

## MOBILE LIBRARY SERVICES IN UNIVERSITY LIBRARIES OF PAKISTAN: A SURVEY OF LIBRARIANS

### Rida Akhtar Baig

M.Phil. Scholar LIM, Department of Library & Information Management, Superior University, Lahore

[ridaakhtarb@gmail.com](mailto:ridaakhtarb@gmail.com)

### Prof. Dr. Iqbal Hussain Asad

Department of Library & Information Management Superior University, Lahore

[iqbalhussainasad@gmail.com](mailto:iqbalhussainasad@gmail.com)

### Syed Rahmat Ullah Shah

Department of Library & Information Management Superior University, Lahore

[rahmatgee@yahoo.com](mailto:rahmatgee@yahoo.com)

### ABSTRACT

*Access to information has changed dramatically in recent years, particularly in academic settings, thanks to the mobile libraries' services. The current study explored the attitude of university librarians towards the use of mobile library services, actual provision of services and challenges faced for provision of services. Quantitative research approach is used and a structured questionnaire was used to gather data from 135 librarians. The results show that the views of individuals on mobile library services are largely good but the level of provision of mobile library services is not good. Despite the agreement among respondents regarding the significance of mobile library services, challenges encompass absence of framework, lack of technology appreciation, budgetary limitations and technological constraints, security and privacy issues etc. The current study suggests several recommendations. Developing technical infrastructure, growing digital collections, offering user assistance and training, raising awareness and outreach, working with technology suppliers are some suggestions for bettering mobile library services. By putting these suggestions into practice, Pakistani university libraries may better meet the information demands of researchers, teachers, and students. This study contributes to the growing body of knowledge regarding the mobile library services in underdeveloped nations.*

**Keywords:** Mobile library, Information organizing, E-library services, University libraries, Mobile services infrastructure, Employs engagement.

### 1. Introduction

Academic librarians provide diverse library services and are considered as a key source of information, learning, and research. Academic librarians' main responsibilities have historically included creating collections, organizing catalogues, and making print and digital materials easier to use. But as the information world gets more complicated, it's becoming increasingly clear that librarians are essential to helping students develop their information literacy and critical thinking abilities (Julien, 2018). Students need assistance in accessing vast databases, identifying reliable sources and critically analyzing material in this age of information overload. Academic librarians are in a good position to offer this advice because of their experience in the organization and assessment of information (Vorndran & Hargett, 2019).

Due to advancements of Information and Communication Technology (ICT), particularly wireless and mobile technologies, educational institutions are transforming their libraries by introducing mobile library services. The Internet has altered the core responsibilities of librarians, as well as the service offerings and

organizational cultures of libraries, contributing to the transformation of our world into a more linked global community. Information technology has become a vital instrument for information processing, storage, and distribution. Due to the use of information technology in automated acquisitions, machine-readable cataloguing, circulation controls, online information retrieval, resource sharing, electronic document delivery, web applications, social media use, online journals, and electronic databases, libraries are going through major changes (Song, 2023).

The idea of mobile libraries first emerged as a way to make library services available to people who might not otherwise have access. Mobile library services have generally significantly increased access to educational resources and promoted a reading culture. Mobile technology has now come up with “Libraries in hand” trend. Our librarians are in move to determine these devices are affecting information access and ensure that they are communicating with patrons and providing web content in the most appropriate and effective ways. Librarians need to become proficient in using these devices to enable users to access them anywhere from anyplace.

Mobile library services are virtually offered to library users. They make use of software (apps) that are downloaded to devices and created especially for operating systems, offering a smooth and practical method of accessing library contents. With the rising prevalence of tablets and mobile phones, these apps are becoming more and more popular because they ensure compatibility and reduce competition from search engines. Libraries do, however, confront difficulties with authentication, visibility, and information silos. Creating "discovery apps" that integrate with various library resources and efficiently represent the library will be essential for drawing users and advertising library offerings. Users of mobile libraries should have a customised experience, with only the most frequently used links displayed. Whenever possible, it's necessary to offer options for reviewed or evaluated sources, connections to mobile versions of databases, and real-time assistance.

Mobile library services such as search, ask a librarian, database, renew, circulation and library hours were frequently used at academic libraries, while the services of search, search through barcode scanners and database were mostly common at public libraries. According to the users of academic and public libraries, circulation and renew, search, ask a librarian and library hours were considered as the most essential services to be included in library mobile applications (Mansouri & Soleymani, 2019). The growth use of mobile phones has made it critical to understand how librarians see mobile services and the factors that influence their readiness to serve readers. This study is very important because it shows that if librarians who are in charge of developing new services and operations for the library have a good attitude towards information technology, they will undoubtedly welcome new technologies and hasten their implementation in libraries. On the other hand, if librarians take on pessimistic attitudes or ideas, they may hinder the innovation of libraries and so impede the advancement of their parent organizations (Ashiq & Safdar, 2023). The purpose of the current study is to evaluate the current situation of mobile library services, identifying barriers, and suggesting workable solutions to make these services effective.

## 1.2 Research Questions

Libraries are built and maintained to provide information resources for a specific community. Mobile library services make materials available to those who might not otherwise have the opportunity to access them outside of the libraries

physical location. It will be essential for library experts to analyze the current situations of academic libraries to better serve mobile services being offered for the customers. The following research questions have been designed to achieve the objectives.

1. What kind of Attitude University Librarians have toward mobile library services?
2. What is the level of mobile services in university libraries in Pakistan?
3. What types of challenges are being faced while providing mobile services in university libraries of Pakistan?

## 2. Literature Review

The review section examines the body of research on the mobile library services provided by librarians. It explores mobile library services from a number of viewpoints in university libraries, with particular attention to attitude of librarians, actual provision of services through mobiles and challenges faced in provision of mobile library services.

Since attitude has a significant impact on people's behaviour and judgement, it is a crucial term in psychology, particularly social psychology. As an inclination to act towards something or someone in every circumstance, attitude is defined as follows. A person's beliefs regarding the system determine whether their attitude is good or negative. Knowledge creation, generation, dissemination, and preservation became increasingly difficult for library professionals with the advent of new technology. In order purposes of improving their knowledge and expertise, they must stay up to speed, stay abreast of new technological developments, and adopt a constructive outlook on the application and usage of cutting-edge library technology.(Khanam & Sohail, 2024)

University libraries in Pakistan are beginning to see the advantages of incorporating mobile technology into their service offerings. Nevertheless, a number of obstacles prevent mobile library services from being widely used. One major obstacle to mobile devices' access to digital content is limited internet connectivity, especially in rural regions. Concerns about privacy and data security may also prevent users from utilizing mobile library applications to their full potential. Notwithstanding these obstacles, there are prospects to use mobile technology to close the gap in access to information and enhance it for a variety of user groups, such as students residing in rural regions and people with impairments.(Prakash, 2022)

The increasing popularity of mobile library services in academic libraries in Pakistan, as indicated by the study conducted by Rafiq and Naveed (2021) highlights the significant role these services play in enhancing access to library resources for students and faculty. The specific academic institutions mentioned in the study, including the University of Punjab, Lahore College for Women University, and the University of Agriculture, Faisalabad, are among those utilizing mobile library services to improve their library offerings. Mobile library services have several benefits that contribute to improving access to resources for users, especially those in remote or rural areas.

The evolving landscape of digital technology in higher education is transforming library services, spaces, and roles. Academic librarians are undergoing a significant transition, particularly in response to changing pedagogies for online learning. Despite these shifts, there is limited understanding of how academic librarians are being prepared for these changing roles. McTavish, (2020) utilizes an online survey to gather perceptions from academic librarians and analyzes job posting

descriptions to capture the current realities of their services, as well as their perspectives on acquiring new skills and competencies. Survey findings indicate that academic librarians are engaged in diverse library environments, and currently, most of them develop substantial technology and pedagogy competencies while in their roles. To address present realities, the author proposes a competency framework for academic librarians in Canada and recommends adjustments to the instructional curriculum of preparatory programs for these librarians.

Most people still think of mobile phones as tools for sending texts and making phone calls, therefore they frequently don't correlate them with other uses like looking up information. Nonetheless, a rising minority of individuals do use their mobile phones as note-takers, diaries, e-mail clients, and internet access devices, as their reliance on them grows. As a result, patrons of libraries may have higher expectations that certain services will be offered in a mobile-friendly manner.(Rao Nalluri & Gaddam, n.d.)

Masrek and Hussein (2019) discovered that the behavioral intention of academic librarians in Pakistan to adopt mobile application services was significantly influenced by performance expectancy, effort expectancy, and facilitating factors. Also, this study has offered empirical proof of the variables that would motivate librarians to choose mobile application services in the situation. The findings indicate that mobile library services are an effective way to reach out to users in Pakistan who may not have easy access to library resources.

However, librarians also face challenges in their mobile library services. Time constraints, limited resources, and competing demands can impact their ability to fully engage in instructional activities. Moreover, librarians may encounter varying levels of support and recognition for their teaching efforts within their institutions, which can influence their perceptions and motivation (Hinchliffe, 2016; Julien, 2017).

Digital literacy and user acceptance are basic principles that are essential to the successful completion of digitization projects. Users' understanding of and preparedness to use digital resources is essential to the durability and efficacy of such initiatives. Sajjad's (2016) research demonstrates the significant gap between the accessibility of digital collections and users' understanding of their benefits, which results in their inadequate utilization. Libraries should give priority to addressing digital literacy issues to reduce this problem, especially for those who are new to the internet (Khan, 2017).

The library catalogue was one of the first services to be available online; prior to the creation of the World Wide Web, libraries offered dumb-terminal access to their catalogues. In a similar vein, among the first things that should emerge in mobile space is the library catalogue. For mobile users, certain features of the catalog—like account access—make more sense. Mobile OPACS, also known as MOPACS, offer library patrons different levels of access to the data included in regular OPACS. Typically, these resources are either independent, downloaded applications or transcoded websites designed for portable devices.(Madhusudhan & Dar, 2017)

Technical know-how and education are both vital for ensuring the effectiveness and quality of digitization methods. Khan (2017) emphasizes that a lack of internal expertise in digitization methodologies and standards frequently gives rise to poor digitization quality and inefficient procedures. Furthermore, extensive training may be necessary for many library staff members in order to handle difficult materials, operate digitization equipment, and manage digital collections efficiently (Khan, 2017). Establishing technical education as a top priority gives library staff the

tools, they need to streamline digitization procedures and improve the overall quality of digital resources and services.

### 3. Research Design

Research design is the plan for connecting conceptual research problems to the pertinent and achievable empirical research. It is an inquiry which provides specific direction for procedures in research (Creswell, 2017). Research design may be categorized as qualitative, quantitative, mixed methods and multimethod (Ullah, Hayat & Ameen, 2024; Ullah & Ameen, 2023; Ullah & Ameen, 2023). Since this study is descriptive in nature and explores the mobile library services, quantitative research design was used to achieve the objectives of the study. Johnson and Onwuegbuzie (2004) stated that the research method typically aligns with inquiries that offer solutions to the research issue. Muijs (2010) defines research as gathering and organizing data, from a sample size and analyzing it through statistical techniques. To meet these objectives a quantitative research methodology was chosen. The survey method is most appropriate for studies that have individual people as the part of analysis. Surveys are capable of obtaining information from large samples of the population. It is also well suited to gathering demographic data that describe the composition of the sample (Casteel & Bridier, 2021). Therefore, the survey research method was used to collect data from the People through a structured questionnaire.

#### 3.2 Population and Sample

Lack of knowledge about the population may create hurdles in the smooth collection of meaningful data (Ullah, 2024). University librarians were selected as the population of the study. Creswell, et al. (2011) stated, when constructing a purposive sample, a researcher engaged their specific knowledge or skill about a group to select 135 participants that represent that population. Professional librarians were providing mobile library services. In this case, the population being studied comprises all university librarians across Pakistan, encompassing both departmental libraries and central libraries. Due to the nature of this group, convenient sampling technique is employed. Rather, the goal is to gather insights from a range of university librarians to ensure a representative sample.

#### 3.3 Data Collection and analysis

Various methods, such as interviews, questionnaires, and observations have been employed by earlier researchers to gather data. The current study opted to use a questionnaire to collect data from the target population. According to Blaxter (2010), a questionnaire is considered a tool for obtaining data from large and diverse groups. One advantage of using questionnaires, as highlighted by Rea and Parker (2005), is their adaptability for use within the population over time or in regions. Researchers often turn to questionnaires when dealing with scattered populations, according to Rea and Parker (2005). To align with this approach, a structured questionnaire method was crafted with the study's objectives at its core. The construction of the questionnaire was informed by a review of existing literature. The questionnaire's original version was made considering feedback. The questionnaire is distributed to essential staff members at university libraries, such as library directors, financial officers, or librarians in charge of information organizer projects. Respondents can select their preferred method of response because data is gathered using both physical and electronic forms. Data analysis was conducted by using SPSS (Statistical Package for the Social Sciences). The frequency of responses was assessed to gauge the mobile

library services project. The findings were presented section-wise in the results utilizing descriptive statistics. The calculations, such as frequency, percentages, mean, and standard deviations were used to highlight the patterns and variations within the data.

#### 4. Results

##### 4.1 Demographic Information of respondents

Out of 135 universities, the analysis showed 58 (43%), were categorized as private, and 77 universities (57%) as public. Out of the sample, 68.9% (93) of the participants identified as male, and women make up of 31% (42). The results show that 69, or 51.1%, of the total 135 sample size, or the majority of participants, have a MLIS/BLS degree. 51, or 37.8%, of participants have gained a Master of Philosophy (M.Phil.) qualification, following closely behind, and an equivalent 15, or 11.1%, have a Doctor of Philosophy (Ph.D.).

**Table 4.1 Demographic Information of respondents**

Variables	Frequency	Percent
<b>Type of university</b>		
Public	77	57
Private	58	43
<b>Gender</b>		
Male	93	68.9
Female	42	31.1
<b>Education</b>		
MLIS/BLS	69	51.1
M Phil	51	37.8
Ph.D.	15	11.1
<b>Total</b>	<b>135</b>	<b>100</b>

##### 4.2 Attitude toward mobile library Services

The mean values show that attitude of respondents towards mobile library services is positive and they agree or strongly agree with statements. They agreed that use of mobile technology will enhance their performance. They enjoy experimenting new technologies and use it easily. They intend to apply it in libraries in near future (Table 4.2).

**Table 4.2 Attitude toward mobile library Services**

Sr. No	Statements	Mean	Std. Deviation
1.	I enjoy experimenting with innovative information technology.	4.12	.734
2.	I believe it is quite easy to understand how to use mobile technologies	4.12	.723

3.	My belief is that using mobile technologies will enhance both my work and the effectiveness of the library	4.10	.705
4.	I would look for opportunities to test out new technologies	4.08	.734
5.	I believe that using mobile technologies is generally easy.	4.08	.734
6.	I think mobile technology will be used libraries in the future.	4.03	.828
7	In the long term, using mobile technologies will benefit me.	4.01	.777
8	I believe adopting mobile devices in the library will enhance my performance.	3.99	.824
9	I was able to acquire mobile technologies quickly and easily.	3.94	.720

Scale: 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree

#### 4.3 Means for provision of Mobile Services in Libraries

The mean values show that the respondents did not agree for statements about actual use of mobile for provision of mobile library services. They used SMS, Table of contents and ask a library services in higher degree as compare to renewing items, place holds and emails by using mobile phones (Table 4.3).

**Table 4.3 Use of Mobile Services in Libraries**

Sr. No	Statements	Mean	Std. Deviation
1.	SMS notifications	1.46	.500
2.	TOC (table of content)	1.39	.490
3.	Ask a librarian	1.37	.485
4.	Downloading	1.13	.341
5.	24/7 retrieval facility	1.11	.315
6.	Place holds	1.10	.306
7	Renew items	1.08	.275
8	Online Public Access Catalogue	1.04	.207
9	Access to journals	1.04	.207
10	Email	1.04	.190

Scale: 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree

#### 4.4 Challenges in providing Mobile Library Services

The mean values show that respondents faced different challenges while providing mobile library services to users. Absence of a framework for policies influencing m-tech adoption is the major challenge. There is lack of appreciation for the technology (mean = 4.01) and Lack of IT expertise to implement mobile technology in libraries (mean = 4.00). Respondents also faced difficulty due to reduced page size in mobile, poor internet speed. They faced connectivity problems, security issues, cost of internet and synchronization issues.

**Table 4.4 Challenges of using Mobile Services**

Sr. No	Statements	Mean	Std. Deviation
1.	Absence of a framework for policies influencing m-tech adoption	4.09	1.103
2.	Lack of appreciation for the technology among librarians	4.01	1.096
3.	Lack of IT experts to implement mobile techs in libraries	4.00	1.133
4.	Connectivity problems of mobile network signals	3.94	1.070
5.	Many pages are reduced in size when they are converted to mobile mode.	3.89	1.070
6.	Concerns about security	3.86	1.023
7.	Seeing the information in its usual size or with its written content is an extreme concern.	3.85	1.033
8.	The speed of the service is poor on the mobile devices for navigation	3.85	1.004
9.	The cost associated with mobile device accessibility and bandwidth charges are high.	3.85	.981
10.	Compared to desktop computers, a single page appears broken on mobile devices.	3.82	1.071
11.	At risk of viral attack	3.82	1.036
12.	Some complications with connectivity and synchronization between two mobile devices	3.77	1.106

**Scale: 1=very high limited, 2=limited, 3=slightly, 4=average level, 5=very high level**

## 5 Conclusion

The development of information and communication technology has made it easier to combine different mobile technologies for provision of library services. The current study found a positive attitude of university librarians about the use Mobile Library Services in University Libraries of Pakistan. Comparison of means demonstrated that attitude towards mobile technology is significantly positive but actual use of mobile library services is of lower level. University librarians face challenges in the provision of mobile library services to library readers. The low usage score demonstrates the need for more study about the use of mobile library services. The current study facilitates further research into the factors that contribute to the popularity of mobile libraries. The findings demonstrate the necessity of using different models such as Technology Acceptance Model (TAM) to adequately comprehend the issues related to the provision of mobile library services. The current study demonstrates the need for a deeper comprehension of the ways in which many factors, both singular and combined, impact mobile library uses and enjoyment of mobile library services in universities.

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