

Library User Education Planning and Strategies: A Study of University Libraries in Islamabad

¹Sana Hassan*, and ²Dr. Saima Hanif

- 1. MS Scholar, Sarhad University of Science and Information Technology, Peshawar, KP, Pakistan
- 2. Assistant Professor, Sarhad University of Science and Information Technology, Peshawar, Pakistan

*Corresponding Author	Saimahanif2015@yahoo.com

ABSTRACT

P-ISSN: 2790-6795

This study attempts to identify the library user education strategies and planning used in public and private sector universities of Islamabad, Pakistan. This study was conducted using a quantitative approach with a sample size of 77 participants. Data were collected through a Google questionnaire form. The validity and reliability of the research instrument were checked beforehand. The data were analyzed using descriptive statistics. It was concluded in this research that the actual focus should be on lifelong learning of library users. Several activities should be conducted using technologies and collaboration with other institutions. Several recommendations are also given in this study such as need analysis should be done to facilitate the library users, and by using the diverse delivery methods and hands-on training sessions, integrated curriculum collaborations should be done. Professional training programs for library staff should also be conducted regularly. This study may also be replicated in other cities and provinces of Pakistan.

Keywords: Digital Transformation, Information Literacy, Information Technology, Knowledge Management, Research Facilitation, University Libraries, Library Trends

Introduction

Library user education is an important part of services provided by academic libraries. Its goal is to help students, teachers, and researchers learn the skills they need to use library resources effectively. Especially in higher education, where digital resources and technology are becoming more important, libraries have grown from just being places to store books into centers for information literacy. University libraries in Islamabad, like many others around the world, understand the importance of creating and running good user education programs to meet the needs of their different users (Ameen & Rafiq, 2009).

Successful library education involves more than just basic orientation and catalog training. It focuses on teaching skills that help users find, assess, and use information responsibly and efficiently. Information literacy, which is a major goal of library education, is seen as a crucial skill for academic success and ongoing learning (Ameen, 2013). To reach this goal, university libraries in Islamabad have created strategic plans for educating users. These plans involve understanding the unique needs of their users, incorporating library lessons into academic courses, and regularly checking how well their educational programs work (Hussain & Nazim, 2013).

Planning user education programs involves several key steps, starting with evaluating user needs. University libraries in Islamabad use different methods like surveys, focus groups, and interviews to find out what users know and what skills they have. This evaluation helps in creating teaching materials and choosing the right ways to teach, making sure the library lessons are useful and focused (Naz & Naeem, 2012). Another important part of planning is working together with librarians and teachers. When it comes to how they provide services, university libraries in Islamabad use both old and new methods. Traditional ways, like face-to-face orientation sessions, workshops, and individual

consultations, are still important for giving direct help to users (Rehman, Mahmood, & Bhatti, 2012). But, libraries also use more digital tools and platforms to reach more people and fit different schedules and learning styles. Online tutorials, webinars, and interactive guides let users get library help from a distance and at their speed (Rafiq & Ameen, 2012).

Additionally, libraries understand the value of regularly reviewing and enhancing their user education programs. Gathering frequent feedback from participants and evaluating performance helps libraries adjust their teaching methods and fix any issues or difficulties. This ongoing process ensures that library education stays in tune with the evolving needs of the academic community (Ameen & Rafiq, 2009). Although university libraries in Islamabad have made notable progress in improving user education, they still encounter challenges, especially with limited resources and the digital gap. Not all students have the same access to digital devices or fast internet, which can restrict their full use of online library resources and tutorials (Naz & Naeem, 2012).

Literature Review

Library user education is seen as a key part of doing well in school and learning how to find and use information in colleges and universities. Academic libraries, like the ones in Islamabad, are putting more effort into creating and running programs to help students and teachers deal with the many sources of information. Over time, different studies have looked at how libraries plan and carry out these programs, focusing on knowing what users need, teaching these skills as part of regular classes, and using both old and new ways of learning.

Library user education is usually connected to the bigger idea of information literacy. Information literacy means knowing how to find, judge, and use information well. Ameen and Rafiq (2009) say that the main aim of user education is to help people get better at researching, so they can make smart choices about the resources they use. In Pakistan, there's a lot of focus on creating programs for information literacy, and university libraries are key in helping students and teachers develop these skills. Research shows that good user education programs can really boost students' research skills and their school performance (Ameen, 2013).

A study by Iqbal and Rehman (2015) shows that planning is very important for teaching people how to use libraries. They say that this planning should be thorough, including understanding what users need, setting clear goals, and creating a flexible teaching plan. In their research on university libraries in Islamabad, they noticed that many libraries use methods like surveys, focus groups, and feedback forms to find out what their users need to learn. This helps libraries make their teaching programs better, so the lessons are useful for students' studies and research. Additionally, Hussain and Nazim (2013) believe that library education should be part of the regular school curriculum, so students learn about libraries as part of their formal education. This means that working together between teachers and librarians is very important to make sure students get the right library education.

A main way university libraries in Islamabad help students is by having introduction meetings and classes. These usually happen at the beginning of the school year to help new students learn about what the library offers (Naz & Naeem, 2012). But some research says that these usual ways, though helpful, might not be enough for students who have different levels of understanding about using information. Mahmood (2013) thinks libraries should try more different ways, like teaching in person and using online tools to reach more students. For instance, online lessons, web seminars, and interactive study materials have been found to make learning more fun and give students who can't come to real classes more chances to learn.

Recent studies have looked at how well digital tools work for teaching users, moreover, role of libraries and librarians have changed with the passage of time, Hanif, S., Shah, Rehman, & Hassan, S. (2024) Stated that regular trainings for university librarians can improve the services for users. Zahra, Hanif, S., & Shah, (2024) mentioned that libraries are using many latest technologies so there is need to hire more qualified and skilled staff to serve the users. Rafiq and Ameen (2012) found that many university libraries in Islamabad use Web 2.0 technology to offer user education online. These online platforms let libraries share instructional materials in different forms, like videos, podcasts, and interactive guides, making it simple for users to get information from anywhere. Digital tools not only make library instruction more accessible but also support ongoing learning, as students can review the content whenever they need to. Rehman, Mahmood, and Bhatti (2012) also point out that digital tools can meet different learning styles by providing both live and self-paced learning options.

Even though technology can help in teaching library users, there are still some problems, especially when it comes to the digital gap. Not all students have the same access to digital devices or fast internet, which can make it hard for them to use online learning tools (Naz & Naeem, 2012). This is especially true for students from poorer backgrounds or rural areas. Ameen and Rafiq (2009) say that university libraries should think about these differences when planning education programs, making sure all students can use the resources and get the help they need. Also, librarians need to be trained well in using digital tools and teaching technologies to provide good user education.

A key part of teaching library users is regularly checking how well it's working and getting feedback. Libraries in Islamabad have started to see the importance of doing regular checks in their teaching programs to make sure they are meeting the changing needs of their users. They often use surveys, feedback forms, and tests after teaching to see how well the teaching works and to find areas that need improvement (Iqbal & Sohail, 2013). This ongoing process helps libraries improve their teaching methods and materials, making sure their teaching programs stay useful and meet the needs of the academic community.

Material and Methods

The study on library user education planning and strategies in the public and private sector university libraries of Islamabad follows a descriptive survey research design to assess the effectiveness of current user education programs. The study targets librarians, library staff, students, and faculty from various universities in Islamabad. Questionnaires were distributed to gather quantitative data on user education strategies. Quantitative data is analyzed using descriptive statistics (frequencies, percentages, mean, and standard deviation). This methodology ensures a comprehensive understanding of the planning and effectiveness of library user education strategies in Islamabad's university libraries.

Responded Profiles

The respondents' profiles focused on gender, age, job title, professional qualification, number of years worked, and experience in the library environment.

Table 1.Gender of the respondents						
Male	61	79.2				
Female	16	20.8				
	Ge er" Male Female	Table 1.Gender of the respondentser" frequencyMale61Female16				

Results from table 1 on gender show that out of the 77 respondents who responded to the questionnaire 61(79.2%) were male and 16 (20.8%) were female.

worked more than fifteen years.

Type of University/Institute						
"Type of University/Institute"	frequency	Percentage				
1. Public Sector	36	48				
2. Private Sector	39	52				
		1 . 1 1				

Table 2.

Results from table 2 on gender show that out of the 77 respondents who responded to the questionnaire 36 (48.0%) for Public Sector while 39(52.0%) were Private sector.

	Job tit	le	
	"Job title"	frequency	Percentage
1.	Chief Librarian	5	6.5
2.	Deputy Librarian	5	6.5
3.	Librarian	16	20.8
4.	Assistant Librarian	24	31.2
5.	Library Assistant	10	13
6.	Information Officer	5	6.5
7.	Catalouger	2	2.6
8.	Manager Library	2	2.6
9.	Assistant Director	2	2.6
10.	Library Incharge	1	1.3
11.	Superidentant	1	1.3
12.	Snr. Deputy Director Library	1	1.3
13.	Director Library	1	1.3
14.	Junior Cataloguer	1	1.3
15.	Library Attendent	1	1.3

Table 3	
Iob title	

Table 3 provides the job titles of the respondents. The results showed that the majority of respondents 24(31.2%) were assistant librarians; 16(20.8%) respondents were librarians; library assistants totaled 10(13%). From a total of 77 respondents, 5(6.5%) were information officers, while University librarians, Chief, and deputy librarians were 5(6.5%).

Work Experience					
	"Work Experience"	frequency	Percentage		
1.	0-5 years	26	33.8		
2.	6-10 years	19	24.7		
3.	11-15 years	18	23.4		
4.	16 years or more	15	19.5		

As indicated in question 4, respondents were asked to indicate the years they have worked in their respective libraries as a way of assessing their work experience. The feedback from the responses shows that the majority numbering 26(33.8%) respondents had worked in the library for over five years. This was followed by 19(24.7%) respondents who had worked for more than nine years. 18 (23.4%) respondents had worked in the library for between eleven to fifteen years while the minority totaling 15 (19.5%) had

Table 5. Professional qualification							
1. BS Library Science	21	27.3					
2. MALibrary Science	33	42.9					
3. Mpil/MS Library Science	20	26					
4. PHD Library Science	3	3.9					

Table 4

Analysis of results concerning the professional qualification of the respondents is presented in Table 5. Those with a first university degree were 21(27.3%) while a master's degree was 33(42.9%). Moreover, MS/Phil in the library constituted 20(26.0%). Of the respondents, 3(3.9%) have acquired a certificate or PhD qualification.

Methods and Strategies Currently Employed in Library User Education

As indicated in Table 01, respondents were asked to indicate their level of agreement with the statement on Methods and Strategies Currently Employed in Library User Education.

	Table 6Content delivery in user education								
	"content delivery in user education"	Strongly Agree f (%)	Agree f (%)	Neutral f (%)	Disagree f (%)	Strongly Disagree f (%)	М	SD	
1.	In-person workshops	65(84.4)	12(15.5)	0(0.0)	0(0.0)	0(0.0)	15.4	25.23	
2.	Video tutorials	35(45.4)	36(46.7)	2(2.5)	4(5.1)	0(0.0)	15.4	16.46	
3.	Webinars	15(19.4)	58(75.3)	3(3.8)	1(1.2)	0(0.0)	15.4	21.97	
4.	Guest Lectures	1(1.2)	3 (3.8)	3(3.8)	47(61.0)	24(31.1)	15.6	17.82	
5.	Library Events & Programs	10(12.9)	61(79.2)	4(5.1)	2(2.5)	1(1.2)	15.6	22.91	
6.	Online Chat bots	0(0.0)	4(5.1)	2(2.5)	38(49.3)	34(44.1)	15.6	16.75	
7.	One-on-one Training	32(41.5)	43(55.8)	1(1.2)	1(1.2)	0(0.0)	15.4	18.38	
8.	Sessions with Librarian	43(55.8)	34(44.1)	0(0.0)	0(0.0)	0(0.0)	15.4	19.07	

Key: SA- Strongly Agree, A-Agree, N- Neutral, DA-Disagree, SD- Strongly Disagree

The findings indicate a strong preference for interactive and personalized learning methods in library user education. In-person workshops, sessions with librarians, and one-one training are particularly favored, emphasizing the importance of direct engagement. In contrast, guest lectures and online chatbots received negative feedback, suggesting a need for re-evaluation of these formats to better meet user needs. Overall, these insights can guide libraries in enhancing their user education strategies.

	Table 7								
	Delivery methods.								
"co	ontent delivery methods"	Not Effective f (%)	Slightly Effective f (%)	Undecide d (%)	Effective f (%)	Very Effective f (%)	М	SD	
1.	In-person workshops	0(0.0)	0(0.0)	0(0.0)	12(15.8)	65(84.4)	15.4	25.23	
2.	Video tutorials	0(0.0)	24(31.1)	2(2.5)	30(38.9)	23(29.8)	15.8	12.34	
3.	Webinars	0(0.0)	27(35.0)	1(1.3)	34(44.1)	15(19.5)	15.4	13.68	
4.	Guest Lectures	33(42.8)	38(49.3)	1(3.8)	6(7.8)	0(0.0)	15.6	16.45	
5.	Library Events & Programs	0(0.0)	8(10.4)	1(1.3)	52(67.5)	16(20.8)	15.4	19.18	
6.	Online Chat bots	44(57.1)	27(35.1)	3(3.9)	1(1.3)	2(2.5)	15.4	17.28	
7.	One-on-one Training	0(0.0)	1(1.3)	0(0.0)	55(71.4)	21(27.3)	15.4	21.36	
8.	Sessions with Librarian	0(0.0)	0(0.0)	0(0.0)	48(62.3)	29(37.7)	15.4	19.8	
17									

Key: NE-Not Effective, SE-Slightly Effective, UD-Undecided, E-Effective, VE-Very Effectiv

In-person workshops, one-on-one training, and sessions with librarians were the most effective methods. Guest lectures and online chatbots were seen as the least effective. Other methods like video tutorials, webinars, and library events had mixed feedback, with varying levels of satisfaction.

Table 8							
library engage users in educational programs							
"Educational programs"	Strongly Agree f (%)	Agree f (%)	Neutral f (%)	Disagree f (%)	Strongly Disagree f (%)	М	SD

Annals of Human and Social Sciences (AHSS)

1. Interactive activities during sessions	71(92.2)	6(7.8)	0(0.0)	0(0.0)	0(0.0)	15.4	27.9
2. Follow-up surveys	42(54.5)	33(42.9)	0(0.0)	2(2.6)	0(0.0)	15.4	18.28
3. Competitions & Incentives for participation	18(23.4)	57(74.0)	1(1.3)	1 (1.3)	0(0.0)	15.4	21.86
4. Use of social media and digital platforms	20(25.9)	54(70.1)	0(0.0)	3(3.9)	0(0.0)	15.4	20.68
5. Workshops or hands- ontraining sessions	36(46.8)	40(51.9)	1 (1.3)	0(0.0)	0(0.0)	15.4	18.50
6. Book clubs or reading groups	33(42.9)	36(46.8)	1(1.3)	8(10.4)	0(0.0)	15.6	15.70
7. Study groups or peer-to- peer learning	36(46.8)	37(48.0)	2(2.6)	2(2.6)	1(1.3)	15.6	17.07

Key: SA- Strongly Agree, A-Agree- Neutral, DA-Disagree, SD- Strongly Disagree

The findings suggest that educational programs should prioritize interactive and engaging methods to enhance user experience and learning outcomes. Libraries and educational institutions are encouraged to leverage digital tools, incorporate gamification strategies, and focus on hands-on training to meet the diverse needs of their participants. Additionally, while many formats are effective, ongoing evaluation and adaptation of programs like book clubs can further enhance engagement and satisfaction among users. By aligning educational offerings with user preferences, libraries can create more impactful learning environments.

Challenges and Barriers

This section sought to examine the Key Challenges and Barriers Faced by Librarians and Institutions in Implementing Effective Library User Education Programs.

Table 9

	Resource limitations does your library face									
	"Resource limitations"	Strongly Agree f (%)	Agree f (%)	Neutral f (%)	Disagree f (%)	Strongly Disagree f (%)	М	SD		
1.	Budget constraints	64(83.1)	9(11.7)	3(3.9)	1(1.3)	0(0.0)	15.4	24.50		
2.	Inadequate Staffing	39(50.6)	32(41.5)	5(6.5)	1(1.3)	0(0.0)	15.4	16.64		
3.	Insufficient technological resources	17(22.1)	56(72.7)	3(3.9)	1(1.3)	0(0.0)	16	20.89		
4.	Inadequate training	14(18.2)	57(74.0)	3(3.9)	3(3.9)	0(0.0)	15.4	21.34		
5.	Limited Access to Digital Tools	30(38.9)	42(54.5)	4(5.2)	1(1.3)	0(0.0)	15.4	17.29		
6.	Insufficient Physical Space	48(62.3)	22(28.6)	2(2.6)	5(6.5)	0(0.0)	15.4	18.06		
7.	Outdated software/hardware	49(63.6)	24(31.2)	3(3.9)	2(2.6)	0(0.0)	15.6	18.83		
8.	Insufficient technical support	31(40.2)	42(54.5)	4(5.2)	0(0.0)	0(0.0)	15.4	17.64		
9.	User resistance to technology	19(24.7)	45(58.4)	4(5.2)	9(11.7)	0(0.0)	15.4	16.11		

Key: SA- Strongly Agree, *A*-Agree- Neutral, *DA*-Disagree, *SD*- Strongly Disagree

The findings indicate that resource limitations are a pervasive issue affecting the effectiveness of services and programs. Institutions must prioritize addressing budget constraints, staffing challenges, and technological upgrades to enhance overall functionality. Additionally, investing in training for both staff and users will be vital for overcoming resistance and ensuring that available resources are utilized effectively. By addressing these key limitations, institutions can better meet the needs of their communities and improve service delivery.

Learning Styles, Levels of mior mation Literacy, and Technological Frontiency										
"practice can be improved"	Strongly Agree f (%)	Agree f(%)	Neutral f(%)	Disagree f(%)	Strongly Disagree f(%)	М	SD			
1. Hands-on activities	69(89.6)	5(6.5)	3(3.9)	0(0.0)	0(0.0)	15.4	26.87			
2. Group discussions	52(67.5)	26(33.8)	0(0.0)	0(0.0)	0(0.0)	15.6	20.8			
3. Individual coaching	23(29.9)	50(64.9)	2(2.6)	2(2.6)	0(0.0)	15.4	19.24			
4. Self-paced online modules	13(16.9)	57(74.0)	2(2.6)	5(6.5)	0(0.0)	15.4	21.27			
			-							

Table 10Learning Styles, Levels of Information Literacy, and Technological Proficiency

Key: SA- Strongly Agree, *A-*Agree,*N-* Neutral, *DA-*Disagree,*SD-* Strongly Disagree

The data strongly supports the assertion that practice can be improved through targeted instructional strategies. By leveraging hands-on activities, fostering group discussions, and optimizing individual coaching and online modules, educators can create a more effective learning environment that meets the diverse needs of learners. Future research could further explore the specific elements of these methods that contribute to practice improvement, thereby providing deeper insights into effective educational practices.

Tabla 11

library support users with different levels of technological proficiency									
"levels of technological proficiency"	Strongly Agree f (%)	Agree f (%)	Neutral f (%)	Disagree f (%)	Strongly Disagree f (%)	М	SD		
1. Basic tech orientation sessions	67(87.0)	10(12.9)	0(0.0)	0(0.0)	0(0.0)	15.4	26.09		
2. Advanced technology workshops	46(59.7)	30(38.9)	0(0.0)	1(1.3)	0(0.0)	15.4	19.14		
3. Online tech support resources	29(37.7)	48(62.3)	0(0.0)	0(0.0)	0(0.0)	15.4	19.79		
4. Peer-assisted learning	15(19.5)	55(71.4)	3(3.9)	4(5.2)	0(0.0)	15.4	20.44		
5. Creating User- FriendlyResources	28(36.4)	46(59.8)	0(0.0)	3(3.9)	0(0.0)	15.4	18.56		
6. Organizing IntroductorySessions	37(48.1)	37(48.1)	0(0.0)	3(3.9)	0(0.0)	15.4	17.67		

Key: SA- Strongly Agree, A-Agree, N- Neutral, DA-Disagree, SD- Strongly Disagree

The findings indicate a strong demand for comprehensive training programs that cater to varying levels of technological proficiency. Basic orientation and advanced workshops are highly valued, suggesting that institutions should continue to invest in these areas. Additionally, the emphasis on online support and user-friendly resources points to a need for ongoing development of accessible materials and assistance. By fostering peerassisted learning and organizing foundational sessions, institutions can significantly enhance users' technological competencies, ultimately leading to greater engagement and effective use of available resources.

	Table 12.										
	Information literacy levels are useful										
	"Information literacy"	Strongly Agree f (%)	Agree f (%)	Neutral f (%)	Disagree f (%)	Strongly Disagree f (%)	Μ	SD			
1.	Identifying Information Needs	63(81.8)	13(16.9)	1(1.3)	0(0.0)	0(0.0)	15.4	24.30			
2.	Locating Information	48(62.3)	26(33.8)	2(2.6)	1(1.3)	0(0.0)	15.4	18.97			
3.	Evaluating Information	27(35.1)	48(62.3)	1(1.3)	1(1.3)	0(0.0)	15.4	19.23			
4.	Organizing Information	21(27.3)	53(68.8)	0(0.0)	3(3.9)	0(0.0)	15.4	20.36			
5.	Ethical Use of Information	21(27.3)	50(64.9)	0(0.0)	6(7.8)	0(0.0)	15.4	18.93			
6.	Communicating Information	34(44.1)	35(45.5)	1(1.3)	8(10.4)	0(0.0)	15.6	15.68			

Annals of Human and Social Sciences (AHSS)				January-March ,2024 Vol 5,Issue 1					
7.	Critical Thinking	30(38.9)	26(33.8)	0(0.0)	21(27.3)	1(1.3)	15	16.99	

Key: SA- Strongly Agree, A-Agree, N- Neutral, DA-Disagree, SD- Strongly Disagree

The analysis of the data reveals a strong consensus on the importance of various components of information literacy, particularly in identifying information needs, locating information, and evaluating information. However, there are notable areas of concern, particularly regarding critical thinking and the ethical use of information, where a minority of respondents expressed disagreement

Conclusion

The research about "Library User Education Planning and Strategies: A Study of University Libraries in Islamabad" shows that user education programs are very important for helping students and researchers become better at finding and using information, which helps them do better in universities. Even though libraries in Islamabad have made some progress in creating these programs, they still face problems like not having enough resources, staff not being well-trained, and students not being very interested.

Some important suggestions are to do a good job of figuring out what people need, work together with other university departments, use digital tools to reach more people, and keep checking how the programs are doing to make them better. Also, libraries should help their staff learn more so they can teach the programs well. In general, making good plans and having the right support are key to making these programs work in university libraries.

Recommendations

Several recommendations for enhancing Library User Education (LUE) planning and strategies in university libraries in Islamabad:

Needs Assessment

Conduct regular surveys and focus groups to identify the specific information literacy needs of students and faculty. Tailoring programs based on this feedback will ensure relevance and effectiveness.

Integrated Curriculum Collaboration

Collaborate with academic departments to integrate information literacy into the curriculum. Faculty can help identify key skills and topics that align with their courses, making LUE a part of the educational experience.

Diverse Delivery Methods

Utilize a mix of delivery methods, including in-person workshops, online tutorials, and interactive webinars. Offering varied formats accommodates different learning styles and increases accessibility.

Hands-On Training Sessions

Incorporate practical, hands-on training sessions that allow users to engage directly with library resources, databases, and search tools. This experiential learning can enhance retention and confidence.

Peer-Led Initiatives

Develop peer-led programs where experienced students mentor newcomers. This approach fosters a supportive learning environment and can help demystify library resources for first-year students.

Continuous Professional Development for Library Staff

Invest in ongoing training for library staff to ensure they are well-versed in current trends, technologies, and pedagogical strategies related to user education.

Utilization of Technology

Leverage technology to create engaging and interactive learning materials, such as video tutorials, infographics, and online quizzes. Consider implementing learning management systems (LMS) for tracking user progress.

Assessment and Feedback Mechanisms

Establish robust assessment methods to evaluate the effectiveness of LUE programs. Collect feedback after sessions to identify areas for improvement and to gauge user satisfaction.

Awareness Campaigns

Run awareness campaigns to promote user education programs. Utilize social media, email newsletters, and campus events to inform users about available resources and training opportunities.

Cultural Relevance

Incorporate local and cultural contexts into user education materials. This relevance can enhance engagement and encourage users to connect with library resources more deeply.

Partnerships with Other Institutions

Explore partnerships with other libraries and educational institutions to share resources, best practices, and training materials. Collaborative efforts can expand the reach and impact of user education programs.

Focus on Lifelong Learning

Promote the idea of lifelong learning in user education initiatives. Encourage students to view information literacy as a critical skill that will benefit them throughout their academic and professional lives.

References

- Ali, S., & Yaqoob, A. (2019). Enhancing library user education through peer-assisted learning. *Pakistan Journal of Library and Information Science*, 20(1), 15-24.
- Ameen, K., & Rafiq, M. (2009). Development of digital libraries in Pakistan. Library Hi Tech News, 26(3), 15-17.
- Ameen, K. (2013). Information literacy instruction in Pakistan: Exploring perceptions and practices. Library Philosophy and Practice.
- Ameen, K. (2014). User education programs in university libraries: A review of practices and challenges. *Library Philosophy and Practice*.
- Egan, S. (2013). The role of information literacy in academic success: A meta-analysis. *Journal of Academic Librarianship*, 39(2), 132-139.
- Hanif, S., Shah, S. A. A., Rehman, A. U., & Hassan, S. (2024). Changing Role of Libraries and Librarians in the New Technological Era: An Evaluative Study of University Libraries of Islamabad. *Bulletin of Business and Economics (BBE)*, *13*(2), 448-454.
- Hussain, A., & Nazim, M. (2013). Assessing information literacy skills of research students of University of Delhi. International Information & Library Review, 45(3-4), 129-136.
- Hussain, S. (2020). Embracing technology in library user education: Innovations and challenges. *International Journal of Library and Information Science*.
- Iqbal, S., & Sohail, M. (2013). User education programs: An insight from selected universities of Pakistan. Pakistan Library and Information Science Journal, 44(2), 3-11.
- Jabeen, F., & Noor, M. (2017). Challenges in implementing user education in university libraries of Islamabad. *Pakistan Journal of Library and Information Science*, 18(1), 55-68.
- Kumar, S., & Rani, A. (2016). Impact of user education on library resource utilization in academic libraries. *Library Management*, 37(6), 368-377.
- Mahmood, K. (2013). Developing an integrated information literacy program in university libraries of Pakistan. Library Management, 34(8-9), 622-634.
- Naz, F., & Naeem, H. (2012). The role of library user education in the use of information resources in university libraries of Pakistan. Library Philosophy and Practice.
- Rafiq, M., & Ameen, K. (2012). Exploring the adoption of Web 2.0 technologies in library and information centres of Pakistan. Program: electronic library and information systems, 46(4), 362-378.
- Rehman, S. U., Mahmood, K., & Bhatti, R. (2012). Awareness and use of electronic information resources among postgraduate students of health and medical sciences: A case study from Pakistan. Library Review, 61(3), 194.207.
- Singh, J., & Kaur, G. (2015). Strategies for effective library user education in academic institutions. *DESIDOC Journal of Library & Information Technology*, 35(6), 491-496.
- Shafique, F., & Ali, S. (2018). Assessing user education effectiveness: A case study of university libraries in Islamabad. *Global Knowledge, Memory and Communication*, 67(3), 185-198.

Zahra, M., Hanif, S., & Shah, S. A. A. (2024). Current Technological Trends Used in Libraries: A Study of Public Sector Universities of Khyber Pakhtunkhwa, Pakistan. *Journal of Development and Social Sciences*, *5*(3), 87-99.