

# USE OF MOBILE TECHNOLOGY IN LIBRARY AND INFORMATION CENTER: AN OVERVIEW

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**Abstract:** Libraries have continually adopted new technologies to improve their services. Our mission is to provide efficient and effective solutions for our users, ensuring they can access the information they need promptly. Historically, libraries have experienced the advancement of various technologies, establishing a high standard in the process. The incorporation of diverse information and communication technologies has enabled libraries to automate and enhance their services. By leveraging ICT, libraries have significantly improved their offerings. This modern technological environment allows users to access resources instantly, overcoming geographical barriers. The growth of mobile technology has encouraged libraries to explore its implementation. In a remarkably brief period, mobile technology has connected libraries with readers around the world. This digital shift has been transformative. The current article highlights the key strategies that leading libraries use to provide services via mobile devices. The emergence of mobile applications has made accessing library resources more user-friendly and contextually relevant. Furthermore, this article discusses the challenges that come with mobile applications and library services.

**Keywords** - Mobile technology, Library services, Mobile communication, Mobile Apps, Mobile web

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## 1.0 Introduction

Mobile communication is transforming the way people search for, acquire, and share information in their daily lives. In recent years, the number of smartphone users has surged dramatically, reaching unprecedented levels. The increasing prevalence of smart devices like tablets, e-readers, and audiobooks has contributed to this trend, providing users with convenient access to a vast array of information with just a click, regardless of topic or category. Mobile phones are at the forefront of this evolution in information exchange. Today, they serve not only as communication tools but also as multifunctional devices that allow us to check emails, browse the internet, engage in audio and video calls, send texts, and play games. Additionally, devices such as iPads, iPods, and tablets seamlessly integrate social media platforms (like Facebook, Twitter, LinkedIn, and Google+) along with productivity and entertainment options right at our fingertips. Cutting-edge technology has turned smartphones into essential companions for users, catering to both recreational and educational needs. A plethora of mobile applications is available for free, easily downloadable from platforms like Google Play Store, App Store, Nokia Store, and others. Users can access a wide range of applications, commonly referred to as apps, including e-book readers, music players, navigation tools, word processors, marketing resources, translation services, and health and shopping applications. These apps significantly enhance the smartphone experience for users in various ways. Ultimately, smartphones are poised to play an increasingly important role in education as well.

## 2.0 Review of the Literature

Fox (2010) observed that mobile technology is deeply integrated into our daily lives, fundamentally transforming the way we work. He noted that the demand for mobile technology is increasing, particularly due to the expanding significance of distance learning in education. This concept extends beyond mere "mobile technology"; it encompasses the necessary infrastructure that supports these advancements on portable devices. Many major internet companies have tailored their services for mobile platforms, yet navigating the mobile landscape is more complex than it appears. A significant challenge lies in delivering the maximum amount of information while minimizing screen space and bandwidth usage. Fox stressed the importance of making e-services for mobile devices context-dependent or "context-sensitive." Kesselman (2022) identified the most effective mobile applications that can foster innovative, forward-thinking library services. He recommended iOS and Android applications to enhance creativity and innovation within library mobile services. Kaddipujar, Jacob, and Kumbar (2022) investigated the use of App Inventor for developing Android applications through a drag-and-drop method at the Raman Research Institute library. Their research delves into the MIT App Inventor, highlighting its key features for librarians to create and implement applications tailored to their libraries. This

application, developed by MIT, enables libraries to enhance their mobile services for users. Ajab Mohideen, Sheikh, and Kaur (2022) created a mobile app for library services utilizing open-source software. The app was built on the Koha platform, an open-source library information system, and underwent user acceptance and system acceptance testing by experts, who confirmed its operational efficiency, accessibility, and utility for libraries. Key features of the app include circulation management, an Online Public Access Catalog (OPAC) search, personal book collections for patrons, patron account management, librarian chat functionality, QR code book borrowing, social media integration, and SMS notifications regarding library activities. Additionally, Central Library IIT Delhi (2023) investigated and implemented mobile technologies to deliver library services through a mobile application, allowing users to access these services on their devices. These mobile-based library services provide a quicker means of obtaining responses to straightforward inquiries, available around the clock.

### **3.0 Objectives of the Study**

1. Understanding the educational and service offerings of a mobile library.
2. Identifying the services available to mobile phone users and their applications.
3. Gaining insight into the design of mobile library information systems and the primary challenges associated with mobile phone usage in library services.
4. Encouraging librarians and library users to utilize library services, exploring the advantages of mobile technology, and determining the services accessible through mobile devices.
5. Recognizing and addressing the barriers to information access within library services.

### **4.0 What is Mobile Web?**

Mobile web encompasses the utilization of the World Wide Web on portable devices, including smartphones and tablets. This involves connecting to the internet and engaging with web-based applications and services via a mobile browser or application, as opposed to using a desktop or laptop computer. The mobile web has become a crucial component of the internet, experiencing substantial growth in recent years as an increasing number of users depend on their mobile devices for online access and connectivity. The convenience and portability of mobile devices enable users to browse the web from virtually any location at any time. To cater to the smaller screens and limited processing capabilities of these devices, the mobile web frequently employs tailored mobile versions of websites or mobile applications, which are optimized for better responsiveness and user experience. Mobile applications are dedicated software solutions specifically designed for mobile devices, available for download and installation from app stores or other digital platforms. The mobile web plays a vital role in the internet ecosystem, providing numerous advantages such as convenience, accessibility, and enhanced connectivity. Additionally, it serves as a significant platform for businesses and organizations, enabling them to connect with users on mobile devices and offer services and products tailored for mobile use.

### **5.0 Purpose of the Study**

This paper aims to explore the integration of mobile technologies in the evolution of Libraries and Information Centres. Mobile devices serve as a vital link to engage with patrons effectively. Developing a library application or mobile website that enables users to check library hours, manage their accounts, or search through databases is more feasible than many realize. The following resources are designed to assist libraries in strategizing and establishing their own distinctive mobile presence: assessing current mobile device usage, providing insights into various devices, service providers, and their features, outlining the different activities these devices facilitate for enhanced library engagement, examining how libraries and librarians are adapting their services for mobile users, and considering future initiatives libraries can undertake in this domain.

### **6.0 Research Methodology**

This study conducted a comprehensive examination of the pertinent literature. In crafting this article, the terms library, mobile, and technology were employed to clarify the concept and explore the impact of mobile technology on libraries. Advances in technology have facilitated quicker access to information, prompting libraries to adapt and innovate their spaces in response to these technological shifts.

### **7.0 Mobile Technology and Library Services**

Libraries have the potential to provide a wide array of mobile services to interested patrons. When a user has an inquiry and wishes to reach out to the library for assistance, the library's guidance service can address the user's question and offer support promptly whenever feasible.

**7.1 SMS Alert Services:** M Technology offers essential services that enhance library operations. Librarians can manage the library calendar, track new arrivals, monitor overdue items, and provide information about library events and programs, as well as available products. SMS notifications can be sent to multiple users simultaneously, ensuring they receive timely updates regarding library guidelines, new arrivals, services, and overdue items. Patrons can opt to receive notifications about events or amenities they wish to stay informed about. To utilize these alert services, providing a contact mobile number is necessary. Mobile alerts keep patrons informed about library emergencies, such as recall notices and cancellations of reserved items.

**7.2 Reference Service:** These services can be facilitated through SMS communication. Patrons can also receive immediate responses. Reference services are available during library operating hours, allowing patrons to inquire about their needs through live chat or text messaging with librarians.

**7.3 Library catalogue:** Libraries can provide access to their online catalog via smartphones, featuring a user-friendly and intuitive search interface. Patrons can also search for electronic resources using their mobile devices. When a patron enters a keyword in the search bar, a concise bibliographic record of the requested documents or information resources will appear on their mobile screen. To access full-text information, library patrons are assigned a unique Username (UN) and Password (PW).

**7.4 News and Events:** Traditional libraries utilize notification systems and display panels to provide their patrons with the latest information. These panels feature details on job opportunities, various academic competitions, library events such as induction programs, stock audits, book returns, and lectures on diverse topics, as well as updates on scholarly achievements, awards, and more. Nowadays, libraries are leveraging mobile technology to enhance patrons' awareness of these events and news. Individual SMS notifications regarding library activities and important updates can be sent directly to patrons.

#### **7.5 Journal Finder:**

The Library Journal Finder grants access to full-text journals, newspapers, and magazines, along with links to print titles available in the library. Users can easily find articles related to their topics of interest by simply entering relevant keywords and conducting a search.

#### **8.0 Essentials for Implementing Mobile Services in Libraries and Information Centers**

Due to the limited screen size and storage capacity of mobile devices, it is crucial for libraries to create optimized websites specifically for mobile users. These mobile-friendly library websites should incorporate various tools, including layout design tools, personalized domain names, interactive interfaces, community engagement features, library locator tools, maps, driving directions, image galleries, videos, tailored content, and even mobile-compatible OPAC systems. Additionally, the website must be both technologically sophisticated and cost-efficient.

- a) **Bulk SMS Software:** Bulk SMS technology has revolutionized mass communication via mobile devices. It enables the rapid dissemination of messages to large audiences in under 10 seconds. This method is a cost-effective solution for conveying information to extensive groups. Numerous companies provide bulk SMS services, including SMS Chilly, My SMSmantra, Solutionsinfini, boomadcom, mvaayo, and many others operating in India.
- b) **Wi-Fi for mobile phones:** A secure and robust Wi-Fi network should be established across the campus. Management of this network can be entrusted to the knowledgeable library staff. Library patrons can obtain a MAC Address (Media Access Control Address) to gain access to the campus Wi-Fi, which serves as a unique identifier for each network interface.

#### **9.0 Findings**

Mobile technology presents significant opportunities for libraries to offer improved services that align with user expectations. To fully capitalize on this potential, libraries must undertake thorough analyses and make informed decisions to tackle the challenges mentioned earlier. This includes investing in staff training, seeking collaborative partnerships, exploring innovative funding strategies, and being willing to adapt their conventional information delivery methods.

### 10.0 Recommendations

The study presents several recommendations aimed at overcoming obstacles to the implementation of mobile information and document delivery systems in libraries.

- i. It is essential to appoint highly skilled, capable, and innovative professionals within the library.
- ii. Libraries should strive to minimize the costs associated with establishing a mobile library information and services system.
- iii. A sufficient budget must be designated for the introduction of a mobile information services system in the library.
- iv. Library management should be proactive in integrating information systems and mobile library services.
- v. Successful implementation of these initiatives necessitates providing relevant information to both library professionals and users.
- vi. Innovative concepts and initiatives ought to be recognized and encouraged to inspire staff and professionals.
- vii. To remain attuned to the global landscape, it is crucial to adopt a flexible mindset that aligns with evolving needs and emerging trends.

### 11.0 Conclusion

In today's world, mobile phones have become essential instruments for communication and information exchange. Nearly every individual in society utilizes mobile devices to share opinions, perspectives, thoughts, facts, and general information. The dissemination of processed information is a fundamental aspect of a civilized society. This brief overview highlights that numerous organizations, including libraries and information centers, are deeply engaged in this evolution. Libraries, in particular, employ various tools and strategies to deliver information to their user base. At the same time, it is crucial to promote libraries effectively. To achieve this, leveraging technology is vital. Mobile technology has emerged as a significant advantage for contemporary libraries. By integrating mobile technology into their services, libraries can connect with patrons more efficiently. Today, mobile technology is an indispensable part of our daily lives, and utilizing it to enhance library services presents a significant challenge. The mobile application enhances learning by facilitating the creation of library resources with expanded Omni capabilities, thereby boosting engagement beyond traditional library settings through improved access to collections and fostering innovative connections between users and libraries. The rise of mobile technology has heightened the awareness among library professionals regarding the necessity to harness technology to leverage its significant advantages. Libraries face the challenge of producing uniquely accessible digital content that is comprehensible and adaptable to the needs of readers. The mobile revolution presents challenges that libraries must convert into opportunities. In the current landscape, mobile technology enables instantaneous data sharing with a simple tap, connecting users to a vast array of information. To advance the digital provision of library services in a mobile-centric environment, libraries, publishers, and librarians are collaborating to develop mobile applications, electronic resources, and services optimized for mobile devices and networks. The digital transformation of library e-resources and services poses a significant challenge in the near future, aiming to reshape the information landscape and ensure that global knowledge is readily accessible to users through mobile technology.

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