further, a study carried out by Mahmood (2012) to explore the perceived IL skills and what relationship was existed between perceived IL skills and selected personal and academic variables. The data were collected through a cross-sectional survey method. The population of the study was consisted of almost 30,000 students from 73 educational units of University of the Punjab, Lahore. Convenient sampling technique was used to collect data. It had been decided to collect at least 25 questionnaire filled by each person of the team and in this way 1414 questionnaires with response rate of 77% were got filled. A questionnaire was developed by reviewing the relevant literature and previous used tools to enlist the literacy skills. In this regard, 20 IL skills were listed by using five point Likert type scale. The instrument was found reliable by applying Cronbach's Alpha. The gathered data were coded and analyzed by using SPSS to employ needed statistical tests. Findings of the study revealed that the majority of the participants were female, having average age of 21 to 25, most of them were from social sciences and belonged to graduate classes. More than half of them were considered themselves as proficient in English and above fourth-fifth claimed having

computers in their homes. Most of them perceived themselves as good in IL skills mentioning thirteen information literacy related activities. They were efficient in consulting search engines and having basic computer skills yet they were found reluctant while using HEC digital library, indexing and abstracting databases, online database as well as library OPAC which showed lack of IL skills among them. The study exposed that students did not attend any IL program at school, college and even at university level. It had been found that there was a great relationship existed between IL skills and educational level, discipline of the study, English language proficiency and having personal computer at home. The study implied its findings as the central authority, educational administration, university as well as librarian should need to be focused in developing information literacy programs and it should be included in curriculum to enhance the significance of these programs. These efforts would be fruitful to make the students lifelong learners. Further, more special programs and courses should be offered to enhance the proficiency of the students in English languages so that they can perform better.

Another study conducted by Batool and Mahmood (2012) to explore the perceptions of faculty (teachers) regarding IL skills among their 3rd grade students. The population of the study was school teachers teaching at private school systems through 3rd grade. By employing purposive sampling techniques, 54 school teachers were selected who were teaching at 3rd grade in private schools of Lahore. A customized questionnaire “California School Library Association’s Information Literacy Skills at K-2” was used to collect data. It had been found that school teachers perceived that their students were at good level of IL skills as they were well aware of consulting right person in library and caring library materials. The students were perceived as good in using basic ICTs resources as well as they were found respecting other library patrons. The school teachers perceived that their students were able to identify their information needs and they were able to interpret table, chart and illustrations.

Furthermore, they were able to identify the parts of books as title, author, publisher etc. The students were found adequate and good in all required standards by California School Library. They were found efficient in accessing information, critical in evaluating information, accurate in using information, independent learner by appreciating literature, persuading information for personal interest, striving for excellence in information and knowledge generation and contributing positively to information community. The overall results were very encouraging as teachers were found satisfied regarding information literacy skills among their 3rd grade students.

Ullah and Ameen (2014) conducted a study to explore Pakistani medical libraries IL practices. The study investigated the type of IL provided, enlightening covered topics, delivery methods for IL, IL integration in course. Also, level of assistance and collaboration among library professionals and teaching faculty members in terms of implementing IL programs and their practices were investigated. A survey method was used to collect data and a questionnaire was mailed to 114 medical libraries of academic institutions. The study findings revealed that majority of medical libraries were offering IL instructions programs. Library professionals mentioned that mostly IL programs were developed and executed without the involvement of faculty members. The most common method for IL practices was reported a face-to-face instruction method that usually delivered in theater rooms, reference counter desk and computer labs for practicing practically. Also, written and verbal feedback and searching computer lab were common methods used by Pakistani medical librarians. However, the librarians were suggested to use a uniform approaches for the most excellent implementation of IL programs.

Another study conducted by Ullah and Ameen (2015) to examine the importance of IL skills capturing the perceptions of medical librarians. The study was proposed to reveal the differences existed between perceptions regarding information literacy of public sector

librarians and those who were working in private sector. The study also inferred the differences of perceptions regarding importance of literacy librarians working in medical educational institutes. For this purpose, survey method was employed to accomplish the study by using a questionnaire. The questionnaire consisting of eight information literacy skills was developed by keeping in view the basic instructions of ACRL and other relevant literature. To ensure the validity, expert review was conducted and questionnaire was also pilot tested before conducting actual study. To collect data, 114 academic head librarians were approached. It had been found that all participated librarians considered all information literacy skills important for their library patrons. Yet, a variation had been occurred as most of the librarians working in public sector libraries considered evaluation skills least important which was, however, an important part of IL definitions. The study further highlight the issues as lack of awareness regarding IL among medical librarians, lack of training opportunities and even no proper place of IL skills in LIS curriculum. The authors found no significant difference between perceptions of librarians working at public and private as well as no significance difference found on the basis of working in medical colleges, institute and university.

Rafiq (2014) conducted a research study to report IL skills among faculty members of Univrsity of Lahore and survey method was used for data collection. Simple random sampling technique was used to select participants from 650 faculty members. Through sampling, 84 participants were selected to participate in the study. A self-developed questionnaire was personally administered to collect required data. The study revealed that faculty members were deficient in terms of information skills as most of them were reported unable to use catalog and not having basic searching skills. Further, they were unable to use subject terminologies and proper search strategies. They were advised to learn information literacy skills as continuous process.

Summarizing the relevant literature, it may be concluded that IL is at the growing stage in Pakistani libraries, and this calls to explore this important area for research activities. This study will add IL literature by elaborating the IL practices in the university and research institute libraries of Lahore, Pakistan.

Objectives of the Study

The present research aimed to address the following objectives:

1. To investigate the current status of information literacy (IL) practices at university libraries of Lahore.
2. To identify the methods used by professional librarians for IL instructions at university libraries of Lahore.
3. To determine the effectiveness of different methods imparting IL instruction at university libraries of Lahore.
4. To find out the difference of methods used by professional librarians for IL instructions between public and Private Sector University libraries in Lahore.

Research Questions

This study achieved its objectives by addressing the following research questions:

1. What is the current status of IL practices at the university libraries of Lahore?
2. What type of methods professional librarians are using for IL instructions at university libraries of Lahore?
3. What is the level of effectiveness of different methods imparting IL instruction at university libraries of Lahore?
4. What are the different methods used by professional librarians for IL instructions between public and Private Sector University libraries in Lahore?

Methodology

This quantitative study is based on a descriptive research design. A cross-sectional survey method was used to collect the data. The population of the study contained 30 HEC recognized universities (11 public and 19 private) of Lahore. A sample of thirty head librarians was selected and covered through a census survey. Data were collected from only the head librarian of each university through a questionnaire. Based on the review of the related literature questionnaire developed by Ullah and Ameen (2015) was adapted according to the need of the study. It has consisted of two sections regarding the IL practices, method of delivery of IL instructions, and its effectiveness. The reliability value of the scale was $\alpha = .092$. Demographic information was also collected through the questionnaire. Data were analyzed by applying descriptive and inferential statistical techniques.

Data Interpretation

RQ1: What is the current status of IL practices at the university libraries of Lahore?

The data showed in (Table 1) that most of the libraries 23 (76.7%) are offering IL programs while a few of institutions 5 (16.7%) denied doing any type of IL. A very few institutions 2 (6.7%) acclaimed that they are working on it to introduce IL instructions.

Table 1

Status of Information Literacy (N = 30)

Status of IL	Frequency	Percentage
Offering IL	23	76.7
Not offering	05	16.7
Working on it	02	6.7

The Cross-tabulation results revealed that IL practices are almost equally offered by both public and private university libraries formally (Table 2). However, it has been found that most of the private university libraries are offering IL practices informally.

Table 2

Mode of Practices by the type of Institution (Public / Private)

Type of Institution	Mode of Practices		Total
	Formal	Informal	
Public	7	3	10
Private	9	6	15
Total	16	9	25

Table 3 showed the types of IL practices being offered by the university libraries in Lahore. Library tours/orientation sessions are offered by most of the libraries (23; 92%) followed by little more than the third quarter of libraries (19; 76%) are offering introductory information skills, library catalog instruction. Less than half of the libraries (12; 48%) are focusing on evaluating internet resources skills followed by little less than half (11; 44%) are presenting research skills and with the same percentage of libraries are offering an introduction to their websites. While it was strangely found that only a few libraries (5; 20%) are providing an overview of information literacy. However, five respondents were skipped as they denied to the existence of any information literacy practice in their institutes.

Table 3

Different Type of IL Practices being Offered in university libraries of Lahore (N=25)

Type of IL Practices	f	%
Library tour / orientation session	23	92
Introductory information skills, library catalogue instruction	19	76
Evaluating internet resources skills	12	48
Research skills (conducting literature search)	11	44
Introduction to Library website	11	44
Advanced information skills (e.g. database training)	8	32
Referencing styles (Managing Reference Style, Citation Management)	6	24
An overview of what information literacy	5	20

RQ2: What type of methods professional librarians are using for IL instructions at university libraries of Lahore?

Table 4 mentioned the methods of information literacy instruction used by the professional librarians at the university libraries of Lahore. It was found that hands-on practice employed by most of the respondents (20; 80%) followed by (18; 72%) respondents used printed training manuals, a mixture of face-to-face and online is employed by (17; 68%), seminars are conducted by (16; 64%) and (15; 60%) are doing online web-based methods of IL training. Individual instruction at the reference desk is offered by (11; 44%), workshops conducted by (10; 40%) while online web tutorials are organized by only (7; 28%). However, very few (4; 16%) of respondents are offering IL instruction face-to-face in a venue to the library e.g. lecture theatre, classroom.

Table 4

Methods of Information Literacy (IL) Instructions

Methods	<i>f</i>	%
Hands-on Practice	20	80
Printed training manuals	18	72
A mixture of face-to-face and online	17	68
Seminars	16	64
Online, (e.g. web based)	15	60
Individual instruction at the reference desk	11	44
Workshops	10	40
Online/Web based tutorials	7	28
Face-to-face in venue external to the library e.g. lecture theatre, classroom	4	16

RQ3: What is the level of effectiveness of different methods imparting IL instruction at university libraries of Lahore?

Table 5 presented the effectiveness level of different methods of information literacy instruction used by professional librarians at university libraries in Lahore. It revealed that a one-short group session for new entrants was considered the most effective method of IL

instruction delivery followed by conducting workshops and seminars that were considered most effective. The method of formal class teaching as part of the main curriculum is considered effective by a great number of participants (18; 63.4%) while six respondents (20%) were remained neutral in this regard. Extracurricular courses (13; 43.3%) and Web tutorials (13; 43.3%) are being considered the least effective method of delivering IL instruction.

Table 5

Effectiveness of Method Imparting IL instruction (N = 30)

Methods	Least Effective	Less Effective	Neutral	Effective	Most Effective
One-short group session for new entrants	1 (3.3%)	2 (6.7%)	3 (10%)	13 (43.3%)	11 (36.7%)
Workshops and seminars	1 (3.3%)	6 (20%)	4 (13.3%)	9 (30%)	10 (33.3%)
Formal class teaching as part of the main curriculum	5 (16.7%)	---	6 (20%)	8 (26.7%)	11 (36.7%)
As an extracurricular course	1 (3.3%)	6 (20%)	10 (33.3%)	9 (30%)	4 (13.3%)
Web tutorials	1 (3.3%)	8 (26.7%)	8 (26.7%)	10 (33.3%)	3 (10%)

The perceived effectiveness of the IL instruction delivery method was shown in Table 6 which described that one short group session for new entrants was perceived most effectively by securing ($\mu= 4.03$) followed by workshops and seminars with the value ($\mu= 3.70$). While formal class teaching as part of the main curriculum ($\mu= 3.67$) followed by an extracurricular course ($\mu= 3.30$) and the least effective method ($\mu = 3.20$) considered was web tutorials.

Table 6

Effectiveness of Method Imparting IL Instruction (N = 30)

Methods	M	SD
One-short group session for new entrants	4.03	1.02
Workshops and seminars	3.70	1.22
Formal class teaching as part of the main curriculum (Integrated or embedded into the curriculum)	3.67	1.40
As an extracurricular course	3.30	1.04
Web Tutorials	3.20	1.05

RQ4: What is the difference of methods used by professional librarians for IL instructions between public and private sector university libraries in Lahore?

Table 7 specified that there was statistically no significant difference in the mean scores of public sector university libraries ($\mu= 3.55$, $\mu= 3.64$, $\mu=3.36$, $\mu= 3.36$, $\mu= 4.27$) and private sector university libraries ($\mu= 4.00$, $\mu= 3.74$, $\mu= 3.26$, $\mu= 3.11$, $\mu= 3.89$) for the effectiveness of delivery methods of information literacy instruction used by professional librarians.

Table 7

Results of T-test regarding Method of Effectiveness by the type of Institution (Public/Private)

Methods	M		<i>t-value</i>	<i>P</i>
	<i>Public</i>	<i>Private</i>		
One-short group session for new entrants	3.55	4.00	-1.077	.291
Workshops and seminars	3.64	3.74	-.211	.834
Formal class teaching as part of the main curriculum	3.36	3.26	.247	.807
Web tutorials	3.36	3.11	.635	.531
As an extracurricular course	4.27	3.89	.964	.343

Discussion

This study aimed to investigate the IL practices and methods used by the library professionals at university libraries of Lahore, Pakistan. The results of the present study indicated that most of the academic libraries were doing a basic level of information literacy practices like library tours/library orientation to new entrants. Also, what is information literacy, library tours, library catalogue instructions, and introductory information skills was observed in the university libraries. The results of this study aligned with the study conducted by Jabeen, et. at., (2016). Another study conducted by Baro, Seimode, and Godfrey (2013) also presented similar results to the present study. Khan and Ameen (2020) suggested social media account compulsory for new students through which the library will upload library videos to update and guide new library users easily and instantly.

It was inferred that one short group session for new entrants was an information literacy method used by professional librarians. Workshops and seminars, formal class teaching as part of the main curriculum, extracurricular courses, and web tutorials were the methods used for IL instructions in university libraries of Lahore. Likewise, Khan and Ameen (2020) proposed awareness strategies for less used library services and consider students' first-day orientation sessions compulsory. Also, propose a formal information literacy course for the first semester students to make awareness among new entrants about library services and resources.

The study revealed that one short group session for new entrants was perceived most effectively followed by workshops and seminars and formal class teaching as part of the main curriculum. However, extracurricular courses and web tutorials methods were considered the least effective methods. Ameen and Ullah (2016) talked about the effectiveness of information literacy instruction and mentioned that IL instruction plays a key role to make library users efficient, responsible, and independent learners. Also, Khan and Ameen (2020)

assessed library services and concluded that information literacy instructions play a pivotal role in offering effective library services and information literacy sessions should be arranged regularly to create awareness among library users to use library services effectively. Khan and Rafiq (2019) conducted a study by focusing library social media services and mentioned that information literacy service provided by 48% university libraries in Pakistan and suggested to include library social media services in the information literacy sessions to make awareness among library users for effective library services.

Results of the study revealed that professional librarians at public and private sector university libraries of Lahore had the same perception regarding the effectiveness of information literacy instruction methods. However, a study conducted by Khan and Rafiq (2019) mentioned that the ratio of information literacy service is higher (52%) in private sector university libraries than public sector university libraries (44%).

Recommendations

Based on the findings of the study and keeping in mind the importance of information literacy instructions, the following recommendations are made:

- Information literacy helps students to become lifelong learners, the academic libraries should conduct different training sessions for information literacy instructions.
- Mostly, academic libraries are just providing training related to the basic level of introductory information about library services and resources. They should focus on research related training like online searching techniques, awareness of relevant databases, avoiding plagiarism, managing references using software, scholarly publishing, and copyright issues.
- The librarians and faculty members are proposed to work in collaboration with each other to improve the programs of information literacy instruction and research culture in their universities.

- Universities should integrate information literacy instructions at all levels as credit or non-credit courses to help students to become life-long and independent learners.
- The administration should provide sufficient resources to university libraries to promote information literacy programs.
- Information literacy programs should be introduced as a formal course within universities.

Conclusion

It was concluded that most of the academic libraries were using a basic level of information literacy practices like library tours/library orientation to new entrants. This basic level of information literacy training was observed as: what is information literacy, library tours, library catalogue instructions, and introductory information skills in the university libraries. It has been also revealed that most academic libraries were avoiding offering research-based information literacy training like advanced information literacy skills, managing references, avoiding plagiarism, and research skills. The preferred delivery method of IL instructions was hands-on practice as most of the librarians were conducting IL sessions with the help of computer applications. Furthermore, workshops and seminars were helpful to introduce information literacy instructions to the users. Due to the practice of IL training, most of the librarians were providing individual level IL instructions at their reference desks. In this respect, the face-to-face delivery method was preferred with sometimes a mixture of online sessions. It was also inferred that one short group session for new entrants was the perceived most effective method of IL instruction followed by workshops and seminars. While formal class teaching as part of the main curriculum followed by an extracurricular course and the least effective method considered was web tutorials. Results further revealed that professional librarians at public and private sector university libraries of Lahore had the same perception regarding the effectiveness of information literacy instruction methods.

References

- Aharony, N., & Bronstein, J. (2014). Academic librarians' perceptions on information literacy: The Israeli perspective. *Portal: Libraries and the Academy*, 14, 103-119. Retrieved from <https://www.press.jhu.edu/journals/>
- Ameen, K., & Gorman, G. E. (2009). Information and digital literacy: A stumbling block to development? A Pakistani perspective. *Library Management*, 30, 99-112. doi: 10.1108/01435120910927565
- Ameen, K., & Ullah, M. (2016). Information literacy instruction: An overview of research and professional development in Pakistan. In *European Conference on Information Literacy* (pp. 555-562). Springer, Cham.
- Ansari, M. N., & Zuberi, B. A. (2010). Use of electronic resources among academics at the University of Karachi. *Library Philosophy and Practice (e-journal)*. Paper 385. Retrieved from <http://digitalcommons.edu/libphilprac/385>.
- Anwar, M. A. (1981). Education of the user of information. *International Library Review*, 13(4), 365-383.
- Arif, M., & Kanwal, S. (2009). Acceptance of digital library among female students and effects of limited access of digital library on their performance in research work: A case of International Islamic University. *The International Information & Library Review*, 20, 1-7. doi:10.1016/j.iilr.2009.07.003
- Baro, E. E., Seimode, F. D., & Godfrey, V. Z. (2013). Information literacy programmes in university libraries: a case study. *Libri*, 63(4), 282-294.
- Batool, S. H., & Mahmood, K. (2012). Teachers' conceptions about information literacy skills of school children. *Pakistan Journal of Library and Information Science*, 13. Retrieved from <http://pu.edu.pk/home/journal/8>

- Bhatti, R. (2010). An evaluation of user-education programmes in the university libraries of Pakistan. *Library Philosophy and Practice (e-journal)*. Retrieved from <http://digitalcommons.edu/libphilprac/316>
- Bhatti, R. (2012). Information Literacy: Furthering the Cause of Higher Education in Pakistan. *Pakistan Library & Information Science Journal*, 43(1), 3-11.
- HEC-National Digital Library. (2004). HEC-National Digital Library (NDL). <http://www.digitallibrary.edu.pk/>
- Higher Education Commission of Pakistan. (2009). *Curriculum of library and information science for BS 4-year program*. Retrieved from <http://www.hec.gov.pk>
- Jabeen, M., Yun, L., Rafiq, M., Jabeen, M., & Tahir, M. A. (2016). Information literacy in academic and research libraries of Beijing, China: Practices, methods and problems. *Information Development*, 32(3), 579-591.
- Julien, H., & Breu, R. D. (2005). Instructional practices in Canadian public libraries. *Library & information science research*, 27(3), 281-301.
- Kaleem, M. M., & Zaheer, A. (2019). Measurement of Online User Information Literacy Satisfaction: An Empirical Study. *Journal of Social Sciences & Humanities*, 27(1), 19-48
- Khan, M. T., & Ameen, K. (2020). An Assessment of Effectiveness of GCU Library Services in Fulfilling Users' Needs and Demands. *Pakistan Library & Information Science Journal*, 51(3), 39-50.
- Khan, M. T., & Rafiq, M. (2019). Library Social Media Services (LSMS)! Going Viral for Survival. *Pakistan Library & Information Science Journal*, 50(3), 23-32.
- Kousar, M., & Mahmood, K. (2015). Perceptions of faculty about information literacy skills of postgraduate engineering students. *International Information & Library Review*, 47(1-2), 52-57.

- Mahmood, K. (2012). Relationship of students' perceived information literacy skills with personal and academic variables. *LIBRI – International Journal of Libraries and Information Services*, 39, 1-14.
- Naveed, M. A., & Rafique, F. (2018). Information Literacy in the Workplace: A Case of Scientists from Pakistan. *Libri*, 68(3), 247-257.
- Rader, H. (2003). Information literacy: A global perspective. *Information and IT literacy: Enabling learning in the 21st century*, 24-42.
- Rafique, G. M. (2014). Information literacy skills of faculty members: A study of University of Lahore, Pakistan. *Library Philosophy and Practice (e-journal)*.
- Rafique, G. M., & Khan, H. A. (2018). Information Literacy Skills of Management Sciences' Students. *Pakistan Journal of Information Management and Libraries*, 19, 52-73.
- Ullah, M., & Ameen, K. (2014). Current status of information literacy instruction practices in medical libraries of Pakistan. *Journal of Medical Library Association*, 102(4), 281-287.
- Ullah, M., & Ameen, K. (2015). Perceptions of medical librarians towards the importance of information literacy skills. *Pakistan Journal of Information Management & Libraries*, 16, 01-07.
- Warraich, N. F., Tahira, M. (2009). HEC national digital library: Challenges and opportunities for LIS professionals in Pakistan. *Library Philosophy and Practice (e-journal)*.
- Yearwood, S. L., Foasberg, N. M., & Rosenberg, K. D. (2015). A survey of librarian perceptions of information literacy techniques. *Communications in Information Literacy*, 9(2), 186-197.

Yu, T. K., Lin, M. L., & Liao, Y. K. (2017). Understanding factors influencing information communication technology adoption behavior: The moderators of information literacy and digital skills. *Computers in Human Behavior, 71*, 196-208.

Zeeshan, M., Idrees, H., & Siddique, N. (2020). Information literacy skills among students of Lahore University of Management Sciences (LUMS). *Library Philosophy and Practice*, 1-15.