

# APPLICATION OF MOBILE TECHNOLOGY IN LIBRARY SERVICES

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**Abstract:** Libraries have always adopted new technologies to assist in their objective of providing clients with effective and efficient services, as well as timely access to needed information. Implementation of Information and Communication Technologies (ICTs) has changed the way people access and communicate information. Users want easy and instant access to relevant information, putting pressure on Library and Information Science (LIS) professionals to think out of the box for meeting their information needs. Application of mobile phones to provide library and information services are a significant step in this direction. The development of mobile technology has resulted in shifting the academic environment from traditional to mobile learning settings. This paper describes mobile technology applications in library & Information services. Finally it conceives the future of mobile library technology.

**Keywords:** Mobile technology, Mobile library services, Library Applications, Mobile library websites, Skills required

**1.0 Introduction:** Information and communication technologies (ICT) have provided faster access to information and it is also challenging the libraries to rethink and remodel their services adopting the technological changes. Implementation and relevance of Information and Communication Technologies (ICTs) have not only changed the way people access information, but has also given birth to the new channels of communication. Invention of mobile phones is a vital achievement of technological developments

The traditional library services are now moving to mobile library information services. There are the challenges in providing the necessary information to users at the right time. Mobile technologies have made communication and information access very convenient and timely to users. The adoption of mobile technology alters the traditional relationships between libraries and their users and introduces novel challenges to reader privacy. There is the shift from 'd-learning' (distance learning) to 'e-learning' and now from 'e-learning' to 'm-learning' will be the next big wave, which will reform education in India.

Nowadays, libraries are functioning in a user centered, technology based atmosphere, providing individualized value added services. The Internet and networking of libraries and information centers have facilitated information access 24x7 at one's fingertips. Library and Information Science (LIS) professionals are no more merely caretakers of books. They do the challenging, non-commercial business of satisfying information needs of users. Therefore, today's LIS professionals look forward to assume new earnings of communication for outreaching the users to take information at their ease. (Kumar)

## **2.0 Mobile Technology and Libraries**

Mobile devices are ubiquitous in today's society, and there's no evidence that that is going to change. Today's most of the library users have mobile phones for their personal uses as well as they also use the mobile phones for some other applications. In library, the Mobile Technology has now come up with "Libraries in Hand" trend. Librarians are in move to determine how these devices are affecting information access and ensure that they are communicating with users and providing Web content in the most appropriate and effective ways. Librarians are utilize the mobile technology and put their efforts to increase the market and demand for mobile access to personalized facts and information anytime, anywhere on 's own handheld device. Since mobile handheld devices truly are personal devices, search histories and physical locations can be harnessed to produce more accurate, individualized information and services. Libraries today are covering most of the technologies given by mobile industry like PDA's, Blackberry, iPod, Cell phones, and mobilizing library contents in a portable form suit able for small screen and delivering short services in the form of contents and information with device's multiple searching features. Librarians will need to become proficient in using these devices to enable users to access the many where from anyplace. So, it is crucial for librarians to understand mobile devices and

provide services through them. Library may provide robust services to their users only with the help of desktop computing and internet access. (Suthar)

### **3.0 Major Prons & Cons of Library Information through Mobile**

- User friendly-Aid
- Personalized Service
- Ability to Access Information
- Time Saving
- User Participation
- Location Awareness
- Limitless Access
- Access to Print-disabled Users

The Major drawbacks are there are costs involved in setting up the equipment and training required to make use of mobile devices. Mobile IT devices can expose valuable data to unauthorized people if the proper precautions are not taken to ensure that the devices, and the data they can access, are kept safe. (Sharma)

### **4.0 Mobile Devices Used In Libraries:**

- PDAs (Personal Digital Assistant)
- Smart Phones
- Cell Phones
- iPods and MP3 players
- Tablets

The design of mobile devices and services is important to accessibility. As reading becomes more inclusive of diverse communities, libraries will need to address the ongoing accessibility challenges of the mobile world.

### **5.0 Services of Mobile Technology in Libraries**

Librarians are in move to provide better services with the use of mobile technology to their users for information access and information retrieval and ensure that they are communicating with their users and providing Web content in the most appropriate and effective ways. Since mobile handheld devices are personal devices, search histories and physical locations will harness to produce more accurate, individualized information and services. Many libraries offer the following services to their users through the mobile technology.

### **6.0 E-Books and Databases**

The publishers are in move to convert content into an e-book format for mobile devices (ranging from Kindle, Sony's e-book reader, cell phones, and other e-book readers) and this allows for remarkable functionality and formats the e-books as you desire and provide a great reading experience for the user. Google has worked with major publishers to bring chapters, pages and volumes off of the bookshelf and onto the mobile device. The end result would be downloadable e-books which Google users would store on their Blackberries, PDA's and smart phones (or mobile e-book reading devices) along with the traditional PC's and laptops which would either be free and advertiser supported, or available via 'on demand' micro payments.

### **7.0 SMS/Texting – Library Instant Access**

Google SMS enables you to send queries as text message over your mobile phone or device an easily get precise answers to our questions without Links, without web pages just text and information in seconds. Merriam Webster (online) has mobile subscription facility, and just by putting our mobile number we get the word information just by messaging. Library OPAC system is now mobiled facility of text message to check the availability and the details of books. Publishers are sending extract from books via SMS. Websites are now giging the option of sending content to IM addresses and via SMS.

- SMS if requested book is available (collect messages)
- SMS reminder if a book is due
- requesting a list of loans via SMS
- renewing books via SMS
- requesting an overview of outstanding fines via SMS
- to check available books via SMS
- requesting the opening hours of the library via SMS

### **7.1 Cataloguing Service**

This service is a heart of the library because this service provides to library users for their needed information. How many titles are available and how many copies are available in the .library for a particular material and

also search via mobile by the users. Through this service, library users able to know their access their library account, request and renew their items on their own mobile device.

### **7.2 Current Awareness Service**

Current Awareness Service is a form of service can be from different new latest e-journals articles. It can be made available to the users through wide range of mobile devices. They can access and search the same over their mobiles.

### **7.3 Reference Service**

Reference services in libraries today are becoming increasingly a virtual, as more and more researchers are working remotely. Technologies such as instant messaging, e-mail and SMS text messaging are making it easy or libraries to maintain their relevance as information hubs by offering convenient services to busy users. Ask-a-Librarian services can be offered to mobile patrons, enabling them to submit their research questions remotely by text. (Suthar)

### **7.4 Text reference service**

If the library receives a high volume of enquiries that require brief responses, such as dictionary definitions, facts or service information then Librarians can provide instant answers, and links to articles/references in real time.

### **8.0 Formal Education, Distance Learning and E-learning**

Students are very versatile in using their mobile phones and various mobile applications. Academic libraries can harness the advantage to lead implementation of library services through mobile devices to support distance learning, formal education, and research activities in eLearning environment by making the information resources ubiquitous. Library services should also blend with teaching and research practice of colleges/universities, scientific community or other patrons whom they serve.

### **9.0 My library**

My library is a personal library space where users can find information and resources of their choosing. Users can read alerts, check records, renew resources, request items, track interlibrary loans and document delivery requests, set up email notices of new books and journal articles, set up preferences for catalogue searching, etc.

### **10.0 E-resources with Mobile Interfaces**

Some publishers are already delivering e-books (both text and audio) that are accessible via mobile phones. It offers access to a variety of databases and digital resources such as e-Books, e- Journals, Web databases, dissertations, audio books, streaming music, films, images and article databases which can be used on mobile. These collections can either be downloaded from the library websites on user's own mobile devices or libraries lend mobile devices with th collections already on them. A large collection of audio books both free-and subscription based services are available for download and also transferable to mobile devices. Libraries can make use of multimedia messaging service (MMS) on mobile devices to shar photos, videos, and audio. Most of the e-book publishers provide 24x7 access to the library subscriptions from any internet terminal within the campus, as well on mobile devices, such as iPads, Android devices, and Kindle.

### **11.0 Library guide**

Libraries can give users the best of library guide information such as library use guide, question answering service, and library statistics delivering rich content in a way that works best for users. If users have questions and want to contact the librarian for help, they can get a fast response from the library via the mobile device and find the appropriate information needed.

### **12.0 Mobile document Supply**

The mobile environment and technology present new opportunities for sending document requests and scanned images and monitoring the use of collections as well as the automation of administrative operations. It can support electronic funds transfer, supply chain management, e marketing, online marketing, online transaction processing, electronic data interchange, and automated inventory management systems.

### **13.0 Library Virtual/ Audio Tours**

Library Virtual/ Audio tours, instruction/induction/orientation programs have been quite significant in bringing the nonusers to libraries and also help the remotely located or users located in different geographical locations. Library users, who don't have time or inclination to attend an on-site workshop, can get access to library tours

on their mobile devices. Audio/ virtual library tours can be produced fairly quickly, inexpensively, and could reduce the amount of staff time spent helping new users to orient themselves in the library and explaining the facilities available. It can easily be provided both as downloads from the library website and on mobile devices. (Saxena)

#### **14.0 Creating Mobile Web Sites, OPACs and Applications**

- Android Developers. Resources for creating Android applications. Includes developer's guide, tutorials, and videos. Access: <http://developer.android.com>
- AirPac (Innovative Interfaces). Offers a mobile version of the Innovative Interfaces (III) library catalog. Includes features such as cover images, integrated library locations with Google Maps software, request and renew items, and more. Contact Innovative Interfaces for pricing. Access: <http://www.iii.com/products/airpac.shtml>.
- Boopsie. Specializing in public and academic libraries and universities, Boopsie can deliver mobile applications that are compatible with all Web-enabled phones. Contact the site for a price quote. Access: <http://www.boopsie2.com/>.
- Create an iPhone Optimised Website using JQTouch. Freelance Web Designer and Developer Matthew Leak outlines one way to create an iPhone friendly version of a Web site. Coding examples are included in this tutorial. Access: <http://www.tuttoaster.com/create-an-iphone-optimised-website-usingjqtouch/>.
- Library Anywhere. Created and sold through LibraryThing, Library Anywhere is a mobile catalog for any library. Includes mobile Web and apps for iPhone, Blackberry, and Android. Prices range from \$150 annually for schools to \$1,000 annually for universities (additional fees may apply). Access: <http://www.librarything.com/forlibraries>.
- MobileTuts+. Tutorials for all mobile developers, regardless of platform. Topics include techniques for building mobile apps and mobile Web sites. Access: <http://mobile.tutsplus.com/>.
- MobiSiteGalore. Build a mobile Web site in less than 60 minutes. No technical or programming knowledge required. Packages range from basic (cost: free) to unlimited (cost: \$24.99 per month). Access: <http://www.mobisitegalore.com>.
- MoFuse. Build a mobile version of an existing Web site or blog with the
- MoFuse (short for Mobile Fusion) content management platform. Plans range from \$7.95 per month to \$199 per month. All accounts come with a 14-day risk-free trial. Access: <http://mofuse.com/>. 22 Ms. Dhara Sharma & Mr. Dipti Ranjan Sahoo
- Mobile Web Best Practices 1.0: Basic Guidelines. Created by the World Wide Web Consortium (W3C), this document specifies guidelines for developing Web-based content for mobile devices. Access: <http://www.w3.org/TR/mobile-bp/>.
- W3C MobileOK Checker. Validate mobile-optimized Web sites for compatibility with current Web standards. Results include severity, category, and description of the error along with best practices for fixing issues. Access: <http://validator.w3.org>. (Sharma)

#### **15.0 Library-Based Services**

- M-Libraries offer the opportunity for the expansion of existing library-based services into the mobile domain.
- Two m-Library services envisaged for implementation within this architecture
- being:
- Library Catalogue, Loans & Reservations Service
- The Interactive Library Map Service.
- Recommendations Service
- These services enable users more efficient access to resources and information whilst moving throughout the library.
- This infrastructural system, and its inherent mobility, affords an ideal opportunity to enhance the user's library experience. (Mayank Trivedi and Vishnu Suthar)

#### **16.0 Conclusion**

In the modern era, several organizations such as libraries, documentations centers are highly involved in the process of information communication and dissemination. Mobile phones are essential tool for everyone for information communication purpose. Human being, in information society, depends to use mobile phone to communicate thoughts, facts, conversations, in brief, information. Libraries especially use several tools and techniques to circulate the information to the user community. At the same time, libraries should be advertised.

For this purpose, the use of technology is very essential. Mobile technology has become boon to the libraries. In modern era, libraries can adopt mobile technology to provide its services in a better way and effectively for the remote users.

**17.0 References**

1. DINESH, R., .ARUN PRAVIN, S., ARAVINDHAN, M., & RAJESWARI, D. (2015). LIBRARY ACCESS SYSTEM SMARTPHONE APPLICATION USING ANDROID. *International Journal of Computer Science and Mobile Computing*, 4(4), 142-149. Retrieved November 7, 2017.
2. Dr. K. Kumar. Application of Mobile Technology among Engineering College
3. Library users: A Study. *Community of Knowledge*. Retrieved November 7, 2017
4. Liu, Y., & Briggs, S. (20015). A Library in the Palm of Your Hand: Mobile Services in Top 100 University Libraries. *INFORMATION TECHNOLOGY AND LIBRARIES*, 133-148. Retrieved November 7, 2017.
5. Saxena, A., & Yadav, R. (2013). IMPACT OF MOBILE TECHNOLOGY ON LIBRARIES: A DESCRIPTIVE STUDY. *International Journal of Digital Library Services*, 3(4), 1-58. Retrieved November 7, 2017, from [www.iiijjooooddddlllsss...iiinnn](http://www.iiijjooooddddlllsss...iiinnn).
6. Suthar, A. A. (2013). USING MOBILE TECHNOLOGY TO DELIVER EFFECTIVE LIBRARY SERVICES. *Asian Journal of Library and Information*, 5(3), 72-75. Retrieved November 7, 2017.
7. Sharma, D. (2014). Application of Mobile Technology in Library Services: An Overview. *International Journal of Information Technology and Library Science*, 3(2), 17-24. Retrieved November 7, 2017, from <http://www.ripublication.com>
8. Mayank Trivedi and Vishnu Suthar. A plan of M-Library for Smt. HansaMehta Library: A study. *International Journal of Information and Communication Technology Research*. 2011 (July); 1(3): 91-95 ISSN-2223-4985 Retrieved November 6 , 2017