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Optimizing Library Services- Academic Libraries' Mobile Initiatives

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Optimizing Library Services — Academic Libraries' Mobile Initiatives

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Academic libraries are developing mobile initiatives to support the popularity of these devices on campus (Kim, 2013). Paralleling librarians' interest in creating mobile services are activities at the international and national level to foster these efforts. *Academic Libraries Mobile Initiatives and Research from 2010 to the Present: Identifying Themes in the Literature* showcases these initiatives. The research especially supports academic librarians in the development of mobile initiatives by illustrating trends in the creation of these services and highlighting best practices in their implementation.

Statistics support librarians' adoption of mobile services and resources for users. *Business Insider* noted one in every 17 individuals worldwide owned a tablet and research suggested their adoption rate was exceeding smartphones (Heggestuen, 2013). Mobile devices or web enabled smartphones remain particularly popular among college students and technology is increasing in importance in higher education, especially in libraries. Mohamed (2014) suggested users' expectations on mobile access include the availability of library services through these devices.

Foremost, smartphones and other mobile devices provide librarians new avenues to deliver services for users such as reference, instruction, and resources (Little, 2011). **Lippincott** (2010) believed mobile devices offer new instructional opportunities for librarians that include teaching users how to access and organize information and create mashups utilizing various sources. Still, the mobile revolution requires librarians to evaluate library services and develop new ones to support mobile patrons (Bell & Peters, 2013).

It remains important that librarians understand the myriad of issues surrounding libraries' adoption of mobile services and resources. For example, **Cyrus** and **Baggett** (2012) and Cushon (2013) note privacy concerns with the use of mobile services in libraries. In addition, **Smith**, **Jacobs**, **Murphy**, and **Armstrong** (2010) remind us to assess user needs, staff skills, costs, as well as the tool's interoperability and longevity in adopting new technology in the library. A major consideration for libraries creating mobile websites includes decisions on optimizing content or developing a native application.

It is essential that web enabled mobile devices are mobile friendly, especially for access to library resources such as catalogs and databases. **Kim** (2013) notes the difficulty in navigating a non-optimized website on a smartphone. Web usability from mobile devices can be improved by mobilizing a website or utilizing a dedicated (native) application. **Caniano** and **Catalano**, (2014) describe an app or application as "a small software application designed for a specific function" (299). Native apps promote usability on mobile devices through their display of information in a menu format (Aldrich, 2010).

Optimizing content on mobilized websites supports navigation and usability by eliminating issues with small screen size and keyboards (Aldrich, 2010). Both optimizing content and developing a native application offers advantages and disadvantages. **Kim** (2013) suggests mobile optimized websites are less costly and quicker to create, but they do not have as many diverse features as native applications. Still, native applications are platform specific and require separate apps for different devices such as an iPhone and an Android operating system (Bridges, Rempel & Griggs, 2010; DeMars, 2012).

To identify articles describing academic libraries' mobile initiatives we searched library literature with various combinations of the following keywords: mobile, tablet, iPad, device, technology, application, phone, library, academic, university, college, and higher education. We truncated terms and limited the results to material published after 2009, to reflect the incorporation of emerging information technologies into libraries' mobile initiatives. We focused on materials that discussed libraries' mobile initiatives utilizing tablets or smartphones, and we also included papers that described mobile initiative research in the review.

We reviewed 114 papers and identified six themes including: mobile initiative research reports, efforts to mobilize services and resources, librarians' use of tablets, Quick Response (QR) codes in libraries, the availability of short message services, and mobile application development for libraries. We considered the primary focus on the material in our assignment of a theme for each paper.

The largest number of papers included research librarians conducted to direct their development of mobile services and resources. The majority of this material tracked librarians' efforts to reveal students' mobile habits utilizing surveys, focus groups, and observations. The remaining papers illustrated librarians' efforts to identify mobile services provided by other academic libraries and potential projects for their institutions.

The second largest body in the literature highlighted librarians' efforts to mobilize their resources and services. Within these papers, we identified the following topics including: the overall process of mobilizing the library's website, mobilizing specific content for the website, mobilizing library services, reducing the cost of mobile services and resources, and promoting libraries' mobile services.

We also found a sizable number of papers that discussed the use of tablets in libraries for delivering services and resources. These papers focused on the delivery of reference services with tablets, the provision of instruction with tablets, the availability of tablets for circulation, and librarians' use of tablets for non-reference duties.
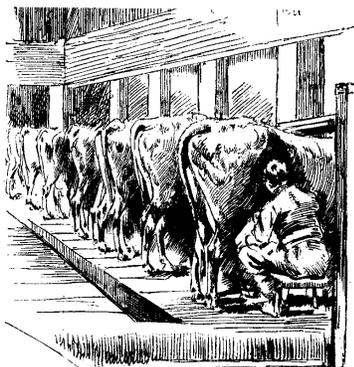
The use of QR codes to support mobile resources and services in libraries was also discussed. We found QR codes utilized for enhancing students' awareness of library resources, fostering patrons' access to the print collection and eBooks, and information literacy instruction.

A smaller segment of the material centered on libraries' adoption of short message services (SMS). These papers discussed the use of SMS for reference, the My Info Quest national text reference collaborative project, and a pilot SMS initiative for article alerts.

The smallest number of material in the literature included three papers that examined libraries' use of mobile applications. This material, unlike material discussed in another part of the review, did not focus on the use of mobile applications to support students' mobile access to the catalog and website. All three of the apps utilized by libraries were designed to support students' library use.

Foremost, the literature review highlights the importance of librarians' efforts to sup-

port students' access to library resources and services. It also reveals research projects including quantitative and qualitative studies that informed librarians' development of mobile services for students. In addition, the research illustrates the advantages of utilizing the mobile services provided by other libraries to guide the creation of similar projects at other institutions. For example, librarians at the **University of Illinois** conducted research to identify strategies for supporting students' iPad usage. In another study at this institution, librarians developed applications to enhance students' abilities to locate print materials on the shelf as well as scholarly research for an assignment.

Papers that discussed mobilizing libraries' services and resources underscore the need to incorporate responsive web design, conduct an environmental scan, partner with other entities in developing mobile services, employ commercial products in their creation, and promote the services to students. This literature also demonstrated the importance of providing students mobile access to the OPAC and databases as well as other library information. Still, the research pointed to the advantages of monitoring individuals' usage of mobile devices as well as the library's mobile services and resources to ensure the library remains relevant to their users.

The literature revealed opportunities for employing tablets to support a variety of library services. Still, librarians should consider utilizing other tools in conjunction with tablets for delivering mobile reference including LibGuides and statistical software for assessment. In addition, mobile reference projects benefit from including staff in their development and especially providing staff training, technical support, and promoting the program to students to foster successful outcomes.

Quick Response codes are important in enhancing students' awareness of library resources as well as supporting their access to material. A QR code LibGuide can further support students' use of these tools. In addition, the literature pointed to the popularity of introducing students to QR codes through library treasure hunts.

Material discussing SMS supports its use for reference delivery at the institutional as well as national level. However, the literature noted the need for training to improve the outcome of these initiatives. Although there was limited research on the use of SMS for other library services, collaborations with database vendors may increase opportunities with this technology.

Papers that tracked librarians' creation of mobile applications demonstrate their value for improving students' access to library services and resources. In addition, these papers highlight the value of sharing the source code for the applications as well as publicizing their development at conferences and in journals.

Modern technologies offer librarians a wealth of opportunities for supporting users' access to library resources and services. In the millennium, it is especially critical that librarians consider the use of mobile devices in their adoption of technologies for the provision of library services and resources.

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paper, while others boxes the same size could have 20 books or more. They could not provide an explanation for why they did it that way, but we retained the boxes, so that we could recycle them for our summer weeding projects.

We are currently awaiting the final approval of the insurance adjuster. When the approval is provided, the university will transfer the money into our book object code. I believe I was "prepared for a purpose" when I attended the Disaster Preparedness workshop. I even contacted **Dr. Jessie Carney Smith**, the Library Dean at **Fisk** and **Annie Peterson**, our **Lyrasis** trainer, to share that I had been able to convert my just in time knowledge into actual experience. The event absolutely reinforced for me the thought that librarianship is a forever growing and evolving profession where you may need any skill set you can acquire. ☙

to hear their advice. On the other hand I know **Rick Burke** and his secret to managing a well-oiled machine often is much more than asking nicely.

I missed the closing keynote speaker, **Monica Bulger** but knowing **Bonnie** and her criteria for speakers I would expect nothing but the best. The **12th Annual Conference** is over and the attendees got to choose from many excellent programs and yes there were plenty of programs on Open Access, managing e-resources, emerging technologies and library publishing. There was something for everyone.

Next year we all return to Austin for the **13th Annual Conference** on March 4-7, 2018. I feel honored to have attended all but one of the **ER&L** meetings and I can say that they just keep getting better and better. A well organized, carefully planned and highly successful meeting produced by **Bonnie** and **Sandy Tijerina** and the many people who work so hard to make the meetings great each year. ☙