Mobile Applications in Library Services

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Outline

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History, Mobile app and Libraries

Technology
Tools, Languages and Platforms

Why Mobile app?
Advantages and Significance in this pandemic

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Nature of services libraries can deliver using Mobile app

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Special requirements and constraints

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Various libraries using Mobile applications
Introduction
Mobile Application, also referred to as mobile app or simply app is a computer programme designed to run on a mobile device, usually available through application distribution platform. Mobile application development requires the use of specialized integrated development environments. Different app development tools are needed for different operating systems (platforms).
There seems to be an app for everything these days.
Mobile application date back to the end of the twentieth century.
Typically, they were small games, ring tone editors, calculators, calendars, and so forth.
Nokia was famous for putting the 1970s video game snake on some of its earliest phones.
Mobile apps are usually available through “application distribution platform” which originated in 2008.
Different sectors like banks, financial institutions, government sectors, marketing industries are providing their service via mobile apps to benefit their users.
There are number of existing library mobile application, through which various libraries are providing different services.
There are companies like Android Developers, Appsbar, Appsgeyser, Boopsie, Library Anywhere, Capira etc. which create Mobile Apps for library.
Technology
Types based on platform

- MOBILE APP
- NATIVE APP
- HYBRID APP
Tools and Languages

Android Application
- Tool: Android Studio
- Language: Kotlin, Java

iOS Application
- Tool: Xcode
- Language: Swift

Hybrid Application
- Tool: Eclipse
- Language: React Native
Stages of Mobile App Development

1. Requirement Gathering
2. Planning
3. Design & Development
4. Testing
5. Publishing
Architecture

Database ➔ Request ➔ Back End Server ➔ Request ➔ Front End (Client) ➔ Response ➔ Back End Server ➔ Response ➔ Database
- Native Apps target toward a particular mobile platform.
- High performance Apps, most reliable, when compared with Hybrid Apps.
- Access to built-in features of the device, Native UI available from app stores.
- The main purpose for creating native apps is to ensure best performance for a specific mobile operating system.
- Native apps provide better user experience.

- Hybrid apps are easier and faster to develop, using single code which works in multiple mobile operating systems.
- They have cross-platform, reaching a wider audience.
- Hybrid apps use a bridge which links them to native code for accessing device features.
- They can’t access device features directly which makes them less efficient in terms of performance.
- A hybrid app combines elements of both native and web applications.
Why Mobile App?
BYOD (Bring Your Own Device)

Speed, convenience and portability

Better user experiences

Load content faster

Cameras, GPS, phone dialing, and other features

Allow users to set preferences

Greater Reach

Keep vital information at hand

Working offline

Uniform Look and Feel

Compatibility

Easy Marketing
- Mobile applications provide simpler user interface. And can improve access to information.
- Unlike, a responsive/mobile website, an application can leverage all smartphone features as efficiently.
- Mobile websites have single-window restriction, however, with mobile sites it's often impossible to fit everything onto one page.
- Mobile websites have heavy content and needs faster processor.
- If we plan on setting up features linked to native device functionality, like GPS, click-to-call, cameras, or scanners, then an app will be more effective.
- There is a lot of significance of mobile based services in social distancing being practice in this pandemic situation. As mobile apps can ease patron concerns by allowing them to use their own mobile device for self-service rather than interact with library devices or staff for simple requests.
User Interface in Mobile Apps

User Login

Easy navigation
Services
DIGITAL CARD

Eliminate the need of physical card, risk of loss or misuse. Barcode/QR code on card can be scanned. User can simply carry card in their mobile phones.
REQUESTS

Remote renewal, reservation, book recommendation, ILL requests can be raised through mobile app being at remote location.
PATRON ACCOUNT

User can check their accounts, late fee, overdue, history etc. And can set preferences as well.
**EVENT CALENDAR**

Integrated event calendar for notifying library events and activities through e-mail or push notification.
Push Notifications are a way to provide alerts and related information. Using the web management console, libraries can instantly deploy messages to thousands of mobile app users in seconds.
**New Arrivals**

**Central Library IISER Bhopal**

**New Books Arrival**

(Period: 21.02.2020 – 06.03.2020)

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**IISER Bhopal Library**

**NEWS**

New arrivals, bulletin board, library digest, news clippings options can be integrated.
E RESOURCES

Personalized setting for bookshelf of favorite e-books and e-journals can also be integrated.
OPAC
Allowing patrons to search for books, e-resources etc. at single platform.
Documents by subject domain, type, publisher can be displayed on home to attract user and to aware user about the collection.
Instant help through tutorials on different problems while using library and resources.
PAYMENT GATEWAY

Direct gateway for fine or fee payment integrated in mobile app.
ABOUT LIBRARY

Easy navigation to information about library, rules, timings, holidays etc.
FAQ

Libraries can add frequently asked questions to resolve basic queries instantly.
REFERENCE SERVICE

Ask a librarian service can be given through chat, e-mail and even through call by using phone dialing feature.

Sarabhai Library, IIM Ahmedabad

Central Library, IIT Delhi
Patrons can view library’s social account directly from mobile app.
Direct navigation using GPS to the library location.
Contact the Library
- Call Us
- Email Us
- Chat

Integrated library location, Direct e-mail and calling feature.
Challenges
Special Requirements

**Expertise**
Professional developer is required for developing mobile app and for future support

**Quality Assurance**
Constant QA after updates for minimal issues faced by user

**Analytics**
For better user experience, constant monitoring of user activity, time spent and dropouts are required

**Support and updates**
To run along constant changes in platform and device, mobile apps need support and updates

**Marketing**
To make users aware about app, its features and services
Limitations

**Security**
- Issue of security can also arise as mobile apps track user activity and can access user data

**Multiple Platform**
- Native apps and hybrid apps both have few advantages and disadvantage, which make it difficult to choose

**Tools and Language**
- Custom design for the apps can be hard to fight off the differences in tools & languages of each platform’s API

**Storage and Display**
- Limitations of storage and small display can be problematic sometimes

**Budget**
- Budget constraint is also area of concern for some libraries
- **In House App** - For In House app development libraries need expertise provided by certain Mobile Apps Development Lab or by own IT Team.

- **Customized Mobile App** - Customized app developers also have limitations. The downside is one can only add features from existing modules.

- **Plug-in App** - Libraries using Plug-in apps like KOHA MOPAC, Knimbus, EBSCO etc. provide limited service and this does not give libraries the flexibility and specificity of an in-house app.
Examples
Indian Examples of Mobile App for Library Services

- **Niti Ayog eLibrary:**
  NITI Ayog Using eLibrary mobile app for access to library collection and a massive collection of open access knowledge to your fingertips. (NITI Aayog, 2019)
Indian Examples of Mobile App for Library Services

- Single Window Search for IIT Delhi e-Resources:

Search all the subscribed e-Resources by IIT Delhi on a single platform including eBooks, Journals Databases, Library Catalog, Institutional Repository etc. both for android and iOS. (IITD, 2019)
Indian Examples of Mobile App for Library Services

- National Digital Library of India:

  It gives access to wide range of digital contents. Provides different ways to browse content repository, filtering result, content relevant for different levels of users, subject domain and languages both for android and iOS. (NDLI, 2016)
Indian Examples of Mobile App for Library Services

- IIM, Ahmedabad, Vikram Sarabhai Library App:

  Provides links to various library resources and services. A new feature "Knowledge@IIMA" provides links to faculty directory, research papers of IIMA (sourced from Scopus), doctoral thesis, etc. (Vikram Sarabhai Library, 2019)
Indian Examples of Mobile App for Library Services

- **IISER Bhopal Library App:**

  This app provides access to online library, information services, and eLibrary services which are being provided by the central library, IISER Bhopal exclusively. (IISER, 2020)
Indian Examples of Mobile App for Library Services

- **IIM Libraries Consortium App:**

  This app has sections like Faculty Directory, eResource list, Consortium Resources, Doctoral Thesis, Annual Meetings, Publications, Union Catalogue, Consortium members etc. (IIMA, 2019)
Custom Library App

- **Capira Mobile Custom Library app**: Capira is a product acquire by OCLC includes custom mobile library apps (CapiraMobile℠), an off-the-shelf mobile library app (CapiraReady℠) and Provides customized and readymade mobile apps for libraries. Capira offers an intuitive mobile product line.

- **Library Anywhere**: With Library Anywhere you can create pages with your own content, such as book lists, announcements, and more. Plus links to your existing “ask a librarian” features, too, like instant messaging or texting. In addition, Library Anywhere offers a branded app option that provides libraries with a complete “white label” solution.

- **Zoho Creator**: Zoho Creator is a custom app development platform that uses low-code technology. It enables non-programmers to use interactive drag-and-drop and click-and-configure interfaces to build completely functional apps.
Implementing the Mobile App to Improve Library Services is a very effective way to disseminate the library information products and services online. Mobile applications are much easier to use and provide better user experience than websites. Libraries can also analyze user activity for better user experience and future updates and modifications. Despite a few limitations, mobile applications are beneficial in the long run in mass communication. This is a good time for Library & Information Professionals to embrace new and innovative technologies.
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THANKS

Does anyone have any questions?