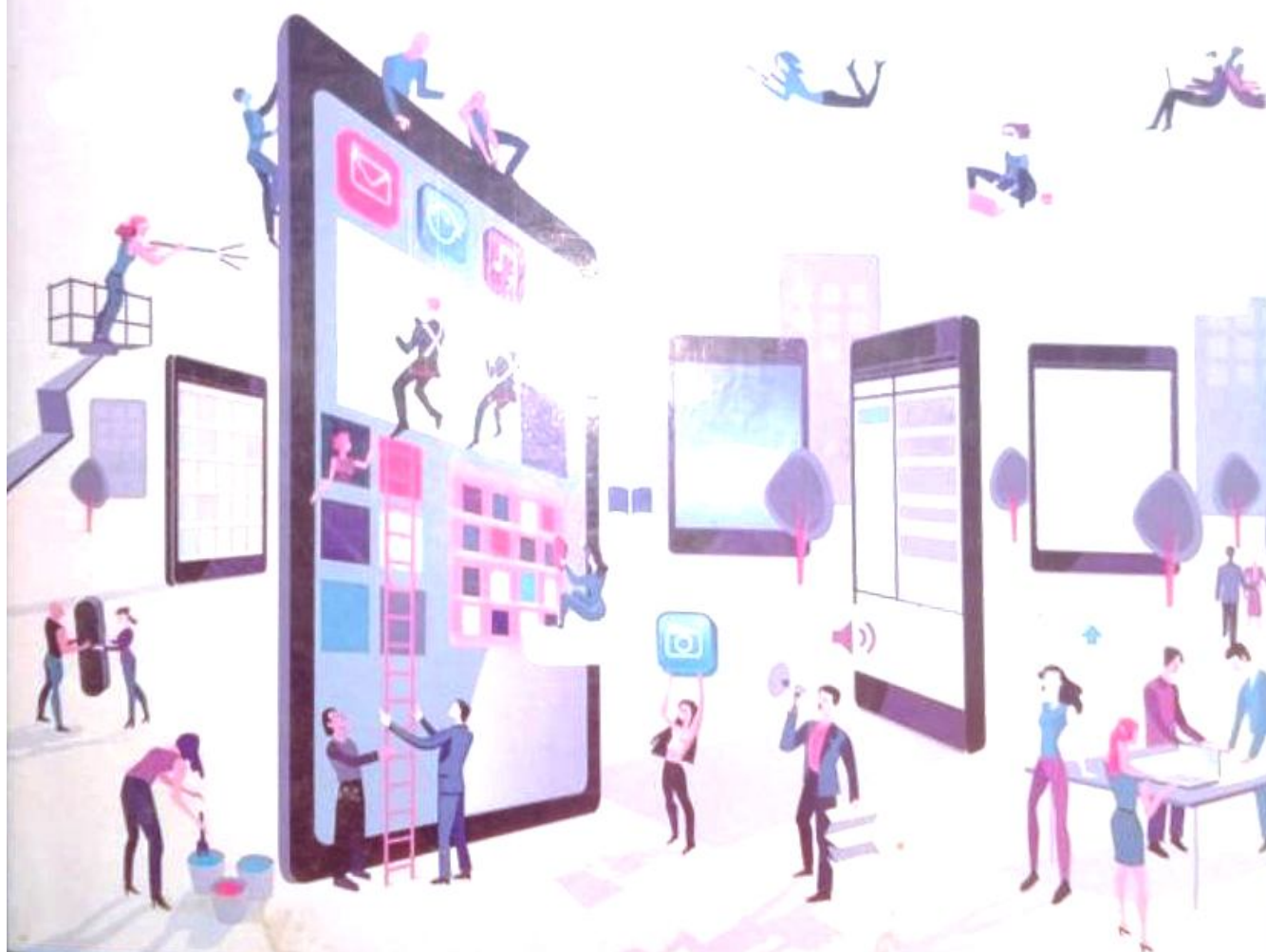


# Changing Dimensions of Libraries in the Digital Age



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## Application of Mobile Technology in Libraries

Vaishali M. Choudhary

### ABSTRACT

Today, technologies have become integral part of everyone's life. They are inseparable from each other. The various technology utilized equipments are computer, mobile phones, multimedia, software, games and apps, E-mails, blogs, instant messaging, social networks, twitter and video conference are forms of technology mediated communications. Today, mobile phones are essential part of our life and they are changing the way one connects and interacts with the world. The chapter discusses the application of mobile technology in libraries and its services.

**Keywords:** *Technology, Mobile, Libraries, Services, etc.*

### Introduction

Libraries have always set examples of experimenting with new technology developments whether it is automation or adopting other information and communication technologies to improve the services. Both libraries and technology are growing organisms. Dynamic nature of technology has significant impact on every aspect of modern life. Advent of information and communication technology has provided faster access to information and that's why it is a challenge for libraries to rethink and remodel library services by adopting the technological changes.

Mobile technology is developed for communication purpose. Since last decade, mobile phones have changed the way of life and work. Mobile phones have gained importance throughout the world.

Mobile phones are gaining more popularity among youth. Students are very interested in learning and using these technologies. They access whatever information they required through mobile phones. Most of them are using Internet to stay connected all the time. Social networking apps, like whatsapp, facebook etc. are not only popular among students but also throughout the society.

### What is Mobile Technology?

Mobile technology is exactly what the name implies—technology that is portable. Examples of mobile IT devices include:

- laptop, tablets and net book computers
- 'smart phones'
- global positioning system (GPS) devices
- wireless debit/credit card payment terminals.

Mobile devices can be enabled to use a variety of communications technologies, including:

- Wireless fidelity (Wi-Fi)—a type of wireless local area network technology
- Bluetooth—connects mobile devices wirelessly
- 'third generation' (3G), 'fourth generation' (4G), global system for mobile communications (GSM) and general packet radio service (GPRS) data services—data networking services for mobile phones
- dial-up services—data networking services using modems and telephone lines
- virtual private networks—secure access to a private network.

It is, therefore, possible to network the mobile device to home, office, or the Internet while travelling.

### Present Scenario of Communication

There is wide range of mobile computing platforms in the market from smart phones to multimedia phones with different types, styles, models and with many inbuilt features

and capabilities like cameras, touch screens, bar code scanning, Wi-Fi, Bluetooth, instant messaging, GIS/GPS, RFID, operating system varying additional storage space, etc. Revolutionary iphones and smart phones (3G and 4G) can be used to run many software applications including Internet access with faster connection speeds. Availability of automatic configuration of GPRS-enabled mobile phones, which help the subscribers to be come online with few clicks.

Emerging technologies like speech technologies in mobile phones have enabled the disabled persons to use mobile effectively.

**The M-Learning Development in India**

'Libraries in hand' are the latest slogan of the Indians' libraries. People in India have an insatiable thirst for information and knowledge. Moreover, mobile services in India are quite affordable; hence, even an ordinary person can own and use a mobile phone. Added to this fact, India happens to have its large population in the age group of 18 to 20 years.

Technology is vital in today's world and makes everything easier. It has transformed our ways of communicating, socializing, playing, shopping and everything we do. These profound changes are putting increased pressure on the traditional models of teaching and learning. Due to ever increasing and diversified needs of the students, technological advancements are also taking place in the field of education every day. While e-learning is still being used as a supplementary tool to the conventional forms of learning, a new method of knowledge addition called m-learning has emerged in the global scenario.

M-Learning refers to the provision of education and training involving portable or mobile device such as smart phones, personal digital assistant, palmtops, I-pods, digital camera, pocket computers, mobile phones etc. Mobile device provides significant opportunities to help learners become more autonomous and also have the potential to change the delivery of teaching and learning in higher education. Mobile learning process can both complement and conflict with the formal education processes. On the positive side, learners can extend their classroom learning activities to homework, field trips and museum visits by reviewing

teaching materials on mobile devices and/or collecting and analyzing information using handheld data probes. Lak (2011) believes that mobile learning is about changing the way we teach with the way student's best learn.

In India, total users of telephone (wireless and landline) are 1058.01 million till May 2016. India's telecommunication system is the second largest in the world next to China and United States. India is third largest in the world next to China and United States. Nowadays 3G mobile users are shifted to 4G device for effective multimedia based m-Learning. Major mobile manufacturers such as Nokia, Sony Ericson and Motorola have linked up with service providers like Airtel, Vodafone and others to provide mobile content, which also include learning content.

**Library Services that can be Provided via Mobile Technology**

- **SMS notification services:** Libraries may provide the alerts on latest news, events and notices via SMS and MMS to the users wherever they might go. The users can get notified instantly with notice alerts on bringing new books to the notice of users for suggestion, information of arrivals of intended documents of users, information of availability of reserved documents for collection, appraising about overdue books, outstanding fines, reminders to return library items, renew books, library circulars, e-journals subscribed, change in timing, information about important events etc.

Such alert notifications can be generated automatically using integrated library management system software. SMS messages can be sent to group of users simultaneously through many free applications, and intermediary websites/clients.

- **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 of implementing of library services through mobile device to support distance learning, formal education, and research activities in e-learning environment by making the information

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resources ubiquitous. Library services should also blend with teaching and research practice of colleges/universities, scientific community or other patrons whom they serve.

- **Database browsing:** Libraries provide access to a variety of its resources and databases. The users can just enter search terms and see results that are designed specifically for mobile viewing. This service includes OPAC (Online Public Access Catalogue), integrated search, and original document search. OCLC's Worldcat mobile application pilot allows users to search for and find books and other materials available in their local libraries through a web application they can access from a PDA or a smart phone.

- **My library:** My library is a personal library space where users can find information and resources of their choice. Users can read alerts, check records, renew resources, request items, track inter-library loan and document delivery requests, set up email notice of new books and journal's articles, set up reference for catalogue searching, etc.

- **E-Resources with mobile interfaces:** Some publishers are already delivering e-books that are accessible via mobile phones. It offers access to a variety of databases and digital resources. 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 device to share photos, videos and audio. Most of the e-books publishers provide 24 x 7 accesses to the library subscription from any Internet terminal within the campus, as well as on mobile devices, such as iPads, Android device and Kindle.

- **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.

- **Mobile document supply:** The mobile environment and technology presents 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 fund transfer; supply chain management, e-marketing, online marketing, and online transaction processing, electronic data interchange and automated inventory management systems.
- **Text reference service:** If the library receives high volume of enquires, that slows down the responses, such as dictionary definitions, facts or service information then librarians can provide instant answers, and links to articles/references in real time.
- **Library virtual/audio tours:** Library virtual/audio tours, instruction/induction/orientation programs have been quite significant in bringing the non-users to libraries and also help the remotely located or users located in different geographical locations. Library users, who don't have time to attend on-site workshops, can get access to library tours on their mobile device.
- **QR codes on mobiles:** QR codes stands for 'quick response' and basically two dimensional bar codes that can contain any alphanumeric text and often used to store url's, text, etc., known as mobile tagging.

#### **Skills Required for the Library Staff**

Librarians should acquire and apply the following skills, if they wish to provide mobile based services:

- Skills relating to training and user orientation to market these services to the users.
- Skills for interacting with users via smart phone applications, mobile friendly web pages and third party intermediary clients.

Knowledge of hardware and software of mobile devices. Develop expertise in protecting privacy and security levels as more personalized information is involved in using for library services.

Familiarity with Internet/intranet services like using email, SMS and spam preventing, etc.

Create mobile optimized content including interactive and participative library homepage, OPAC, virtual tours, and databases.

### Conclusion

Mobile Technology has become a very important part of our lives nowadays. Mobile phones were developed primarily for communication purpose. Mobile phones have gained importance in both the developed and the developing countries. The mobile phones are a device that enables users to communicate, connect, transact and innovate. Mobile device and mobile technologies have potential to facilitate teaching and learning process in a great way. Now, students can access a wide range of digital resources and library services and truly engage in learning activities using any mobile device wherever and whenever they choose, not just at their desktops/PCs. The impact of mobile technology implementation raised strong awareness amongst library staff for the need to acquire skills to realize the associate benefits.

India may be come one of the leading countries in the adoption of m-learning technology in coming years, owing to the number of young users involved in multimedia mobile usage. The Indian educational industry is evolving. The shift from d-learning to e-learning, and now, from e-learning to m-learning will be the next big wave, which will revolutionize education in India. M-learning will bring about a paradigm shift from the traditional methods of education delivery and integrate ICT as an essential component in everyday learning. Indian libraries are needed to be indispensable their users, and for this, they have to include mobile device as a part of their strategic thinking. Mobile libraries have to grow, and this requires greater collaboration between academic industry, corporations and government. In the current scenario, mobile libraries have the potential to proliferate, and we will witness a situation in which the mobile will definitely be used as a tool to spread learning across the country.

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