What's up in Libraries: an Overview

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1. Introduction:

The nature of the academic library and the role they play in campus is changing. Libraries are moving towards an information commons model of service, and becoming campus community centers. They invite student and faculty socialization, learning, research, scholarship and instruction. They are most effective when programming, services, and spaces are developed in partnership with others seeking similar educational outcomes. Academic libraries will increasingly provide information and services to their users at right time as per their requirement.

We've been hearing and reading similar statements about the approaching dominance of mobile for a while now. But there's little evidence yet from library mobile applications of a dramatic sea change in how our users are finding us and using our services. Is that due to over-hyped expectations about this transition, or does it have something more to do with the mobile library applications we're building, or the metrics we apply to counting how they are used? Or is it a wave that continues to build but isn't quite here yet.

Although this is the information age, one of the most common places for people to seek information is still the public library. Fortunately, modern libraries have kept up with technological advancements and have integrated computers, the internet, and other important tools as a normal part of this dynamic hub where paper media meets electronics. In fact, many people view the library as the central information center of the city, and in order to retain this title, librarians now find themselves faced with the need to utilize smart phones and tablet apps to complete their tasks and perform jobs more quickly and efficiently.

There are various applications on the market for librarians, each with their own uses, and although not all are helpful in the library, you might be surprised to learn of how many do serve a literary purpose.

2. Definition - What does Mobile Application (Mobile App) mean?

A mobile application, most commonly referred to as an app, is a type of application software designed to run on a mobile device, such as a smart phone or tablet computer. Mobile applications frequently serve to provide users with similar services to those accessed on PCs. Apps are generally small, individual software units with limited function. This use of software has been popularized by Apple Inc. and its App Store, which sells thousands of applications for the iPhone, iPad and iPod Touch.

A mobile application also may be known as an app, Web app, online app, iPhone app or smart phone app.

Techopedia explains Mobile Application (Mobile App)

Mobile applications are a move away from the integrated software systems generally found on PCs. Instead, each app provides limited and isolated functionality such as a game, calculator or mobile Web browsing. Although applications may have avoided multitasking because of the limited hardware resources of the early mobile devices, their specificity is now part of their desirability because they allow consumers to hand-pick what their devices are able to do.

The simplest mobile apps take PC-based applications and port them to a mobile device. As mobile apps become more robust, this technique is somewhat lacking. A more sophisticated approach involves developing specifically for the mobile environment, taking advantage of both its limitations and advantages. For example, apps that use location-based features are inherently built from the ground up with an eye to mobile given that you don't have the same concept of location on a PC.

3. **History and development of mobile applications and Web sites**

➢ **Libraries to Go: Mobile Tech in Libraries.** Comprehensive Slideshare presentation that reviews how libraries can use and develop mobile technologies.
   Access: http://www.slideshare.net/ellyssa/libraries-to-go-mobile-tech-in-libraries-presentation.

➢ **Library in Your Pocket: Strategies and Techniques for Developing Successful Mobile Services.** Mobile site developers from North Carolina State University Libraries share techniques for creating and promoting mobile services.
   Access: http://www.educause.edu/Resources/LibraryinYourPocketStrategiesa/195003.

➢ **M-Libraries—Library Success: A Best Practices Wiki .** Includes listings of libraries that offer mobile Websites (with and without OPACS) and publishers who offer mobile versions of databases.
   Access: http://libsuccess.org/index.php?title=M-Libraries.

➢ **Spectrum>Mobile Learning, Libraries, and Technologies.** This blog documents topics relating to mobile technologies. Posts include information about specific mobile applications as well as their general usage in libraries.
   Access: http://mobile-libraries.blogspot.com/.

3.1 Mobile applications for learning

➢ **Classics—23,469 Books to Go.** Large collection of free classic literature packaged in an elegant and intuitive interface. Authors include Aristotle, Charles Dickens, Plato, and Oscar Wilde. By Spreadsong, Inc., Classics works with iPhone, iPod touch, and iPad. Price: Free.
   Access: http://spreadsong.com.

- ➢ **Dropbox.** Store, sync, and share files online and across computers. Access your Dropbox, download files for offline viewing, and sync photos and videos to your Dropbox from your mobile device. Dropbox works with iPhone, iPad, Android, and BlackBerry.

  Access: https://www.dropbox.com/anywhere.

- ➢ **Evernote.** Create text, video, and audio memos. All content within Evernote is searchable, including text within snapshots. Notes can be synchronized to Mac, PC, and Web. Evernote works with iPhone, iPod touch, iPad, Android, BlackBerry, Palm, and Windows Mobile. Price: Free.

  Access: http://www.evernote.com/about/download/.

- ➢ **History: Maps of the World.** This app by Seung-Bin Cho showcases high-resolution historical maps of the world from the 4th to the 20th centuries. Features include category/era views and keyword search. History: Maps of the World works with iPhone, iPod touch, and iPad. Price: Free.

  Access: http://itunes.apple.com/us/app/history-maps-of-world/id303282377.

- ➢ **iSSRN.** Created by the Social Science Research Network (SSRN), iSSRN provides access to more than 260,000 research papers in the social sciences and humanities from scholars worldwide. Articles can be e-mailed or viewed on the device. iSSRN works with iPhone and iPod touch. Price: Free.

  Access: http://ssrnblog.com/2009/11/19/ssrns-iphone-app-issrn-is-available/.

- ➢ **Library of Congress (LOC).** Official app for LOC offers a virtual tour of the Main Reading Room, Great Hall, and Thomas Jefferson's Library, as well as exhibition highlights. Includes photos, video, and audio.

  Access: http://itunes.apple.com/us/app/library-of-congress-virtual/id380309745.

- ➢ **Meebo Mobile.** Chat with friends or even monitor your library's chat service while on-the-go. Meebo aggregates multiple chat accounts into a single, easy-to-use interface. Meebo Mobile works with iPhone, Android, and BlackBerry.

  Access: http://www.meebo.com/meebomobile/.

- ➢ **OECD Factbook 2010.** Created by the Organization for Economic Co-operation and Development, this app presents current economic, social, and environmental statistics. The data is organized into 12 categories, such as Population and Migration, Production and Income, Labour, Science and Technology, and more. Each category offers a range of specific sub-topics with data organized into tables. OECD Factbook 2010 works with iPhone, iPod touch, and iPad. Price: Free.

  Access: http://www.oecd.org/publications/factbook.

- ➢ **Periodic Table Explorer.** By Paul Alan Freshney, this app contains in-depth information about all of the elements in the periodic table, including their compounds, physical properties, isotopes, spectra, and reactions. Also includes images of each element. Periodic Table Explorer works with iPhone, iPod touch, and iPad. Price: Free.

  Access: http://freshney.org/apps/pte.htm.

➢ **Planets.** This app by Q Continuum uses current location to display detailed view of the sky. Provides location of the sun, moon, and planets; star and constellation maps; and future and current moon phases. Viewing options such as the sky in 2D, 3D, and planet visibility are available. Planets works with iPhone, iPod touch, and iPad. Price: Free.

Access: http://www.qcontinuum.org/planets/.

➢ **Shakespeare.** This application by Readdle offers the full-text of 40 Shakespeare plays, 6 poems, and 154 sonnets. Includes a searchable concordance. Shakespeare works with iPhone, iPod touch, and iPad. Price: Free.

Access: http://readdle.com/shakespeare.

➢ **TED.** This app by TED Conferences contains the entire TED Talks library of more than 700 video presentations. Ability to sort by recency, popularity, tags, or themes. Save talks for offline viewing. TED works with the iPad. Price: Free.

Access: http://itunes.apple.com/us/app/ted/id376183339.

➢ **USA Factbook Free.** Features facts about all 50 U.S. states, maps with state names, U.S. Anthem with lyrics, U.S. Documents (including the Declaration of Independence), and more. By ADS Software Group, Inc. USA Factbook Free works with iPhone, iPod touch, and iPad. Price: Free.

Access: http://itunes.apple.com/us/app/usa-factbook-free/id305888083.

➢ **WordWeb Dictionary.** Extensive English dictionary and thesaurus that includes more than 285,000 words, phrases, and derived forms. A separate audio version is also available for $1.99. By WordWeb Software, WordWeb Dictionary works with iPhone, iPod touch, and iPad. Price: Free.

Access: http://www.wordwebsoftware.com/WordWebiPhone.html.

3.2 Discovering and downloading mobile applications

➢ **AppBrain.** Discover Android apps via search, rankings, and categories. Install apps from the Web with the Fast Web Installer app.

Access: http://www.appbrain.com/.

➢ **Appolicious.** Browse applications for most mobile devices, including Android and iPhone. Read app reviews and find lists of the best apps.

Access: http://www.appolicious.com/.

➢ **App Store.** Find applications in categories such as games, business, education, productivity, and entertainment. Apps can be downloaded wirelessly to iPhone, iPod touch, and iPad.

Access: http://itunes.apple.com/us/genre/mobile-softwareapplications/.

➢ **App Store HQ.** Browse all apps, search by category, read the latest app reviews, and more. The App Store HQ covers Android, iPhone, iPad, and Web apps.

Access: http://www.appstorehq.com/.

➢ **Getjar.** Browse applications by category or device type. Compatible with most major platforms such as Android, BlackBerry, Windows Mobile, and iPhone.

Access: http://www.getjar.com.

➢ **Mimvi.** This mobile apps search engine discovers iPhone, Android, and Blackberry apps. Type a category in the text box and Mimvi will return a list of related apps. Icons represent each app's native device. *Access:* http://www.mimvi.com.

3.3 Mobile Web sites

In addition to or in place of mobile applications, some companies and organizations also develop mobile versions of their Web site that are better optimized for viewing on mobile devices.

➢ **Encyclopedia Britannica Mobile.** Offers a search box and a list of suggested searches. Results include full-text entries with enlargeable images.
Access: http://i.eb.com/.

➢ **MedlinePlus Mobile.** Produced by the U.S. National Library of Medicine, MedlinePlus Mobile provides information about specific diseases, conditions, and wellness issues. The site also contains prescription drug information, medical dictionary, and current health news.
Access: http://m.medlineplus.gov.

➢ **WorldCat Mobile.** Search the WorldCat catalog for books, movies, music, games, and more. Results include items available at local libraries.
Access: http://www.worldcat.org/m.

3.4 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-using-jqtouch/.

> ➢ **Library Anywhere.** Created and sold through Library Thing, 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/.

> ➢ **Mobile Web Best Practices 2.0: Basic Guidelines.** Created by the World Wide Web Consortium (W3C), this document specifies guidelines for developing Web-based content for mobile devices.
> *Access:* http://w3c-webmob.github.io/mobile_best_practices/

> ➢ **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.

3.5 Examples of mobile library Web sites

> ➢ **Adelphi University Libraries Mobile (AU2GO).** Offers library hours, library staff contact information, a link to the library's blog "biBLIOGraphy," and more.
> *Access:* http://m.adelphi.edu/library/.

> ➢ **Albertsons Library, Boise State University.** Simple text navigation offers various ways to find the library and its contents. An interesting feature is the inclusion of a "Find in Our Building" category, which lists call number locations and popular locations such as study rooms and computers, each linked to an animated floor map.
> *Access:* http://library.boisestate.edu/m.

> ➢ **North Carolina State University (NCSU) Libraries.** Elegant interface with icons representing categories such as room reservations, group finder, and Webcams. Another interesting feature is the ability to view the number of available library computers.
> *Access:* http://www.lib.ncsu.edu/m/home/?browse=iphone.

> ➢ **PENNLibraries, University of Pennsylvania.** A multitude of information at your fingertips, such as mobile versions of databases, image search, library video clips, and more.

Access: http://www.library.upenn.edu/m/.

➢ **University of California Riverside Libraries.** Glossy icons designate many useful categories, including research guides, library workshops, and links to the library's social media profiles. *Access:* http://m.library.ucr.edu.

➢ **Virginia Tech University Libraries.** A simple but effective layout offers important information, such as library hours, contact information, catalog search, and library maps. *Access:* http://m.lib.vt.edu/.

4. Advantages of mobile web applications

The main advantage of a web app is that it is compatible across all platforms and devices. As the application runs in the browser, it is independent of the handset it is run on. This means that the web app has effectively more reach, and that only one app has to be designed for several handsets.

Web apps make use of existing web technologies, such as Java and CSS, which means the technical barriers to entry are low. Developers can use their existing skills to develop a web app, whereas native apps may require additional training given that the technologies are newer.

Companies can also make use of mobile search to allow their consumers to find the app. Native apps need to be downloaded in advance to be used, whereas web apps can be found and used simply through a search on the browser.

Because the app is not distributed through the phone's store, no third-party approval is required before release. The site can be updated in real-time and changed without requiring sign-off by the mobile provider.

There is also some evidence to suggest that browser-based mobile applications will grow faster than the app market, which may bode well for a long-term strategy.

5. Limitations for mobile applications

The models presented above were largely derived from traditional desktop applications. For example, Nielsen's work was largely based on the design of telecoms systems, rather than computer software. The advent of mobile devices has presented new usability challenges that are difficult to model using traditional models of usability. Many numbers of issues that have been introduced by the advent of mobile devices:

➢ **Mobile Context**: When using mobile applications the user is not tied to a single location. They may also be interacting with nearby people, objects and environmental elements which may distract their attention.

➢ **Connectivity**: Connectivity is often slow and unreliable on mobile devices. This will impact the performance of mobile applications that utilize these features.

➢ **Small Screen Size**: In order to provide portability mobile devices contain very limited screen size and so the amount of information that can be displayed is limited.

➤ **Different Display Resolution**: The resolution of mobile devices is reduced from that of desktop computers resulting in lower quality images.

➤ **Limited Processing Capability and Power**: In order to provide portability, mobile devices often contain less processing capability and power. This will limit the type of applications that are suitable for mobile devices.

➤ **Data Entry Methods**: The input methods available for mobile devices are different from those for desktop computers and require a certain level of proficiency. This problem increases the likelihood of erroneous input and decreases the rate of data entry.

6. Conclusion

Mobile technology holds great promise for enabling libraries to provide enhanced services in a form users increasingly are demanding. If this promise is to be fully realized, however, libraries will need to conduct analyses and make smart decisions to address the issues outlined above, support staff education and explore partnerships and new funding models, and be prepared to compromise with respect to their traditional information delivery models.

References:

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