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Information Literacy Skills of LIS Students in Pakistan: A study of University of Sargodha and University of the Punajab, Lahore

Bilal Anjum
Librarian, Govt. Associate College Sillanwali, Sargodha, bilalanjum611@gmail.com

Muhammad Asif Ali
Lecturer, Department of Information Management University of Sargodha, Punjab, Pakistan, asif.ali@uos.edupk

Shahzeb Mugheri Ph.D Scholar
Department of Information Management, University of Sargodha, Punjab, Pakistan, shahzeb.muhammad@uos.edu.pk

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asif.ali@uos.edu.pk

Shahzeb Mugheri

Ph.D Scholar, Department of Information Management, University of Sargodha, Punjab, Pakistan, shahzeb.muhammad@uos.edu.pk

Abstract

This study aimed to investigate the perceived level of IL skills, strength, weakness, challenges, and levels of IL programs attended by ILS students of two leading library schools of Pakistan. This research used descriptive survey method and distributed questionnaire among 330 participants which returned 232 complete usable responses. This study found that participants of both LIS schools perceived good level of IL skills while the majority of them prefer internet sources as they possess adequate internet surfing skills. In addition to challenges the large number of participants lacks knowledge and skills to use computer and personal computer (M = 2.71, SD = 1.245) and (M = 2.84, SD = 1.439). Whereas, the results of IL program attended depicted that majority of participants obtained low mean of (M = 2.76, SD = .985) to (M = 2.57, SD = .991). This study concludes that students of both IL schools were performing well with regard to their IL skills even though there is a dire need for advance level of IL instructions and embedded IL course integration at all a level of degree programs to equipped students with necessary skills.

Keywords: Information Literacy, Information Literacy Skills of LIS students, Information Literacy in Pakistan.

Introduction

Literacy is generally taken as the ability of reading and writing. Nonetheless, there are different types of literacy, e.g., print resource literacy, computer literacy, media literacy, web

literacy, and information literacy (Jones-Jang, Mortensen, & Liu, 2021; Munshi & Nagar, 2016; Sharma, 2022), etc. Information literacy has been used as a collective term covering all or several literacies. Now-a-days, information has become an obligatory and integral need for everyone. "Information Literacy is the method of knowing when and why information is required, where to find it, and how to access, evaluate, utilize, and communicate it ethically. It is the combination of all the abilities that are essential for the effective and maximum usage of information (Naik, 2014). "Information literacy is a necessary skill that has utility in every aspect of a person's life. The radical change and rapid development in the ICT's have forced students to acquire new information skills to effectively and efficiently use information in this age of ICT's. They require to possess information literacy skills, knowledge and approaches to ensure the maximum utilization of information in the era of information technology" (Odede, 2018). "The concept of information literacy was first introduced in the United State of America by Zurkowski in the early 1970s (Lwehabura, 2007). Information literacy involves an understanding structure of knowledge and the source of information. Information literate people are those who have learned techniques and skills for using the extensive range of information tools that include the ability to assess the quality of information independently and use reflectively to build a personal knowledge base" (Badke, 2010). "Information literacy education has gained more importance in higher education institutions. The world-wide web over the last decade has empowered people in all walks of life to seek, evaluate, use and create information effectively to achieve their personal, social, occupational and educational goals" (Swapna & Biradar, 2017).

Review of Related Work

Information literacy is considered an emerging area of research in Pakistan in the field of LIS. We have to change the provision of information in this technological age. This age requires a lot of skills, intelligence, awareness, knowledge, and strategies that have been generated for optimum utilization of information that is being produced enormously, and resources are being created at a very high speed and span.

"Information skills are basic to the achievement of lifelong learning, employment, and daily interpersonal communication of any citizen, such as when a person needs information about health services for someone in his/her care, or a student requires specific information to complete an assessment" (Forrest, 2006, p. 11).

According to Kunakornsakul and Pinit (2012) information literacy skills are among the most important skills in the 21st century. Thailand is among the countries which have been aligned with a worldwide trend of taking the IL skills as the moving power of the 21st-century digital era. It has been picked up from a study of university students of science and technology.

Fidalgo and Thormann (2017) addressed information literacy skills in the 21st century of teachers' training perspective in UAE in terms of ease of learning, usefulness, and support in teaching preferences. The objectives of this study were to ascertain the benefits of IL, the multiple instructional and training methods were preferred, ease of learning, and developing IL skills, from the viewpoint of teachers in training. In this study, they found most of the teachers in training opined that information literacy skills are easy to learn and use but few participants felt it difficult to online safety and privacy that they want to learn more about.

Development of Information Literacy in Pakistan

All over the Asia, IL, and digital information literacy segment are passing and having an outstanding development. In countries such as Singapore, India, Vietnam, Pakistan government policies on the whole, have been very IT-friendly to nurture the digital paradigm (Ameen & Gorman, 2009a). thus literature on the topic in Pakistan is very limited (Anwar & Naveed, 2019). The history and development of LIS education in Pakistan can be traced back in earlier writings Asa Don Dickson (1950) and all India conference of librarians. Several books were published after that, but rarely defined the concept of information literacy. The developments in this area started through practices of using bibliographic instruction and library orientation. Some efforts to develop information literacy started in 1989 by activities of short subject orientations, seminars, and alike informal information literacy program.

One of the earliest suggestions for formal teaching of information literacy skills to university students was made by Anwar and one of his recommendation asked for formal classroom-based instructions to educate the students in the use of the library and its' resources. Another step was taken by Najaf Ali Khan chief librarian university of Agriculture, Faisalabad when he got approved a compulsory course for all undergraduate students which was called 'bibliography' in starting. These efforts reslted the very first formal training on information literacy sponsored by University Grant Commission (now HEC) of Pakistan by July 1976 at the

University of the Punjab by Mumtaz Anwar delivering a short course of 3 credits into two groups for college and university faculty members. In 1978, a focused three months successful program, entitled 'Short Training Course in Agricultural information' was offered to the officers of the federal and provisional agricultural department by the department of library sciences, Punjab University. Afterwards, In 1974-76 Pakistan Library Association recommended the department of library and information sciences to offer an additional subject on both intermediate and bachelor levels with the objectives to: (i) Educating users of information, (ii) Exposing the general student body of the LIS profession, (iii) Motivating potential recruits to join this profession (iv) Creating lecturers positions in colleges and it was begun at the PU as recommendations put forward in board of studies in library science which adopted IL as an optional subject at both intermediate and bachelor levels approved by the faculty of Arts in April 1976. The BISE Lahore also accepted the proposal in December 1974. In early 1975, BISE Lahore hold several meetings that were chaired by Mumtaz Ali Anwar for curriculum design, text books publishing and the BISE Lahore agreed with condition that the board will not permit any college to offer the course unless a full-time lecturer in library science was appointed. The 11th PLA conference held in Islamabad on the theme of NATIS in 1979 it's a continuing struggle by the PLA to finalize the syllabus for intermediate and bachelors (BA) degree program. In 1981 the University of Karachi started a credit base course for fresh intake teaching by the library staff (Naveed & Mahmood, 2019). Ameen and Ullah (2016) conducted a literature-base study on information literacy instruction in Pakistan. who found that IL instruction as a credit course at LIS schools, and continuing education for the professional development of information professionals. They revealed that 13 research papers were published out of 12 from library schools; just 4 library schools were offering a 3-credit hour course at the master level. They also found that CPD continuing professional development is inadequate in Pakistan and hence proposed that information literacy program should be included in the curriculum of all library schools.

The DoIM, University of the Punjab, started 3 credits hour of compulsory subject at the master level in 2008. Moreover, the HEC of Pakistan added an optional IL course in the four-year BS curriculum of the LIS program which survey by Ameen and Gorman (2009b) explored the case of Pakistan and found that information literacy and digital literacy skills are at a low level and no formal course or instructions are being offered in this regard.

Statement of the Problem

Information literacy skills are very important and information professionals such as (Naveed & Mahmood, 2019, 2021; Naveed & Shah, 2022; Rafiq, Ali, & Tufail Khan, 2020; Rafique, 2014; Rafique & Khan, 2018) are supposed to train information users and inculcate such skills in them so that they would be able to become life-long learners and fulfill their information needs effectively. Thus it is pertinent to mention that no study has been made on the information literacy skills of information science students. It shows a clear gap in the literature and there was a dire need to fill this gap. Hence, this study was thought necessary and subsequently planned, which could determine the information literacy skills of these students of two leading library schools in Pakistan.

Objectives of the Study

RO1. To find out the perceived level of IL skills of LIS students enrolled in DoIM, University of Sargodha and DoIM University of the Punjab

RO2. To identify the strengths and weaknesses of the LIS students enrolled in DoIM, University of Sargodha and DoIM University of the Punjab

RO3. To ascertain challenges faced by LIS students of both schools regarding IL skills.

RO4. To find out the sort of IL programs have been availed by LIS students of both schools.

Research Questions

This study will serve following research questions:

RQ1. What is the perceived level of IL skills by LIS students enrolled in DoIM, University of Sargodha and DoIM University of the Punjab?

RQ2. What are the strengths and weaknesses of the LIS students enrolled in DoIM, University of Sargodha and DoIM University of the Punjab?

RQ3. What are the challenges faced by LIS students of both schools regarding IL skills?

RQ4. What sort of IL programs have been availed by LIS students of both schools?

Methodology and Procedure

This quantitative study used descriptive survey method and the sample sized of this study was composed of n=330 conveniently selected LIS students of two (DoIM University of Sargodha and DoIM University of the Punjab) leading LIS schools of Pakistan. adapt data collection tool developed by (Kurbanoglu, Akkoyunlu, & Umay, 2006) pilot tested (Cronbach's alpha value .842 for 28 IL items and .801 for 30 items) was split into two parts, the part one contained the demographical information. Whereas, the second part of the questionnaire consisted of 58 statements related to study's objective. The inquirer visited the field for data collection and distributed total of 330 questionnaires in both school which resulted 232 complete usable responses in-return.

Results and Findings

Demographical Information of the Participants

The demographic information of the respondents has been shown as follows. Table 1 represents the respondents' data about the institute, gender, and program of study. The data was collected from library and information science students of the SU and the PU through a questionnaire. A total of 232 out of 330 respondents filled the questionnaire 150 (64.7%) from the SU, and 82 (35.3%) from the PU. Out of 232 who filled the questionnaire, 99 (42.7%) were male and 133 (57.3%) were female. Respondents were enrolled in four programs, with 73 (31.5%) from BS, 80 (34.5%) were from MLIS, 54 (23.3%) were from M.Phil., and 25 (10.8%) were from PhD. Data revealed that the response was higher in number from the SU than the PU because the number of LIS students of university is greater than the PU

Table 1 *Demographical information of the Respondents n=232*

Category	Frequency	Percentage
Institute		
SU	150	64.7%
PU	82	35.3%
Gender		

Male	99	42.7%
Female	133	57.3%
Program		
BS	73	31.5%
MLIS	80	34.5%
M.Phil.	54	23.3%
Ph.D.	25	10.8%

Perceived level of Information Literacy Skills

Pertaining to perceived level of information literacy skills the students were asked to rate their opinion on 28 statements consisting of five-points Likert scale ranging from 1 = Almost never true to 5 = almost always true. The table 2 indicates that majority of participants responded usually true on all the items. Thus some of statements with heist mean score are as presented in descending order. The large number of participants feel confident and competent usually true the results of three statements "use electronic information sources", "select information most appropriate to the information need", and "use internet search tools (such as search engines, dictionaries, etc.)" got the highest mean score, i.e., (M = 3.72, SD = 1.156); (M = 3.66, SD = 1.609); (M = 3.65, SD = 1.236) respectively. While three statements regarding "interpret information on the library catalog"; "Create bibliographic records and organize the bibliography"; "Determine the authoritativeness, correctness, and reliability of the information sources" obtained relatively low mean scores of (M = 3.10, SD = 1.310); (M = 3.05, SD = 1.305) and (M = 3.03, SD = 1.277) respectively.

Table 2 *Perceived level of Information Literacy Skills*

Statements	n=232	Mean	SD
I feel confident and competent to :			
Use electronic information sources	232	3.72	1.156
Select information most appropriate to the information need	232	3.66	1.609
Use internet search tools (such as search engines, directories, etc.)	232	3.65	1.236
Use different kinds of print sources (such as books, periodicals, encyclopedias, chronologies, etc.)	232	3.51	1.252

Classify the information	232	3.51	1.188
Decide where and how to find the information I need	232	3.47	1.209
Determine the level appropriate to communicate with the audience	232	3.43	1.130
Learn from my information problem solving experience and improve my information literacy skill	232	3.43	1.164
Use many resources at the same time to make a research	232	3.43	1.218
Synthesize and summarize information gathered from different sources	232	3.42	1.214
Interpret the visual information (i.e. Graphs, tables, diagrams)	232	3.38	1.232
Determine the content and form the parts (introduction, conclusion) of a presentation (written, oral)	232	3.37	1.203
Make an oral presentation	232	3.37	1.255
Criticize the quality of my information seeking process and its products	232	3.34	1.245
Recognize interrelationships among concepts	232	3.34	1.135
Initiate search strategies by using keywords and Boolean logic	232	3.33	1.209
Define the information I need	232	3.33	1.305
Choose a format (i.e. Written, oral, visual) appropriate to communicate with the audience	232	3.29	1.177
Locate information sources in the library	232	3.29	1.248
Evaluate www sources	232	3.28	1.215
Paraphrase the information	232	3.27	1.195
Use/search indexes and electronic databases	232	3.26	1.204
Make citations and use quotations within the text	231	3.25	1.257
Synthesize newly gathered information with previous information	232	3.23	1.176
Recognize errors in logic	232	3.23	1.145
Locate resources in the library using the library catalogue	232	3.22	1.198
Evaluate information critically	232	3.22	1.095
Identify points of agreement and disagreement among sources	231	3.21	1.177
Identify a variety of potential sources of information	232	3.21	1.163
Prepare a bibliography	232	3.20	1.305

Limit search strategies by subject, language and date	232	3.19	1.173
Write a research paper	232	3.19	1.335
Use different kinds (types) of libraries	232	3.18	1.343
Create bibliographic records for different kinds of materials (i.e. Books, articles, web pages)	232	3.15	1.230
Use different kinds of library catalogues (i.e. Card catalogues, online catalogues)	232	3.15	1.237
Differentiate between fact and opinion	232	3.14	1.131
Use library catalogue	232	3.13	1.343
Interpret information on the library catalogue	231	3.10	1.310
Create bibliographic records and organize the bibliography	232	3.05	1.305
Determine the authoritativeness, correctness and reliability of the information sources	232	3.03	1.277

Scale: 1= Almost never true (ANT), 2 = Sometimes but infrequently true (SIT), 3 = Occasionally true (OT), 4 = Usually true (UT), 5 = Almost always true (AAT).

Strengths and Weaknesses of LIS Students with regard to IL Skills

The respondents were asked to rate the strengths and weak areas of their IL skills on 12 items consisting of five-point likert scale ranging from 1= very poor to 5=very good. The obtained mean score for "Strengths and weaknesses" LIS students is illustrated as under: The results of the first three statements i.e., "Social media (blogs, Facebook, etc.)", "Use of internet resources" and "Use of searching techniques and tools for information" get the highest mean values, i.e., (M = 4.00, SD = .969); (M = 3.92, SD = .964) and (M = 3.88, SD = .925) respectively. Whereas, the statements that obtained relatively low mean score are as reported "Computer literacy skills, ask a librarian, and Cloud computing i.e., (M = 3.54, SD = 1.169); (M = 3.41, SD = 1.210) and (M = 3.16, SD = 1.149) respectively. The complete results have been shown in Table 3

Table 3 *Strengths and Weaknesses*

Statements	n=232	Mean	SD
Social media (blogs, Facebook, etc.)	232	4.00	.969
Use of internet resources	232	3.92	.964

Use of searching techniques and tools for information	232	3.88	.925
Evaluate sources and information	232	3.69	1.060
Use Information responsibly, ethically, and legally	232	3.67	1.126
Identify potential sources	232	3.66	.984
Catalogue searching capabilities	232	3.66	1.081
Research skills	232	3.66	1.074
Word processing software	232	3.62	1.118
Computer literacy skills	232	3.54	1.169
Ask a librarian	232	3.41	1.210
Cloud computing	232	3.16	1.149

Scale: 1 = Very Poor (VP), 2= Poor (P), 3 = Fair (F), 4 = Good (G), 5= Very Good (VG).

Challenges Faced by Students regarding IL Skills

The challenges faced by students regarding IL Skills were the 3rd question of this research study. For instance the students were asked to rate their opinion on 6 statements containing a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. The results of the first two statements i.e. "I spend long-hours searching for information" and "I need to learn to navigate the OPAC features" get the highest mean values such that (M = 3.24, SD = 1.242) and (M = 3.11, SD = 1.231) respectively. On the other hand, statements having the least mean were scored as I lack knowledge and skills to use computer and Lack (non-availability) of personal computer i.e., (M = 2.71, SD = 1.245) and (M = 2.84, SD = 1.439) respectively shown in table 4

Table 4 *Challenges faced by students regarding IL Skills*

Statements	n=232	Mean	SD
I spend long-hours searching for information	232	3.24	1.242
I need to learn to navigate the OPAC features	232	3.11	1.231
It is difficult for me to access and retrieve information from external databases	232	3.09	1.229

	232	2.87	1.266
I cannot identify databases/e-resources in my study area	232	2.87	1.266
I lack (non-availability) of personal computer	232	2.84	1.439
I lack knowledge and skills to use computer	232	2.71	1.245

Scale: 1= Strongly disagree (SD), 2 = Disagree (D) 3 = Undecided (UD), 4 = Agree (A), 5 = Strongly agree (SA)

Information Literacy Programs attended by Participants

"Information literacy program" is the 4th Questions of the research. The participants were asked to rate their opinion on 12 statements on a four-point Likert scale ranging from none to advanced the results are mentioned as in table 5. The results of the first two statements "Printed Information Literacy instructions" and "seminar" got the highest mean score, i.e., (M = 2.76, SD = .985); (M = 2.75, SD = .997) respectively. While the least other two statements "Online courses" and "Briefing by a librarian" obtained the lowest mean scores of (M = 2.46,SD = 1.084); (M = 2.57, SD = .991) respectively.

Table 5 *Information Literacy Programs attended by Participants*

Statements	n=232	Mean	SD
Printed Information Literacy instructions	232	2.76	.985
Seminar	232	2.75	.997
One-on-one discussion	232	2.69	1.060
User Education (Library instruction)	232	2.65	.973
Integrated into course curriculum	232	2.64	1.031
Online IL instructional modules via Library Website	232	2.63	1.052
Computer-aided instruction	232	2.62	1.008
Tutorial	232	2.59	.967
Workshop	232	2.58	1.106
Orientation	232	2.58	.986
Briefing by librarian	232	2.57	.991
Online courses	232	2.46	1.084

Scale: 1 = None, (N) 2 = Basic (B), 3 = Moderate (M), 4 = Advance (A)

Findings of the study

The results of this study depicted that majority of LIS students' (n=232) from both (DoIM University of Sargodha and University of the Punjab) were good at information literacy skills as they feel confident and competent to perform information related tasks and obtained overall mean score ranging from (M = 3.72, SD = 1.156) to the lowest mean score (M = 3.03, SD = 1.277) of last statement given in table 1. Same as aforesaid, regarding the strengths and weakness, the study also found that students were good at using social media, internet sources, searching techniques and tools, using information responsibly, ethically and legally which the statements gained highest mean score from (M = 4.00, SD = .969) to comparatively low means (M = 3.16, SD = 1.149) which indicates that students were having satisfying online information dealing skills. Besides having good IL skills, this study reported that the students were still facing some challenges those encompasses on spending long-hours for searching information, locating OPAC navigation features, accessing and retrieving information, identifying appropriate databases, personal computer availability, and computer related knowledge and skills. Regarding the IL attended programs by students, the study identified that majority of students have never received any formal IL training. These findings are in-line with the findings of (Tan,Gorman,& Singh, 2012)(Naveed, 2021; Naveed & Mahmood, 2019; Rafique, 2014; Rafique & Khan, 2018; Zeeshan, Idrees, & Siddique, 2020).

Conclusion and Implication of the study

This study aimed at accessing information literacy skills of LIS students of DoIM, SU and the DoIM, PU. The study reached on the findings that LIS students of both schools were possessing satisfying level of IL skills. Whereas the it can be seen in the figures above that students enrolled in post-graduate (PhD.) programs perceive higher level of IL skills as compared to students who were pursuing their M.phil and graduation as similarly (Kousar & Mahmood, 2015) found in their study. It means that postgraduate students involve in their academic activities and show signs of improvement. Most of the LIS students were familiar with the information literacy programs and they have attended the basic academic session at their university, thus to equipped students with necessary IL skills, the basic level of IL programs are not sufficient and therefore, it is recommended to incorporate advance need-based IL course and initiate regular IL program at all levels of degree programs as proposed in previous studies by

(Mahmood, 2013; Ullah & Ameen, 2019; Zeeshan, Siddique, & Idrees PhD, 2020). The results of this study will help administrators of both LIS schools in shaping need-based IL course integration and curriculum design.

Limitations of the study

This study has several limitations to be generalized. This study used descriptive survey method and the data was self-reported therefore, the honesty in response is incumbent on the honesty of participants, the sampling technique applied may be considered another limitation as due to unavailability of all the respondents in the research field simultaneously.

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Reference

Ameen, K., & Gorman, G. (2009a). Information and digital literacy: a stumbling block to development? A Pakistan perspective. *30*(1/2), 99-112.

Ameen, K., & Gorman, G. (2009b). Information and digital literacy: a stumbling block to development? A Pakistan perspective. *Library Management, 30*(1/2), 99-112.

Ameen, K., & Ullah, M. (2016). *Information literacy instruction: An overview of research and professional development in Pakistan.* Paper presented at the European Conference on Information Literacy.

Anwar, M. A., & Naveed, M. A. (2019). Developments in Information Literacy in Pakistan: Background and Research. *50*(2).

Badke, W. (2010). Foundations of information literacy: Learning from Paul Zurkowski. *Online, 34*(1), 48-50.

Fidalgo, P., & Thormann, J. (2017). Information Literacy in the 21st Century: Usefulness and Ease of Learning. *International Association for Development of the Information Society*.

Forrest, M. E. J. I. j. (2006). Towards an accessible academic library: using the IFLA checklist. *32*(1), 13-18.

Jones-Jang, S. M., Mortensen, T., & Liu, J. (2021). Does media literacy help identification of fake news? Information literacy helps, but other literacies don't. *American Behavioral Scientist, 65*(2), 371-388.

Kousar, M., & Mahmood, K. (2015). Perceptions of faculty about information literacy skills of postgraduate engineering students. *47*(1-2), 52-57.

Kunakornsakul, H., & Pinit, P. (2012). 21st century skills of undergraduate students in science and technology: an information literacy assessment.

Kurbanoglu, S. S., Akkoyunlu, B., & Umay, A. (2006). Developing the information literacy self-efficacy scale. *Journal of documentation*.

Lwehabura, M. J. (2007). *The status and practice of information literacy for teaching and learning in four Tanzanian universities.*

Mahmood, K. (2013). Relationship of students' perceived information literacy skills with personal and academic variables. *Libri, 63*(3), 232-239.

Munshi, S. A., & Nagar, P. (2016). Information literacy skills among the postgraduate students at Aligarh Muslim University, India. *Library Philosophy and Practice (e-journal), 1419*.

Naik, M. M. P. (2014). Imortance of Informtion Literacy *International Journal of Digital Library Services, Vol. 4,*(3), 92-100.

Naveed, M. A. (2021). Information literacy self-efficacy of scientists. *Information Research, 26*(1), 26.

Naveed, M. A., & Mahmood, M. (2019). Information literacy self-efficacy of business students in Pakistan. *Libri, 69*(4), 303-314.

Naveed, M. A., & Mahmood, M. (2021). Correlatives of business students' perceived information literacy self-efficacy in the digital information environment. *Journal of Librarianship and Information Science*, 09610006211014277.

Naveed, M. A., & Shah, N. A. (2022). Information literacy in the legal workplace: Current state of lawyers' skills in Pakistan. *Journal of Librarianship and Information Science*, 09610006221081895.

Odede, I. (2018). Information Literacy Skills among Library and Information Science Postgraduate Students of Nnamdi Azikiwe University, Awka, Nigeria. *7*(2).

Rafiq, M., Ali, S., & Tufail Khan, M. (2020). Information Literacy Instructions in University Libraries of Lahore, Pakistan: Practices and Methods.

Rafique, G. M. (2014). Information literacy skills of faculty members: A study of the University of Lahore, Pakistan. *Library Philosophy and Practice*, 0_1.

Rafique, G. M., & Khan, H. A. (2018). Information literacy skills of management sciences' students. *Pakistan Journal of Information Management and Libraries, 19*, 52-73.

Sharma, A. (2022). A Research Study on the Role of Computer Literacy in Rural Areas of Himachal Pradesh. *Journal homepage: www. ijrpr. com ISSN, 2582*, 7421.

Swapna, G., & Biradar, B. (2017). Assessment of Information Literacy Skills among Science-Post Graduate Students in Universities of Karnataka State: A Study. *Assessment*

7, 3.

Ullah, M., & Ameen, K. (2019). Teaching information literacy skills to medical students: perceptions of health sciences librarians. *Health Information Libraries Journal*

36(4), 357-366.

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.

Zeeshan, M., Siddique, N., & Idrees PhD, H. (2020). Measuring Information literacy skills of graduate students of Lahore University of Management Sciences (LUMS).