Adapting to the Needs of Mobile Users
Compiled by Chris Bober

Reports on Emerging Technologies – Use of Mobile Devices

Smith, S.D., & Caruso J. B. *The ECAR Study of Undergraduate Students and Information Technology, 2010* (Research Study, Vol. 6). Retrieved from http://www.educause.edu/Resources/ECARStudyofUndergraduateStuden/217333

 The 2010 study is the seventh annual survey of technologies being used by students in higher education. For the last two years, the report has included a special focus on student's use of web-based applications and resources. It was reported that 62.7 percent of respondents owned an Internet-capable handheld device (smartphone) and around 43 percent of them use it daily to access the Internet. Although student expectations for using their mobile devices for educational purposes may be growing, the reality is that most universities have not developed the necessary infrastructure and ―this may be reason for concern if student adoption far outpaces institutional support capability."

Johnson, L., Levine, A., Smith, R., & Stone, S. (2010). *The 2010 Horizon Report*. Retrieved from http://www.nmc.org/publications/2010-horizon-report

The Horizon Report, published annually since 2004, is the result of collaboration between the New Media Consortium and EDUCAUSE Learning Initiative. The report is generated from the ongoing research conducted by the Horizon Project which forecasts emerging technologies that will ―likely have a large impact on teaching, learning, or creative inquiry on college and university campuses within the next five years." The Horizon Project has been tracking the emergence of mobile computing for the past four years and it is now identified as one of the key technological trends to watch for. The authors believe that mainstream adoption in education is imminent as greater numbers of ―faculty and instructional technology staff are experimenting with the possibilities for collaboration and communication offered by mobile computing."

Libraries and Mobile Learning

Aldrich, A. (2010). Universities and libraries move to the mobile web. *Educause Quarterly*, 33(2), Retrieved from http://www.educause.edu/EDUCAUSE+Quarterly/EDUCAUSEQuarterlyMagazineVolum/UniversitiesandLibrariesMoveto/206531

This study explored the progress of mobile web site development across large research universities in the United States and Canada, examining the websites of 111 Association of Research Libraries member universities and libraries. While the study results indicate that universities and their libraries have adapted to the technical aspects of providing mobile websites, it was found that ―dfw functions on university mobile websites clearly addressed educational needs, highlighting an opportunity to provide more educational links and applications."

Ashford, R. (2010, November). QR codes and academic libraries: Reaching mobile users. *College & Research Libraries News*, 71(10), 526-530. Retrieved from http://crln.acrl.org/content/71/10/526.full

Ashford presents an overview of QR (quick response) codes, a type of barcode that is readable by smartphones and mobile phones with cameras. Used effectively, QR codes can provide value added virtual information to existing services at point of need. Although QR codes are now primarily used by corporations, libraries are beginning to realize their potential and are incorporating them into their mobile friendly services. He provides practical uses of QR codes in libraries, including mobile library catalogs and online databases. This presents challenges including ―the need to educate our university communities about QR codes and their uses, how to make them work on different devices, etc."

Griggs, K., Bridges, L.M., Rempel, H.G. (2009, November 23), Library/mobile: tips on designing and developing mobile web sites. *Code4Lib Journal*, *8*. Retrieved from http://journal.code4lib.org/articles/2055

In response to the ever increasing levels of user dependence on mobile devices, Oregon State Libraries' developed a mobile accessible Web site. Six main design guidelines are offered: ―consider the mobile context, adapt the content per mobile device, design based on tried and true patterns, test on a subset of phones, validate conformance and evaluate with your patrons."

Lippincott, J.K. (2010, January March). Mobile reference: What are the questions? (Preprint). *The Reference Librarian*, *51*(1), 1-11. Retrieved from http://www.cni.org/staff/joanpubs/mobile.RefLibn.final.pdf

Lippincott provides practical advice for academic libraries that are planning to deliver reference services to users of mobile devices. Often overlooked in the literature on providing mobile services is ―the identification of overall goals, mobile-compatible content availability, and institutional environment issues." Providing a means of measuring the success of the services is also essential.

Seeholzer, J. (2010) Library on the go: A focus group study of the mobile web and the academic library. *College & Research Libraries*. Advance online publication. Retrieved from http://crl.acrl.org/content/early/2010/04/29/crl-65r1.full.pdf+html
This article details part of the planning process for developing a mobile Web site at Kent State University Libraries. The primary objective was to gauge student needs and expectations for mobile services by using focus groups. It was assumed that providing basic library information on the mobile web site would be sufficient. However, the study found that students were more interested in using their mobile devices for doing research on the Library catalog and on databases. Students also placed a great emphasis on incorporating communication technologies like instant messaging reference services to ask reference questions on the Mobile web site.

Thomas, L.C. (2010, October 15). Gone mobile: (Mobile Libraries Survey 2010). *Library Journal.com*, *135* (17), Retrieved from http://www.libraryjournal.com/lj/ljinprintcurrentissue/886987-403/gone_mobile_mobile_libraries_survey.html.csp

Thomas reports on an email survey of public and academic libraries that was used to gauge the state of mobile library services in 2010. A majority of Libraries were responding or, at the very least, were planning to respond to the evolving expectations of mobile users. Mobile services currently offered fall into three categories: mobile websites, mobile catalogs, and SMS reference (text messaging). Among the more interesting survey findings was that existing mobile services were not being heavily used by their intended

audience. Libraries also reported that there many roadblocks that stood in the way of expanding their mobile services, especially those pertaining to ebooks: ―libraries struggle to make them available via handheld devices owing to the limitations of digital rights management, restrictive (or nonexistent) lending rules, exclusive platforms, and noncompatible file types—all of which impede efforts to provide effective access to electronic collections."

Vollmer, T. (2010). *There's an app for that! Libraries and mobile technology: an introduction to public policy considerations*. Policy Brief No.3. Retrieved from the American Library Association website: http://www.ala.org/ala/aboutala/offices/oitp/publications/policybriefs/mobiledevices.pdf

This policy brief was issued by the American Library Association's Office for Information Technology Policy. Libraries are expanding their outreach by providing services for mobile users, but there are concerns as ―the proliferation of mobile devices and services raises issues of access to information in the digital age, including content ownership and licensing, digital rights management, and accessibility." There are also concerns about reader privacy in the way that patron usage information can be accessed and used.

Mobile Libraries - Conferences
Handheld Librarian IV. *Archives*. (2010). Retrieved from http://www.handheldlibrarian.org/archives

The Handheld Librarian III Online Conference was held from July 28 to July 29, 2010. This site provides links to the conference presentations on innovative uses of technology, best practices for designing and developing mobile library services, as well as the evolving role of libraries as they adapt to these services.

m-libraries Conference. (2010). Retrieved from http://www.usq.edu.au/m-libraries

The m-libraries Conference ―brings together researchers, educators, technical developers, managers and library professionals to exchange experience and expertise and to try to generate ideas for future developments." The Third International m-libraries Conference will be held in Brisbane, Australia, from March 11-13, 2011. Conference presentations from the 2009 and 2007 conferences are provided from this site.

Web Sites, Blogs and Wikis on Mobile Technologies
Fox, M.K. (n.d.). *Mobile technologies in libraries: How the academic library is using pda's, handhelds and other mobile technologies*. Retrieved from http://web.simmons.edu/~fox/pda/#4

This Web site provides links to all things related to mobile developments in libraries: presentations and reports, hardware and software applications, and current awareness sites.

I Education Apps Review. (n.d.). Retrieved from http://www.iear.org/

I Education Apps Review is an online community of volunteer reviewers who investigate the educational value of mobile apps, specifically those developed for the iPhone, iPod Touch, and iPad. Reviewers evaluate the usefulness of these apps for classroom settings at all educational levels.

M-Libraries. (2010). Retrieved from http://www.libsuccess.org/index.php?title=M-Libraries

M-Libraries is part of the Library Success: A Best Practices Wiki. It includes links to libraries that have interfaces or applications for mobile users, vendors of mobile interfaces and applications, and suggested readings on mobile services in libraries.

Spectrum > Mobile learning, Libraries, and Technologies. (n.d.). Retrieved from http://www.mobile-libraries.blogspot.com/

Spectrum is a blog started by Gerry McKiernan of Iowa State University Library in April 2009. Its stated mission is "Documenting Any and All Topics Relating To *Mobile Learning*". Spectrum is useful for current awareness as the posts consist of new product introductions as well as abstracts or summaries of published articles and conference presentations with links to the full text.

Compiler's note: Text that is enclosed within quotations marks has been taken directly from the source document.

Chris Bober is the Education Librarian at Concordia University Libraries.
Email: boberc@alcor.concordia.ca