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Serving Your Mobile Users: The Essentials - Chapter 1 from "The Handheld Library: Mobile Technology and the Librarian"

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Serving Your Mobile Users: The Essentials

Robin Ashford and Alex Rolfe

Key Points

- Texting is still enormously popular.
- Libraries can use quick response (QR) codes to bridge the gap between the physical and the virtual.
- Users who have to pinch and scroll around will not be impressed.
- Libraries need to decide which apps to showcase.
- E-book content is becoming optimized for reading on mobile devices.
- There are many simple, low-cost ways to market your mobile services.
- Hit counts and other basic statistics should be easy to come by.
- We can look forward to new ways to provide service.

INTRODUCTION

The mobile revolution is in full swing. Libraries can no longer afford to be passive. We need to recognize the importance of this societal change and strategize accordingly. The adoption of mobile devices is surging: in 2011, Americans purchased more smartphones than PCs, and there are more wireless subscriptions than people (Mobile Future 2011). Libraries need to be alive to the implications of this rapid growth. Many already are, but may be wondering how to address it. The rapidity of change and the array of mobile technologies out there create a bewildering environment. Here are the elements we recommend for a library to serve its mobile users successfully.

TEXT MESSAGE REFERENCE

Short message service (SMS) reference was one of the first services libraries offered for mobile users. SMS allowed short text messages to be sent over phone networks. The standard was in place as mobile phone networks grew, and it now remains as just about the only mobile service available for users with feature phones. Now texting is moving away from traditional SMS to other messaging services using the Internet rather than phone networks (Troianovski 2011). Even so, texting is still enormously popular. Some 83 percent of American adults own cell phones, and three-quarters of them (73%) send and receive text messages; the typical young adult cell owner sends or receives 50 messages a day (Smith 2011). Texting for reference help is a service well worth offering.

There is not necessarily any monetary cost, though those wanting the best features may find it worthwhile to pay. Meebo and Pidgin are popular free instant messaging (IM) services that allow the library to send and receive text messages as well, while also connecting to a wide array of IM networks. Mosio's Text a Librarian and Altarama are two SMS services, of several available, that provide features like transcripts and statistical reports. Libraries need to make sure the service is staffed and responsive. This service has its unique considerations: messages have to be kept short—under 160 characters (although some services will break up longer ones for you)—and there is a possibility that you are incurring costs for the user. It is a fairly low-barrier service for the library to offer, however, and consumes a lot of resources only if it gets heavily used, which may justify the cost.

QR CODES

Many libraries are implementing quick response (QR) codes in their physical and online spaces. Though they may not be mainstream in your part of the world, smart implementation of QR codes makes sense in libraries, where we aim to best serve all of our constituents, including our ever-growing population of mobile users.

Practically speaking, QR codes excel at bridging the digital and physical worlds, and libraries—now more than ever—are places where the two are intertwined. A low-threshold technology, QR codes are easy and inexpensive to create and implement. Whether they become mainstream or are replaced by something even simpler in the future, they are a technology we can easily implement to add value for our library users now. When used wisely, QR codes provide a lot of bang for the buck.

On the technical side, a QR code is a matrix barcode developed by the Denso Wave division of Denso Corporation in 1994. The barcodes were originally designed for the automotive industry for easy, rapid scanning of information (Denso Corporation

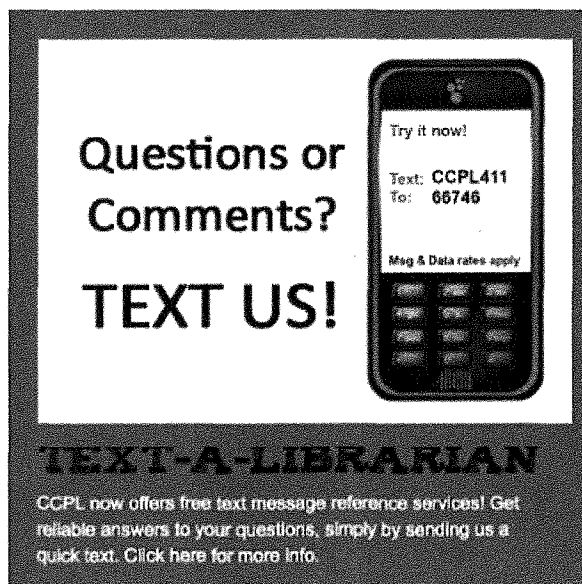


Figure 1.1
CCPL.

2011). Because they are two-dimensional, QR codes can contain more data than a standard barcode, such as contact information or a link to a website, audio file, image, or video. Libraries, with their mix of print and digital formats, are a natural place for using QR codes to bridge the gap between the physical and the virtual. QR codes can place movie trailers on DVD cases and put book reviews on print books. From adding information to purchased content or library exhibits to providing audio tours, these little codes can truly add value for mobile users. Some of our content is already enriched with QR codes by publishers: the journal *Neurosurgery* recently began using QR codes to link readers to related videos or further data (“QR Codes in *Neurosurgery*” 2011; MacRae 2011).

QR codes are also increasingly embedded on web pages; the goal is often to simplify a task the user would have done more laboriously without the QR code. A good example is QR codes in library catalogs. The benefit here is that instead of needing to have paper and pen and time to write, users can scan the code to get the title, author, call number, and location of the item on their mobile device. They may have done this from their computer at home, but the next time they visit their library they can easily pull up that information from their barcode-reader history and walk directly to the item on the library shelf—and no worries about remembering what they did with that little piece of paper! Some library catalogs with QR codes also take users to the full mobile catalog record. Users getting help at the reference desk can just scan the code to bring the record up on their phone, where they can place a hold, share it with a classmate, or simply save the information for later reference.

Much has been written and presented on the topic of QR codes and libraries, and examples of QR code usage in libraries abound. A good starting place for ideas is “Library Success: A Best Practices Wiki,” which includes a page dedicated solely to libraries using QR codes (“QR Codes” 2011). A search for “QR codes libraries” on www.slideshare.net also yields many valuable presentations on QR codes and libraries.

The usefulness of QR codes is debated, and, indeed, not all QR codes provide a value-added experience for the user. This is unfortunate and is something libraries should consider when preparing to implement QR codes. A negative experience scanning a library QR code lowers the likelihood users will try scanning other useful codes. Commercial marketers regularly make the mistake of creating QR codes that take users to nonmobile sites that, on top of being difficult to read, offer the user nothing in return other than advertising to purchase a product or service. When users take the time to open a barcode reader on their device and scan a library-created QR code, they should be rewarded with something of value, not punished with advertising, a nonmobile site, or other low-value content. After all, we want to serve our mobile users better, not “sell” them something they don’t care about. Labeling, or some text that explains what the QR code does, is also important so that users can avoid scanning codes to content that is of no interest to them.

These are the sorts of QR-code implementations that cause a user to come back for more: bringing the user to a mobile library app or site that they can add to their home screen, a gift or cash reward in a scavenger hunt, or a short, useful video tutorial. Best of all are those that meet a real-time need, such as reserving a room on the spot, checking the availability of computers in real time, or learning more about a library display or art show while viewing it.

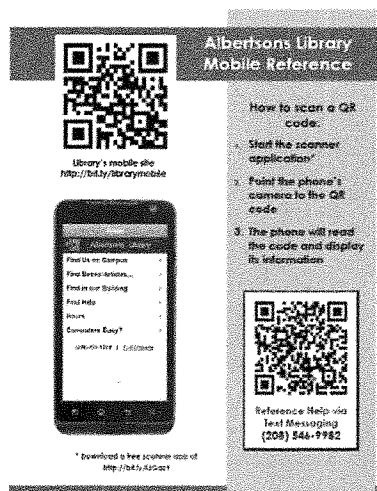


Figure 1.2
Use of QR codes in poster, Albertsons Library, Boise State University.

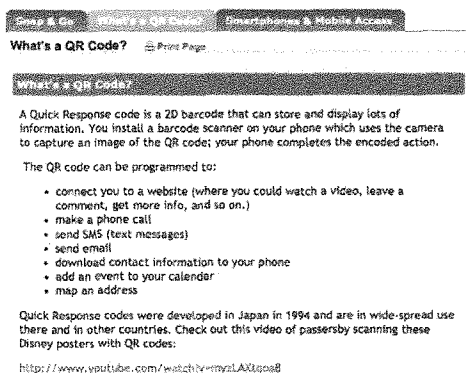


Figure 1.3

Explanation of QR codes for the Snap & Go project, Contra Costa County Library.

However, the greater challenge lies in the fact that most people still don't know what a QR code is or what to do with one. In June 2011, only 6.2 percent (14 million) of mobile users in the United States scanned a QR code (comScore 2011). Also, not all users own a device that can scan the code, so it is important to provide a URL along with a QR code whenever possible. In this environment, it makes sense to provide information on QR codes; whether it's a sign, a handout, a page on the library website, or face-to-face instruction, it's important that we provide some means of educating library users about QR codes. Boise State University, Albertsons Library, Contra Costa County Library, and many others have done an excellent job in this area by creating extensive online guides about QR codes, as well as print posters and cards to educate and at the same time advertise their mobile sites.

Malicious codes and privacy have been raised as concerns. Barcodes can link to browser exploits or could include other malicious content to manipulate your mobile device. It is safest to know and trust what you are scanning. As long as you made the code, you know it's safe. And of course, QR codes, like links on websites, may need to be updated from time to time. As for users, most barcode-reader apps can be configured to show the URL they are going to open up before they actually load, which is one preventive option. Branding the library-created QR code with a logo can instill confidence. If somebody were to put up a rogue QR code of his or her own, it would look odd to your users because it would have no logo as part of the code. In the end, as with other online content, there are risks we may not be able to foresee or preclude.

MOBILE SITE AND MOBILE CATALOG

A mobile website is an important component of mobile library services. Many libraries have their eye on this already; the *Library Journal* Mobile Libraries Survey 2010 revealed that a mobile site and mobile catalog interface were at the top of the list of services currently offered or planned for (Thomas 2010). It is relatively simple to provide a few mobile-formatted pages showing hours, phone numbers, and other information users may want to check while out and about. Given the small screen size, mobile users do not expect or desire sites as robust as standard websites. Users who have to pinch and scroll around a full website on their handheld devices will not be impressed. The mobile site also serves as an access to point to other services for mobile users. Some are discussed below; others, such as applications showing real-time availability of library computers, may not be essential but are nonetheless wonderful. Many users expect to find such services through a mobile site and are not likely to get to them solely through a standard website, QR code, or other means.

One of the first services to go online was the library catalog; before the World Wide Web was invented, libraries provided



Figure 1.4

Customized QR code used by the Harold B. Lee Library, Brigham Young University.

dumb-terminal access to their catalogs. Similarly, the library catalog is one of the first things that ought to appear in the mobile realm. Exposing the collection is one of our basic responsibilities. Certain catalog features, such as account access, make particular sense for mobile users. The ability to renew books and place holds should be part of any mobile catalog. Because this is more difficult than simply putting up a mobile-formatted page, many libraries will need to pay a vendor. A side benefit of doing so is that most vendors' products can double as a basic mobile website as well.

To help users take advantage of your mobile catalog and/or site, you will want to have a redirect script on your main website and catalog pages. Often it can be placed in a header, but if your catalog is also your proxy server (we use Web Access Management from Innovative Interfaces), you may need to go through some implementation gyrations to keep it from redirecting users to your catalog when they authenticate on the way to your library vendor apps.

Mobile catalog vendors are adding features and functionality rapidly. In the 14 months that LibraryAnywhere, the product we use, has been in general release, its makers have added greater freedom to customize, better statistics, new search options, and support for more devices. Boopsie, another vendor offering a mobile catalog interface, recently added the ability to scan any book's universal product code (UPC), check for availability, and place it on hold. Both Boopsie and LibraryAnywhere work with a variety of integrated library systems (ILSs); another option may be a mobile interface offered by your ILS vendor, such as Innovative Interfaces' AirPAC.

LIBRARY VENDOR APPS

Database vendors now offer mobile sites, apps, and sometimes even mobile-friendly features within databases, such as the Alexander Street Press QR codes permitting music downloads to mobile devices. Specific databases often merit their own app; the Nursing Reference Center app from EBSCO downloads a library of information on diseases and drugs that could be useful in a wide variety of health-care settings. Many individual journals, such as *Nature* and the *American Journal of Transplantation*, provide their own apps as well. The impressive amount of development by vendors and publishers constitutes another signal that the mobile landscape is increasingly important for libraries and their users.

The number of library-related apps is already overwhelming. Some libraries have made informational web pages or LibGuides listing mobile apps; MIT and the University of Arkansas are particularly good examples. These guides are useful both to their users and to those of us who have yet to make such pages for our own libraries. What quickly becomes apparent, though, is the need for criteria and policy. Given the plethora of apps available, libraries need to decide which ones to showcase.

Promoting these apps implies some level of library support for them, and this may also need to be a consideration for libraries putting information about them online. It has always been a challenge to keep abreast of the changing functionality of our web-based databases; learning about all the apps and the details of how they work is no less daunting. Most vendors include a help page that library staff



Figure 1.5
Library-related app logos.

can point to. For the more popular apps, such as EBSCO, we may need to assist our users with the initial authentication process. In some cases authenticating is more intuitive than in others; Gale and EBSCO, for example, solve this problem in different ways. The good news is that once a person has been authenticated, they usually do not have to worry about going through the process again. The move to mobile platforms by our vendors presents definite challenges for library workers, but getting these apps into their hands is nonetheless a very important way we can provide value to them.

E-BOOKS

With a mobile site in place, and with vendors offering content via their own apps, expectations soon follow for the library to provide its content in a mobile-friendly format too. Many users read books on their mobile devices already and would love to have access to their library collection in this way. Librarians too are eager to meet this growing demand.

Ebrary's recent download survey found that the most-desired feature is the ability to "check out directly to mobile devices," with more than half of the 395 respondents ranking it highest (McKiel 2011). Ebrary followed up in the fall of 2011 by rolling out a surprisingly generous two-week download option. For those wanting only a chapter, they can download a PDF with no digital rights management (DRM), which means there are no restrictions on how or how long they use it. But to get the entire book, one must have Bluefire or another app that has Adobe Digital Editions; this is what enforces the two-week limit. Allowing downloads to devices equipped with Adobe Digital Editions is becoming the norm, at least for aggregators like EBSCO, EBL, and ebrary. E-books purchased directly from certain publishers, such as Springer or Cambridge, allow the downloading of chapter PDFs with no DRM; users can open these with any PDF-reading app and keep them forever.

One way or another, e-book content from all sources is becoming optimized for reading on mobile devices. As more and more users acquire mobile devices, libraries with solid e-book collections will see use statistics accumulate in part from people standing in lines, riding on buses, sitting in parks, and so on. Libraries with few or no e-books will not be available to their users in this way. With mobile devices becoming ubiquitous, and now that our vendors accommodate them, why wouldn't we want our content available through those devices?

MARKETING

Libraries with a mobile presence will want to advertise these valued products and services. There are many simple, low-cost ways in which to get the word out. The library mobile website or app can be easily promoted on the main library website with a banner, button, or text link to a web page containing a URL to the mobile site, as well as a QR code. Information can be included about what the mobile site offers. Libraries can also promote their mobile presence via posters and signage inside the library. On college campuses, postcards promoting the mobile library site—with a QR code to scan—can be placed in student lounges, dorms, and computer labs,

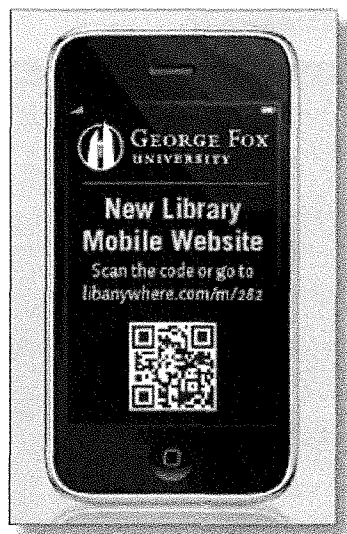


Figure 1.6

Use of QR code to promote the George Fox University Library's mobile website.

as well as in the library. Public libraries can place postcards or posters in community centers and other public areas such as bus stations. Contra Costa County Library, for example, put up eye-catching billboards with a word cloud and large QR code at various Bay Area Rapid Transit (BART) stations.

Services such as SMS reference can be promoted via a QR code and accompanying explanation, as the Calvin T. Ryan Library at the University of Nebraska has done.

ASSESSMENT

In a time of shrinking or stagnant budgets, assessment is very important. For mobile library websites, even those developed in-house, hit counts and other basic statistics should be easy to come by. Expect low numbers at this relatively early stage, but do not necessarily be deterred by them. The *Library Journal* Mobile Libraries Survey 2010 found that mobile offerings accounted for only 5 percent of use (Thomas 2010). Our own mobile site serves between 1 and 2 percent of the number of pages our website serves in any given month. The number of users is between 3 and 4 percent of those using our standard site. (There are fewer pages per user for the mobile site because our standard site is so much more robust.) Yet the number of mobile users has increased 325 percent for us from a year ago, and the number of hits has climbed 67 percent year over year. We expect this trend to continue as more of our students acquire handheld devices and as our mobile services mature.

Statistics can also reveal how mobile users are using your services. Our EBSCO statistics, for example, show that the EBSCO Mobile interface produces far fewer full-text downloads per session than their main interface does. This implies that users are e-mailing results rather than opening them on their device. They have also been avoiding downloading PDFs; they have downloaded HTML full text more than PDF, instead of half as often, as is the case for the main interface. Their obvious dissatisfaction with reading PDFs on a mobile device may affect how we instruct mobile users as well as what apps we recommend. Our mobile site statistics also tell us which devices people are using, information that can also be used to tailor services.

QR-code use can also be tracked, depending on which service you use. It is possible, too, to simply make a batch of QR codes and find out later that you have no means of tracking them, so be sure to factor this in when deciding what kind of QR-code generator or URL-shortener to use. There is more than one way to go about it, but statistics would be worth having. It is important to identify implementations that are not working, as well as to provide evidence of successes.

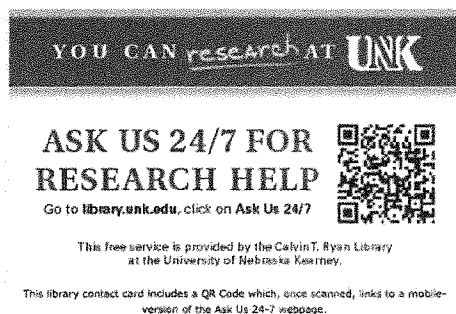


Figure 1.7

Use of QR code to promote the SMS reference service at the University of Nebraska—Kearney.

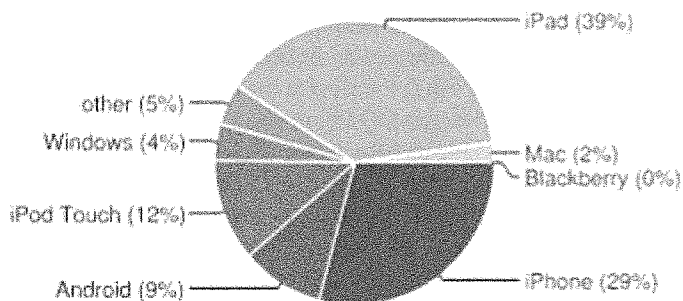


Figure 1.8

Mobile site usage by device type at George Fox University.

A FUTURE OF SMARTER SMARTPHONES

New mobile technologies are being developed and evolving at a dizzying pace. The exponential growth of smartphones is well documented (International Data Corporation 2011), and the mobile revolution is in full swing. Planning how best to move forward with ways to serve our mobile library users can be a challenge even when we are certain of the benefits a known technology can provide.

For planning purposes, and for those libraries with budgets that allow for experimentation, keeping abreast of some of the technologies in development is helpful. Should you implement QR codes in your library if newer, better technologies are just around the corner? Predicting what will be the next great thing that will benefit your mobile library users is tricky business. What we know for certain is that the development and evolution of technology will continue. Smartphones and other mobile devices will get smarter. Below are brief descriptions of technologies worth following.

Augmented reality (AR) enhances one's view of the physical world by overlaying digital information. This magical technology, developed over the past few decades, is rapidly evolving in the mobile space. Better known for fun and games at this stage, a real effort is being put forth to develop it in the more practical and educational space. In the future we may be able to hold up our mobile devices to augment library displays with 3D interactive images, or perhaps have a 3D movie trailer come alive on top of a DVD or book, or enjoy something as practical as a demonstration on how to fix the printer in front of us.

Nate Hill of San Jose Public Library created "Scan Jose," an AR project supported in part by funding from the Institute of Museum and Library Services. While walking around San Jose, people can go to the Scan Jose mobile website for directions to the next point of interest; when they arrive, they will be shown historical pictures pertaining to that location. For the full AR experience, people can use the Layar browser; if they hold their mobile device up in front of them, Layar will use the device's camera to show them what's really in front of them, while overlaying the historical photo appropriate to that point of interest.

Another technology that will soon be part of our mobile users' repertoire is near-field communication (NFC). NFC-enabled mobile devices allow users to interact with posters or anything with a "tag" (an unpowered NFC chip) by simply touching their device to it or waving it nearby. This is the technology behind Google Wallet ("tap to pay" is now available at check-out at stores in test cities), Google Places, and several other applications in development. Many believe that NFC will replace QR codes. Before long, perhaps our mobile library users will see posters with NFC tags, and instead of opening a QR scanner, they will simply wave their device near the sticker to be taken to additional content.

Push technologies may also prove useful to libraries. Urban Airship, a small start-up in Portland, Oregon, specializes in "push notifications," a technology that enables apps to give mobile device owners pop-up notifications about breaking news, social network activity, or discounts. Their recent acquisition of a San Francisco startup, SimpleGeo, will allow location-specific technology to be added to the notifications. This addition could make push notifications far more interesting and useful. Rather than just buzzing when new messages arrive, your device could present a coupon to you because you walked by a store. Walking into your library might trigger a notification of recommended books that are currently available or a reminder while you are there that you

have books on the hold shelf. If given the ability to customize their personal notification settings, mobile users might find this very convenient.

Apple's Siri and Google's continuous development of translation and voice-recognition software promise other interesting developments in mobile behavior in the slightly more distant future. As more of our users become mobile users, and as mobile devices become more sophisticated, we can look forward to new ways to provide service.

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