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Using Smartphone in Smart way for enhancing the Academic Library Services

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Abstract:

The application of mobile phone is not new in academic libraries. Many academic libraries across the globe were already using SMS services to their users to provide them notifications regarding the library. But now the mobile computing has revolutionized libraries by enabling the users hassle free admittance to “information on the go” service. The present paper highlights on the use of smart phones for library services and how the academic libraries can provide the easy access to the information resources through mobile technology. This new technology will be of great help to libraries towards strengthening their library services. Use of Smartphone is an easiest way to get the required information at anytime and from anywhere.

Keywords: ICT, Smartphone, Web Technology, Mobile App, QR Code, etc.

1. Introduction:

Information Technology is playing a crucial role in academic library because of the great advances in the ICT that eventually has helped libraries to be globally ubiquitous. In the past few decades, libraries have adopted ICT and passed through developmental stages like automated house-keeping operations, providing faster access to its collection, and digitization to provide multiple accesses at users desktop. In the modern world, libraries are not lone information providers, Web provides wide range of information although the content may not always be free and or with value addition. To benchmark its place as an information provider, libraries must not hesitate to adopt all possible new technologies like ICT, Wi-Fi, mobile communications, and Library 2.0 and 3.0 to redesign, and transform its services so as to deliver information and its services to the more demanding users whenever, wherever and however they prefer.

The focus of this paper is on hand-held mobile devices like PDAs and smart mobile phones, although the phrase ‘mobile devices’ is used in general. Use of mobile devices depends greatly on constantly changing mobile technology, device design, data transmission rate, battery life, cost, standardization, etc. The passion for mobiles by common man has thrown ample opportunities for libraries to create mobile-friendly library and information services, which may lessen the risk of exclusion. The libraries need to switch over from ‘physical places’ to ‘virtual places’ to embrace and serve ‘netgens’ and ‘digital natives’ who prefer their libraries to be where they are and prefer to access and share information from anywhere at any time.

2. Objectives :

1. To highlight the mobile applications.
2. To explore the mobile library services.
3. To raise the awareness about possible library services through Smartphone.
4. To understand the innovative library services by adopting Mobile Technology.

3. Use of Smart Phones for Library Services:

In view of the capabilities and developments in mobile technologies and their advantages enumerated above, libraries can design and provide the following specific services on mobile devices, compliance with the information security policies and standards of the parent organization. ICT has collapsed barriers and promoted fast communication and interactions across boundaries. The need to meet life's basic challenges and responsibilities has informed the invention and the use of information technologies. Libraries are deeply interested in channels for the transmission of information, such as telephones and telephone lines, cellular networks, cable television, and the Internet. Academic libraries are challenged in satisfying their customer's needs since their target market (researchers, lecturers, undergraduate, and postgraduate students) is demanding and dynamic. The Internet and World Wide Web (www) have made it possible for university teachers, researchers, and students to locate what they need without going to the library. If librarians in this sector are to continue to make substantial contributions as information disseminators, they will have to understand and exploit ICT infrastructure and emerging technologies in delivering services to their clientele.

The following are the mobile phone services:

I. SMS/Texting (Alert Services):

Existing e-mail alert services like bringing new books to the notice of users for suggestion, intimation of arrival of indented documents by users, informing availability of reserved documents for collection, appraising about which/when books are overdue, library circulars, e-journals subscribed, change in timings, information about important events, etc., can be upgraded by sending through SMS/text alert services³ to meet the information needs of 'netgens'. 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.

II. 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 e-learning environment by making the information resources ubiquitous. Libraries should redesign their services keeping social networking sites in mind, which are heavily used by younger generation for interaction, communication, and information sharing. Library services should also blend with teaching and research practice of colleges/universities, scientific community or other patrons whom they serve.

III. Instant Messaging for Reference Services:

The reference and referral services have already become virtual with ICT applications and internet. The mobile devices can further appreciate the service with instant answers like definitions, meanings and other information from digital libraries and web. If the organization has its own secure and private enterprise IM network, libraries may as well make use of these as they are more reliable and secure; or else use web-based free instant messaging services from Google, America Online, Way2SMS, etc., as an intermediary to have interactive sessions with users to answer 'reference queries'. As these free messaging services can be withdrawn anytime by the providers, libraries' may subscribe to fee-based tools like Text a Librarian, LibraryH3lp, MyInfoquest, and Shoutbomb. These tools offer mobile customers all of the benefits of virtual reference services without being tied to a website. Librarians can provide instant answers, and links to articles/references in real time.

IV. E-resources with Mobile Interfaces:

Some publishers are already delivering e-books (both text and audio) that are accessible via mobile phones. Using free Plucker e-book viewer, one can access about 20,000 free e-books from Project Gutenberg. Mobipocket of Amazon is one of the standard e-book reader applications and the website has

over 40,000 titles (about 11,000 free). A large collection of audio books both free-and subscription based services are available for download and also transferable to mobile devices. LibroVox is a collection of free audio books from the public domain. OCLC's NetLibrary collection is providing e-book and audio book titles on library subscription. Libraries can make use of multimedia messaging service (MMS) on mobile devices to share photos, videos, and audio. Most of the e-book publishers provide 24x7 accesses to the library subscriptions from any internet terminal within the campus, as well on operations, to ease the mobile user. In this context, text-only websites are easier and faster to navigate and fabricate into new applications.

V. Library Instructions and Virtual Tours:

Library 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.

VI. Online Library Catalogs on Mobile Phones:

Libraries are required to interact with the software vendors to create mobile compatible WebOPACs⁴. For example, AirPac add-on product will auto detect the type of device you are using and format accordingly the catalogs without graphics for better viewing. LibSirsi-Dynix, Innovative and Library Anywhere developed by Library Thing have similar options. 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 phone⁵. To provide location-based services, libraries have to use mobile telecommunication system, the internet/web-based OPAC on intranet and geographic system like GPS. Many phones have built-in GPS, which allow users to navigate to locations and, if activated, allow others to find them. OCLC's Worldcat mobile application for iphones makes use of this feature when identifying local libraries. Libraries with multiple branches like public libraries can capitalize on the GPS function to create custom maps and navigational tools to branch locations.

VII. Mobile-based Library Lending Service:

As in banking and financial sectors, libraries can formulate regulations for using mobiles for circulation of reading materials and maintenance of users account. The SirsiDynix Company has developed a handheld circulation tool called 'PocketCirc', which enables libraries to access the unicorn library management system on a PDA device. This wireless solution enables staff to assist patrons in the stacks; checkout materials while off site, such as at community or campus events, and update inventory items while walking around the library. Mobile phones make ILL/document delivery services faster and cut-down the time to request/visit different libraries and complement the geographically remote users.

4. Innovative Library Services through Smartphone:-

Mobile library applications opens door for libraries for myriad opportunities. There are many initiatives that are adopted by libraries to expedite their exist services and to make them mobile friendly. Kroski¹⁰ "On the Move with the mobile web: Libraries and mobile technologies" is one of the in depth study on the adoption of mobile technology in libraries. Similarly, Murray and Lippincott have also highlighted some initiatives on incorporating mobile applications in library services. Some main initiatives that are in use in some prominent libraries across the globe are discussed below.

I. Mobile Library Websites:

A Mobile website is an important component of mobile library services. It is basically a short version of large website that is designed and optimized for viewing on mobile devices. They may even be hosted on their own sub domain. The general purpose of a mobile website is to make the content or at least a subset of the content, available to the users. Mobile websites complement the existing library websites to and help extend resources and information to users through their mobile devices. The examples of Mobile websites are The University of Richmond Library , New York University Library and Boston University Center Medical Library made mobile versions of their subject guides, and made their e-books, e-journals, databases, and library site searchable.

II. Library Apps:

Mobile applications, apps for short, are standalone, dedicated pieces of software or web applications/sites that enhance our mobile devices capabilities and access information in an elegant, consistent ways, and are the means for creating new services for our mobile patrons. Likewise, library apps are software applications developed and coded with a specific operating system. Users have to download them in prior of use. Through an app, users are still able to access networked information that is linked by the app. Library mobile applications (apps) can allow users to search, bookmark, annotate, link, and highlight content from scripture, general conference talks, lesson manuals, and other curriculum on mobile devices. Recently, many large public and academic libraries have also developed their own apps. For example, the UCLA library app provides a convenient way for users to search content of the UCLA library on an Android phone. Users can also find library hours, contacts, and laptop availability at campus locations.

III. Mobile Audio Tours:

For the busy library patrons libraries offer Audio/Video tour services for their mobile devices. Such tours help to know the university library system and services. In the past there were some dedicated mp3 players to guide new users through the library. But, the mobile devices have made the task very easy, a user can simply scan a QR Code to get a video that can eventually guide him to many services and locations of the library. Mobile audio tours can be of great help to librarians, especially in areas of tight scheduling and staffing shortage. Although these self-discovery tours may be less expensive to operate than traditional human tours, equipment maintenance and rental operations may not be cost effective for some visitors and organizations Duke University Libraries provides a part audio walking tour of its Bostock Library, available for download as MP3 files.

IV. QR codes on Mobile :

QR code stands for 'quick response', and basically two-dimensional bar codes that can contain any alphanumeric text and often used to store urns, text, etc., known as 'mobile tagging'. QR codes are used in commercial tracking, logistics, inventory control, and advertising. Data can be translated into a QR code by any QR generator, many of which are available as free download. Users simply enter the data to be translated, and the generator produces the code, which can then be displayed electronically or in printed format. Decoding the information can be done with any mobile camera phone that has a QR reader, which is freely available online for most devices. Libraries can use QR codes to label books, journals, audio/visual, and offprints, add QR codes in Web OPAC and other places. Users with phones that have a camera and free barcode decoder software can take a picture of the barcode, then the software decodes the picture, and translates the data into title, barcode, and location information that can be displayed on the phone. The QR code can be scanned, and saved for further use on mobile. QR codes not only link to websites, but also can be used to send prewritten SMS to phones, transfer phone numbers, and provide further text. They are designed to cope with a high-level of error, hence are suitable for outdoor use.

V. Mobile Services for Visual and Hearing Impairments:

Another important use of the mobile technology is for special libraries to use the devices to assist the persons with special abilities like visual or hearing. Many such people are often unable to access because there is no special interface for them. A mobile device such as Smartphone's which have screen readers that can help the disabled to access information. Visual or vibrating alerts relay services and hearing aid compatibility devices make mobile phones accessible for the deaf and hard of hearing, while features such as voice recognition and auto text are needed by those with physical disabilities. The use of augmented reality refers to the "addition of a computer-assisted contextual layer of information over the real world, creating a reality that is enhanced or augmented using either text to speech" or vice versa.

5. Conclusion:

With the advent of mobile phones and smartphones in particular, we are slowly moving away from the notion that mobile phones are just for making calls and texting. The application of mobile phone is not new in academic libraries. Many academic libraries across the globe were already using SMS services to their users to provide them notifications regarding the library. But now the mobile computing has revolutionized libraries by enabling the users hassle free admittance to "information on the go" service. The role of mobile technologies and mobile library initiatives for information access in academic libraries can't be underestimated. The present paper highlights on use of Smartphone for library services with innovative applications and how the Smartphone can facilitate the library services. Academic libraries should stay relevant in the mobile era. There is a need to implement mobile library technologies for the maximum access of their resources and for the satisfaction of their users.

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