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# iPad Innovations in Public Services: A Survey of the Use of Mobile Devices in ASERL Reference Departments

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# iPad Innovations in Public Services:
## A Survey of the Use of Mobile Devices in ASERL Reference Departments

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## Introduction

The availability of iPads and other mobile devices has provided new opportunities for communication, creativity, gaming, shopping, customer service, and more. With mobile devices surging in popularity among patrons, library innovators have started experimenting with these technologies in their services. Given the recent debut of these devices, the professional literature offers only a few studies about academic libraries that have harnessed mobile devices for reference, instruction, and outreach. In helping to expand this research, this paper presents the results of a survey of Association of Southeastern Research Libraries (ASERL) reference departments about their use of mobile devices.

At the University of Alabama's Gorgas Library, the Information Services department started discussing the potential of using iPads in Spring 2011. By the beginning of the Fall 2011 semester, each of the reference librarians had an iPad 2, and the graduate student assistants at the Information Services desk began roving with an iPad on the first floor of the library once an hour. The authors also presented a poster on potential uses of the iPad for reference librarians at the 2011 Alabama Library Association Convention and at the 2011 Mississippi State University Libraries Emerging Technologies Summit. In these poster sessions, many librarians from around the region shared if and how their libraries employed iPads or similar devices. These discussions, along with the iPad experiences at Gorgas Library, sparked the desire to survey Southeastern reference librarians about their efforts to develop mobile services.

## Literature Review

For the past several years, some circulation departments have offered Kindles or similar devices for patrons to check out, and the library literature reflects many of these experiences. One such case study is Clark's "Lending Kindle E-book Readers: First Results from the Texas A&M University Project" from 2009. However, this survey of ASERL libraries focuses instead on the use of tablet computers or smart phones to provide reference, virtual reference, research consultations, instruction, and outreach services.

Since 2006, the Handheld Librarian Conference (www.handheldlibrarian.org) has produced a number of useful presentations on mobile applications. Most of these presentations have offered case studies of library programs related to e-readers, text message reference services, mobile websites, QR codes, Twitter, and similar topics. Apple did not release the iPad until April 3, 2010 so only the most recent years have included discussions on tablet devices (Apple 2010). An example of one of the sessions about iPads is Willie Miller's 2012 session "iTeach: iPads in Library Instruction."

A few authors have reported on their experiences using iPads for reference. In one *C&RL News* article, Lotts and Graves (2011) described their use of iPads for roving reference in the Morris Library at Southern-Illinois University—Carbondale. McCabe and MacDonald (2011) illustrated how iPads could help reinvigorate reference services by empowering librarians to provide more point of need service.

While a few other case studies or "how we did it" articles about mobile devices in specific library services have been published, only a few authors have published surveys about how librarians as a group utilize these technologies. In 2008, Spires conducted a survey on mobile device usage among academic librarians. At that time, mobile devices consisted primarily of smart phones and personal digital assistants. Spires found that many librarians use the devices for personal productivity, librarians did not always know how their colleagues used mobile devices, and few libraries had prepared web content for mobile devices. Some librarians thought their libraries should forge ahead with mobile services, while others wanted to wait and see if the devices' popularity and capabilities increased.

In the article "Gone Mobile? (Mobile Libraries Survey 2010)," Thomas (2010) presented the results of a survey by *Library Journal* to determine how many public and academic libraries make use of mobile devices. From 483 respondents, the survey found that 44% of academic libraries and 34% of public libraries offered some type of mobile services to their customers. Around 40% of libraries of all types reported plans to begin use of mobile services in the near future. Other studies, including "The use of handheld mobile devices: their impact and implications for library services" by Cummings, Merrill, and Borrelli (2010), sought to measure patron use of mobile devices to determine if there is enough demand for libraries to offer mobile services.

This new survey is warranted because several years have passed since these studies, and the advent of the iPad has revolutionized mobile device usage. Tablet devices as well as smart phones have dramatically increased in popularity

and capabilities over the past two years. A survey specifically addressing the use of mobile devices in reference and related purposes is needed, rather than another general survey that includes e-reading circulation services. In addition, this survey differs from prior studies by focusing on the Southeast.

**Methodology**

After receiving Institutional Review Board approval, the authors created a questionnaire using SurveyMonkey. The survey was emailed utilizing a customized survey link to the heads of the reference departments at each ASERL member library in the summer of 2011. ASERL is a reasonably-sized, ready-made sample group. It is the "largest regional research library consortium in the United States", according to the ASERL website (2012). At the time of the survey, there were thirty-eight ASERL member libraries. The authors' institution, the University of Alabama, was not included in the survey.

Some reference departments use the words information, research, or instruction instead of the word reference in their department name. This necessitated the authors to define what constitutes a reference department to identify which department heads to contact. The authors defined reference departments as those departments that provide direct research assistance to library patrons through walk-in assistance, research consultations, virtual services, group instruction, and outreach programs. It was noted that many campuses have more than one library and therefore more than one reference department, but the survey targeted one response from each campus. Therefore, the authors contacted the reference department head in the library that serves as the central library for each university.

**Results**

Eighteen libraries responded to the survey out of the thirty-seven queried. The survey results represent 47.4% of the thirty-eight ASERL member libraries at the time of the survey. While this sample size is not large enough to offer definitive conclusions about all libraries' use of mobile devices or even all Southeastern libraries, it does provide a snapshot of the efforts taking place.

The authors found that half of the responding libraries use mobile devices in reference and related services. Specifically, the survey began with the question, "Do your public service librarians use tablet computers and/or smart phones (such as iPhones, iPads, iPod touches, Samsung Galaxy Tabs, or similar devices) in their reference, virtual reference, research consultation, instruction or outreach services? (Please note that we are excluding circulation services and e-readers, such as Kindles.)" Half (9) of the respondents replied with "yes," 27.8% (5) responded with "no," and 22.2% (4) responded that they intend to start using devices (Figure 1). For those that responded with "no," the authors directed them to skip all of the questions until the last open ended question. No respondents reported that they had created mobile programs but later cancelled the programs.

**Figure 1. Do your public service librarians use tablet computers and/or smart phones in their reference, virtual reference, research consultation, instruction, or outreach services?**
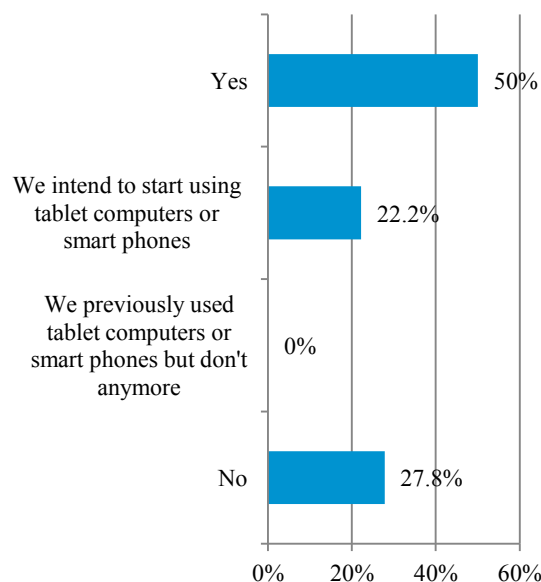


Another question probed length of use. The highest response was 38.5% (5) for less than 1 year, followed by 30.8% (4) for 1-2 years. The newness of the technology is one factor as to why only half of the respondents have programs in place with few having programs for more than a year.
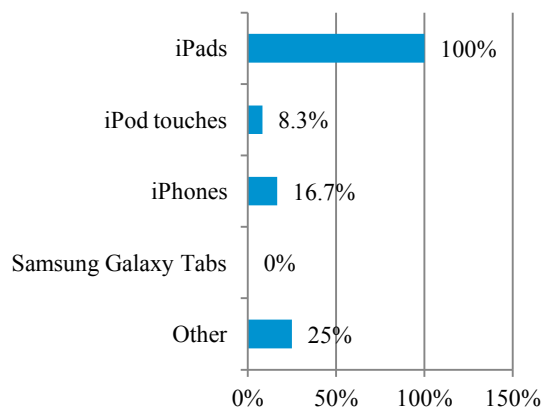
**Devices Used**

Apple's iPad is the most popular mobile device among the libraries surveyed. For the question, "Which tablet computers and/or smart phones do your public service librarians use or plan to use (check all that apply)?", 100% (12) responded with iPads, 16.7% (2) responded with iPhones, 8.3% (1) responded with iPod touches, and three responded with other devices (Figure 2). The responses for "other" included one response each for iPad 2, personal smart phones, and Motorola Xoom. Some libraries have purchased more than one kind of device. In the open responses, one librarian stated, "We just got an iPad and a Xoom and are not really sure how we will use them but are exploring at this point."

It is possible that most libraries chose to use Apple's iPad because there are not many other companies that have developed tablets with similar costs and ease-of-use. A *CNET* review (2011) on the Motorola Xoom notes that "it's expensive, heftier than the iPad 2, and novice users may balk at Android's read-the-manual attitude." A topic for further research could be to determine whether other tablets

become more popular in libraries as other companies develop and improve tablets.

**Figure 2. Which tablet computers and/or smart phones do your public service librarians use or plan to use (check all that apply)?**



**How Libraries are Using these Devices**

When asked, "For what purposes do your public service librarians use or plan to use the tablet computers and/or smart phones (check all that apply)?," the top responses were 83.3% (10) for "internal purposes, such as meeting minutes and communication," 75% (9) for "enhancing outreach programs", 50% (6) for "roving reference outside of the library's walls", and 41.7% (5) for "roving inside the library." Other responses included 25% (3) for bibliographic instruction and 16.7% (2) for virtual reference (Figure 3). ASERL libraries use the mobile devices for multiple purposes, since the twelve libraries that answered this question provided forty response counts.

The authors presumed that the most usage would occur in direct service to patrons. However, the use of iPads for internal purposes may benefit patrons indirectly by streamlining library operations. Additionally, acquainting reference providers with mobile features in behind-the-scenes venues will provide knowledge that librarians can later apply during patron interactions.

Many of the other responses show that the iPad's portability empowers librarians to offer services away from the reference desk. Half (20) of the responses to this question were related to outreach and roving inside and outside the library.

In this vein, one open response noted that librarians use the iPad for "office hours in [a] department of subject expertise." An iPad can be a useful tool for a librarian that provides reference services to departments outside the library. The same respondent also used iPads "to survey faculty at a faculty orientation session and a survey with parents and new students during first-year orientation."

Another reference department head reported using iPads for transactional statistics. Using the iPad to record statistics can be more efficient than older methods. In particular, tablets allow today's reference librarians, who increasingly interact with patrons in areas away from service desks, to record statistics from any location in an electronic format.

**Figure 3. For what purposes do your public service librarians use or plan to use the tablet computers and/or smart phones (check all that apply)?**
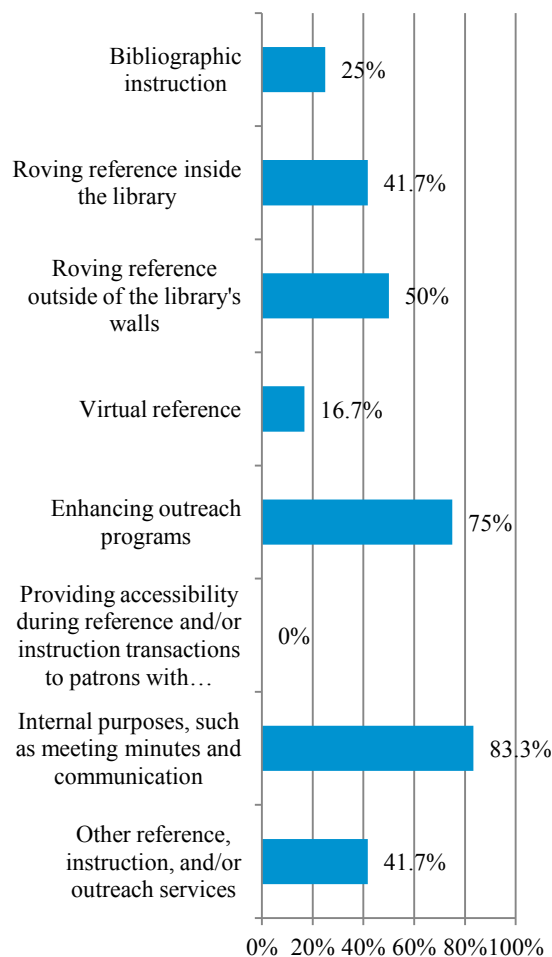


No library marked one of the options: "Providing accessibility during reference and/or instruction transactions to persons with disabilities." The authors included this option after learning about a conference presentation: "Emerging Technology as Assistive Technology: The iPad, Accessibility, and Libraries," at the Mississippi State Emerging Technologies Summit by Melissa Fortson (2011). Although not used in responding ASERL libraries at this time, iPads have tremendous potential in this role.

Overall, these findings are encouraging. Several ASERL libraries have learned about mobile devices, persuaded

librarians to use them, decided to offer some type of mobile service, and even integrated the devices into specific services. ASERL libraries are using mobile devices for internal purposes, outreach, roving reference, instruction, statistics, and more.

**Leaders in iPad Innovation**

One of the questions that intrigued the authors most was, "Who would you say initiated tablet computer and/or smart phone programs at your library?" The largest number of respondents, 61.5% (8), said that public services librarians pioneered the use of handheld devices. The second largest number, 46.2% (6), pointed to library administrators, followed by the library's technology staff, 30.8% (4).

One might suspect that administrators could have mandated the use of mobile devices, but the survey found that public services librarians play the strongest leadership role. This finding speaks well of frontline innovation in the library profession.

One respondent commented that the full potential of iPads had not been realized because their library had only given iPads to a select number of the librarians. This finding suggests that equipping all public services librarians with iPads at the start of the program, or giving all librarians equal opportunities to borrow iPads, could help maximize successful implementation. This approach allows librarians with various work styles and roles to experiment with the devices.

**Homegrown Apps**

One question this survey sought to answer was whether libraries had developed their own apps. Creating an app is one method to provide easy access to library resources on mobile devices. Twelve libraries answered this question, with 41.7% (5) responding "yes" and 58.3% (7) responding "no."

One might hope that more libraries would have buttressed their mobile programs with custom built apps. However, the open comments reveal that libraries provide support for programs more often than the statistics might first suggest. For example, two respondents noted that although their libraries had not developed apps, their libraries had created a mobile site or optimized their existing site to work with tablet computers. Another respondent explained that their university had built an app that included a library section.

**Training Programs**

One pillar of success for any new library program is training. When asked how they train librarians, all twelve respondents indicated that they encourage librarians to "play" with mobile devices on their own. Respondents could mark more than answer, and 25% (3) said they had formal training sessions. Additionally, 16.7% (2) said that librarians and staff read manuals or instructional web pages. Furthermore, 66.7% (8) provided hands-on practice with mobile devices (Figure 4).

Librarians at one university noted that "training is primarily informal hands-on. We are encouraged to take an iPad for several weeks to give it a test drive and use it in whatever ways strike us." Such a free flowing approach might be one of the best ways of fostering frontline innovation and ensuring a positive reception from public services librarians. Also of note, one library explained that the university's technology center had conducted the training for library staff, a cost-effective and collaborative approach.

**Figure 4. How are public service librarians and staff trained in the use of tablet computers and/or smart phones (check all that apply)?**
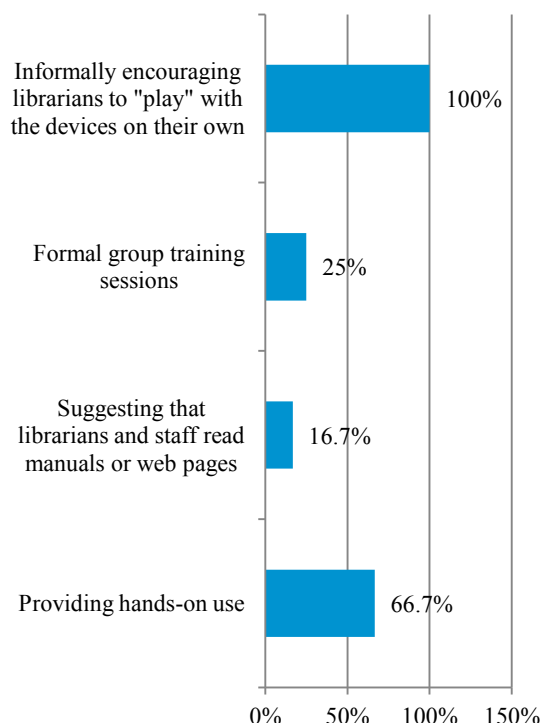


One respondent commented that the librarians already knew how to use library-purchased devices because they had mastered their personal mobile devices. Formal training in functionality might not be necessary for everyone. Perhaps libraries should follow the example of a respondent who said that a task force at their library held an open meeting to exchange ideas about iPads and apps. Even librarians skilled in using an iPad could benefit from such informal sessions in which they share ideas with each other about uses, apps, and patron feedback. One of the authors used this approach at the University of Alabama by leading a training session for the other librarians and graduate assistants based on personal knowledge. During this session, others who owned personal devices offered their suggestions.

**Technical Support**

Maintaining working equipment is also important to the success of any new technology-based program. When asked how technical support is provided, the highest number of respondents, 66.7% (8), said that public services librarians provide their own technical support. Respondents could check more than one answer, and half (6) of the respondents said library technology staff also helped, while 8.3% (1) relied on university technology staff and 16.7% (2) relied on vendor-supplied help. One respondent added that the public services student staff provided the technical support.

The fact that many public services librarians and student workers troubleshoot mobile devices is noteworthy. Many public services departments traditionally rely heavily upon information technology departments for troubleshooting. It could be that mobile devices are so new that they have not yet developed many technical problems. Perhaps mobile devices are easier to use and troubleshoot than previous technologies. While the exact reason is unclear from this survey, the fact that many reference librarians can provide some level of troubleshooting for their devices speaks well of their capacity to master new technologies.

**Assessment**

As one of its core purposes, the survey sought to measure the success of ASERL's mobile programs. Seven respondents (over half of those who had implemented mobile programs) rated their programs as "successful" or "very successful." Only one respondent rated their programs as "unsuccessful." Two respondents were "neutral", and two respondents were "undecided" (Figure 5).

**Figure 5. Overall, how successful would you rate your library's tablet computer and/or smart phone programs?**
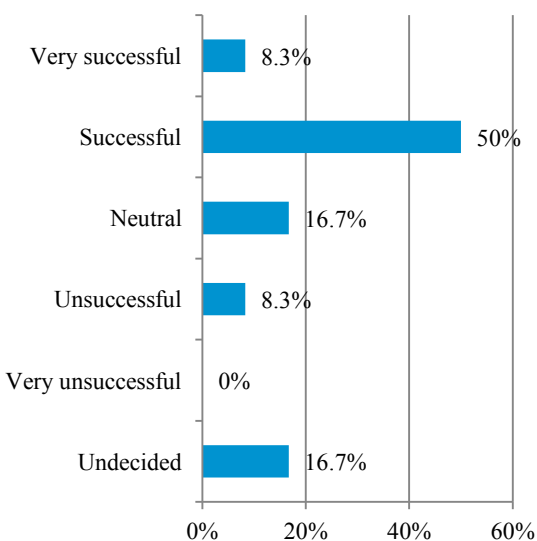


The survey asked libraries how success was measured, and respondents were allowed to check more than one response. Of the responses, 63.3% (7) used anecdotes or informal assessment, while 27.3% (3) tracked usage statistics, and 36.4% (4) relied upon observation. One library had discussions among public services heads about how they pilot iPads in each of their campus libraries. No libraries used surveys or focus groups. The responses demonstrate that many libraries are using informal methods of assessment. An area for further research could be to implement more formal methods of assessment to further research the success rate for these services.

**Why Some Libraries Don't Use Mobile Devices**

Thirteen libraries responded to the final section: "In one paragraph or less, please feel free to share anything else that is notable about your public services librarians' use of tablet computers and/or smart phones, including specific successes or problems." For those eight respondents who answered "no" to the initial question, this question allowed them to share why their libraries do not use mobile devices in their public services departments.

One respondent who answered "no" gave a simple but incontrovertible reason: "funding." Other respondents listed related issues such as, "It would be a budgetary (bureaucratic) nightmare to get smart phones with contracts for librarians to use, so we've never even tried. We had enough trouble getting an iPad checkout program started, because university accounting did not want to set up iTunes accounts even though we weren't buying many apps." Another reference librarian discussed a similar headache with iTunes: "iPads require that the user connect to iTunes, which in turn requires a user-supplied credit card. University regulations do not allow department credit cards to be used for this purpose, so each iPad is linked to someone's personal credit card."

Technical considerations also thwart the successful use of devices, as one respondent lamented, "the iPads would have been used more, but wireless/internet access is spotty." Inconsistent wireless access can limit opportunities for mobile innovation.

Lack of time and staff power to implement mobile programs, the need for more inspiration, as well as the absence of programs with clear applications for mobile devices also came up in the responses. One librarian explained, "We have a laptop that we use from time to time in public services. Using a tablet or smart phone is something that we're not opposed to, it just hasn't come up. We have 1 new librarian and have an open position right now. I'm hoping that ideas about using new-ish technologies will come with new people." The librarian also added a reason that will ring true for many Southeastern libraries: "Right now, we're just trying to get the day-to-day stuff done."

One other librarian got to the heart of the matter: "We have not made use of tablet computers or smart phones because a

case has not been made in our library as to how the use of these devices could improve our public services." The respondent went on to say that the results of this survey would therefore be "very helpful in persuading our library administrators that an investment in this equipment could help us explore new and productive means of using such devices to improve reference services." The respondent's desire for more hard data and successful examples reinforces the need for surveys and the sharing of experiences among libraries.

**Successes in Using Mobile Devices**

While some responses to the final question dealt with problems, many responses highlighted successes that can spark ideas for other libraries. One librarian's comments suggest that simply making iPads available in some way to inventive librarians and staff will yield successful uses-- even if those uses were not foreseen at the outset of a program. Their library tried out iPads in several ways and with varying levels of success. Roving with an iPad from the desk is "taking time to catch on," but using a statistics app for headcounts is "very successful and more efficient than previous paper-based stats." Most interestingly, a student employee "developed an iPad app that mimics the staff-side intranet page that has information" used frequently at the desk.

The same library does "scavenger hunt activities with freshmen-class students using iPod touches that involve some bibliographic instruction and also orientation to the building and our services and facilities." Mobile devices offer unprecedented opportunities to engage students and foster interactivity. An instruction librarian could find an infinite number of ways to use mobile devices--if the library provided the funding for the hardware and the relevant apps.

Another library reported that using iPads for patron surveys had proven to be "very successful." Incentivizing library surveys by giving patrons a chance to try out a state-of-the-art mobile device could encourage participation. This success might be attributed to the mobility iPads provide in disseminating the survey.

Another library noted that it "will begin using Text a Librarian in the next month and public services librarian[s] can accept text reference inquiries on their own personal devices." With so many patrons using mobile devices to submit questions, it makes sense to allow librarians to answer in a similar manner. Mobile devices allow librarians to keep tabs on their virtual reference systems while also moving around their libraries and multi-tasking during slow times, perhaps compensating for the cost of the devices through improved efficiency.

One other successful use is that the use of mobile devices supports professional development. One respondent stated that "a few [librarians] use the iPads...to take to conferences since it is more convenient than laptops."

Mobile devices can be useful tools for conference attendees and presenters.

One respondent pointed out one of the greatest benefits of using iPads, noting that "many faculty are using them either personally or in the classroom and looking for assistance." The librarians like to have an iPad around in order "to test out questions that users ask – such as how to download a PDF on an iPad from one of our databases." Using iPads to enable librarians to share the same experiences as patrons may be one of the strongest reasons for having mobile devices available within libraries.

**Conclusion**

Half of the ASERL libraries that responded to the survey are using mobile devices in public services. The majority of libraries with mobile programs rate the programs as successful. One of the most encouraging findings is that front-line professionals have spearheaded the development of iPad-based services. Further, most reference librarians find it easy to maintain their iPads, perhaps because they have used similar devices in their personal lives.

The most creative iPad programs allow all librarians in a reference department to experiment with iPads. Successful programs have informal aspects to their training, and permit the free exchange of ideas that is so crucial to nourishing innovation. However, as many reference librarians forge ahead with mobile services, some colleagues at other ASERL libraries are running into obstacles. These obstacles include: the limitations imposed by wireless networks, shortages of staff time, complex accounting practices, and an inability to justify iPads to their administrations.

More formal assessments will fuel research, especially in determining whether patrons find it beneficial to receive services from librarians using mobile devices. Research consultation programs sometimes include a feedback survey, and librarians could query patrons in these surveys about a librarian's use of an iPad. In terms of instruction, librarians who use mobile technologies as teaching tools could add relevant questions to their student feedback surveys, or compare the outcomes from iPad-enhanced sessions to traditional sessions.

Librarians must share assessment data with each other, thereby making pilot projects more visible. Publishing more research about mobile devices, as well as presentations at SELA and state conferences, can help spread ideas about iPad implementation. Informal online communication, such as professional listservs, could also be used to create discussions about the successes and setbacks at individual libraries. Through the pooling of experiences, librarians can chart an informed course of action towards using iPads and other mobile devices. This collaboration will allow librarians to find ways to harness these devices in ways that truly benefit patrons.

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