

DIKTUON: *Mobile Devices and Libraries*

By Andrew Keck

Recent technology news continues to affirm the growth and diversity of mobile devices, particularly smartphones that allow for web and app-based access to information and research tools. Indeed, the memory, processing power, and data speed once limited to a standard personal computer is now commonplace within phones. The “phone part” of the typical mobile device can be among the least used features. Today it is not uncommon for library researchers to approach the service desk with a phone displaying a catalog record, a citation from the *ATLA Religion Database*, or, indeed, even a digital photograph of the object of inquiry. With some limitations, researchers can interact with librarians, search across various library catalogs and databases, access free and library-licensed content, and manage their research process through their mobile devices. Theological libraries of all sizes can deliver a variety of library services and content to a user’s mobile devices

LIBRARY REFERENCE

Reference service is increasingly common for libraries to offer and promote through a variety of mobile technologies. At a basic level, offering a reference e-mail service or reference phone number allows inquires from mobile patrons. Many libraries offer a “text-a-librarian” service which makes use of standard mobile messaging. Some libraries purchase their own mobile phone contracts which may allow librarians to provide services throughout the library and campus context. Instead of putting the patron on hold while one walks to a Reference volume, one could simply continue the call while consulting the appropriate volumes. Other libraries contract with services that can route text messages through an instant messaging protocol (Twilio and Libraryh3lp is one such combination). Relying on the features of a smart phone, one can also make use of standard Instant Messaging protocols (AIM, Yahoo Messenger, etc.) as well as web-based chat forms (Meebo or Libraryh3lp) to receive reference queries from mobile users. The suite of reference services offered to mobile users may depend significantly upon the profile of students and researchers being supported, which continues to change over time.

LIBRARY CATALOG

A library catalog vendor may provide an optimized interface for mobile devices and/or provide access through a separate mobile application. Third-party solutions are also available to interpret your library catalog into a mobile-optimized website or application. One might think creatively about other places where catalog data may be stored or accessible. For instance, your catalog data may be included in a regional union catalog or WorldCat (that has several mobile options) or a web-scale discovery solution which may have been optimized for mobile devices. Given the constraints of space in mobile design, mobile applications and websites tend to be optimized for simple searches. Advanced search options, faceted browsing, library account features, detailed metadata, and other features are often absent from mobile versions. However, other features may be added that take advantage of mobile services. For instance, mobile voice features or cameras could be used to initiate a catalog search, or GPS and map features can help patrons navigate to appropriate campus libraries.

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LIBRARY DATABASES

A growing number of subscription databases have or are actively developing mobile versions or applications. Similar to library catalogs, advanced features may be subtracted or added in order to optimize and simplify the interface for mobile devices. A particular challenge in this area is the issue of authentication and authorization. VPNs and proxy services can slow down and add bandwidth challenges to mobile devices since both technologies route traffic through the home institution. While some types of content are challenging to view on a small screen (such as navigating large PDF images of newspapers), other types of content can be easily transformed to work with a variety of smaller devices. Entire e-books can be purchased and read through applications such as Kobo, Stanza, iBook, Kindle, Nook, and others. Audiobooks also can be purchased through iTunes, Audible, or other applications. "Checking out" library licensed e-books or audiobooks is increasingly possible but through an often perplexing process.

LIBRARY RESOURCES

Homegrown library resources such as digital library objects, learning management software, library hours, maps, directions, library blogs, research guides, etc. can be offered through mobile websites or applications. A mobile-focused library website or application can pull a number of these resources together in one place. Web designers continue to adapt their standard suite of tools for increasing mobile-based use. There are a number of web-based technologies that can figure out what device, browser, and screen size you are using and so provide an optimized experience through changing screen layouts, navigation, and size and/or presence of pictures and other multimedia. For instance, if I'm coming to a webpage using an iPad, the webpage that I'm presented can be optimized for my screen size and the Safari browser. Since iPads do not use Adobe Flash, any multimedia using Flash would be replaced with an alternative format or perhaps even converted on the fly as my page is loading. Some web designers are beginning to design specifically for mobile devices and then provide alternative pages for those coming to a webpage from a personal computer. In some instances, it may be easier to design something smaller and find ways to make it work on a bigger screen than designing something for the bigger screen and then making it smaller for mobile use.

LIBRARY RESEARCH

Another use of mobile devices includes managing the research process itself. Citation managers such as RefWorks, Mendeley, Papers, Endnote, Zotero, and others have developed mobile versions or separate applications for iPads, iPhones, and Android devices. Users can use their cameraphones on book barcodes to locate citation information or to capture citation, text, or other content from library materials. Notes on materials can be taken through use of applications like SimpleNote, Evernote, or mobile-optimized word processing programs. The phone's microphone can be used to dictate research notes which can be simply recorded or machine transcribed. Bluetooth keyboards can be used with many mobile devices to enable greater ease in text input.

CONCLUSION

Smartphone use continues to grow and, for some, smart phones can be a primary mode of accessing the Internet and thus the digital resources and services of the library. The limitations of screen size and bandwidth should force library and information providers to scale webpages and applications in ways that benefit both patrons with

mobile devices and international partners or others with limited bandwidth. The proliferation of devices, operating systems, browsers, screen sizes, and technical limitations make it impossible to create mobile applications or webpages that will be optimized for every possible combination. The key may be optimizing for a few, but in a way that doesn't "break" access for other devices. In some cases, development and/or testing should be outsourced to those with experience in working with mobile devices. Even without doing its own development, each library needs to think about and collect together the mobile-optimized resources already available for the users. Both physically and virtually, our users come to the library with mobile devices—our opportunity is to meet them there.

