Published in final edited form as:

J Hosp Librariansh. 2015 ; 15(2): 127–139. doi:10.1080/15323269.2015.1015088.

Mobile Tech and the Librarian: The iTest iPad Project

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Abstract

A 2012 project provided forty-eight health sciences librarians from primarily hospital and academic health sciences libraries with an Apple iPad2 along with training and support on its use. Project objectives were to determine how participants would adopt the iPad into their daily operations and what form of leadership role they would play while participating in the project. By project's end eighty-nine percent indicated they would continue using the iPad primarily as a productivity tool and to provide point of need services. Project data indicated that librarians assumed a leadership role promoting the use of mobile technology and the applications available.

Keywords

Hospital librarians; academic health sciences librarians; tablet computers; mobile computing; iPad; Apple iOS; National Network of Libraries of Medicine; leadership roles; technology adoption

INTRODUCTION

With the increased use of mobile technology in healthcare plus the dominance of the Apple iPad as the device of choice by healthcare workers (1), staff of the National Network of Libraries of Medicine, MidContinental Region (NN/LM MCR) formulated an opportunity for health sciences librarians to employ a new technology and demonstrate its use to their institutions. The project was named the *iTest iPad Project*.

The NN/LM MCR is a membership organization funded under contract with the National Library of Medicine (NLM) to support health information access in a six state region. NN/LM MCR staff had been monitoring the use of iPads in healthcare and noticed increased reports of physicians using iPads on rounds, looking up information on the Internet, using apps, taking notes, doing calculations, etc (2, 3). The National Library of Medicine was also following this trend by producing resources for the iPad. An example of this is the NLM's *Turning the Pages*, which was released as an app in 2011. This app allowed users to

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experience simulated ‘touching and turning’ the pages of a collection of beautiful historic books (4).

Since 2001, the NN/LM MCR has encouraged health sciences librarians to be technology leaders within their institutions. The peer reviewed literature described health sciences librarians supporting the use of iPads by their constituents through device circulation, providing content for the device, and teaching on its use. (5, 6) As far as articles reporting how health sciences librarians were using the iPad, the authors found only one. (7)

This article describes a 2012 iPad project where NN/LM MCR Network members were offered the Apple iPad2 as a way to encourage them to adopt a new technology, where the authors monitored how members used the iPad, and identified the impact it had on health sciences librarians.

PROJECT OBJECTIVES

The project objectives focused on demonstrating that health sciences librarians would adopt emerging technology when given access to it and how they can play a leadership role in implementing new technology. With this in mind, the primary objective was to increase the number of health sciences librarians incorporating the iPad into their daily operations within the project time frame, approximately 50 days.

There were also secondary objectives. The first was to obtain data on how health sciences librarians used the iPad and to identify the arenas where the iPad proved useful to project participants. The second was to learn about the perceived impact using an iPad would have on the image of the librarian or library. Would the project participants’ institutional colleagues notice that their librarian was using an iPad and if so, what impression would this make?

METHODOLOGY

In early January 2012, the University of Utah Institutional Review Board granted approval for the project and determined that the study was exempt from further IRB review, under 45 CFR 46.101(b), Category 2, from the Federal regulations governing human research. On January 17, 2012, Network members were alerted through the NN/LM MCR news blog and listserv that there was a call for applications for the *iTest iPad Project*. Applicants were required to first meet two qualifications: 1) They must be a professional librarian with an MLS, MLIS, or comparable masters level degree; and 2) They must work at a full NN/LM MCR member institution.

Participants were selected on February 10, 2012 with the iPads shipped shortly thereafter. Participants received online training on iPad use, were encouraged to engage and complete project requirements, and the project wrapped up with a project evaluation on April 30, 2012.

SurveyMonkey was used for project applications (Appendix A) and participants were selected based on: 1) Meeting the Network membership and degree qualifications; 2) A clear and reasonable statement on how they would use the iPad at their institutions; 3) A

supervisor's approval for participation; and 4) Access to their institution's wireless Internet. Successful applicants were required to agree to the following: 1) Meet project deadlines; 2) Use Facebook to regularly chronicle their experiences while participating in the project; and 3) Post a picture of themselves using their iPad to the project's Facebook page.

Fifty-six applications were submitted of which, forty-eight were selected. Twenty-five (52%) librarians were from hospital libraries, twenty (41%) from academic health sciences libraries, and three (6%) from association and corporate entities. Participants were distributed throughout each of the NN/LM, MCR states as illustrated in Figure 1.

At the end of the project, each of the forty-eight participants received a questionnaire (Appendix B) to determine whether the project objectives were met. Two participants did not respond to the questionnaire, a response rate of 95%.

iPad Support Resources

Each participant was provided with an Apple iPad2 and protective cover. They were instructed to use the iPad as if it were their own and to keep it after successfully completing the project. They received online training on various aspects of the iPad use, such as: learning basic iPad functions, managing apps, security risks when using an iPad at work or while using public or personal Wi-Fi, learning the different types of apps (e.g., medical apps, productivity apps, communication apps, etc.), and identifying and evaluating apps. Because Facebook was established as a site for participants to share their experiences, participants were also trained to use Facebook, such as setting up profiles, posting comments, setting security and privacy settings, etc.

Facebook and an NN/LM MCR webpage provided any-time support for the project. Project managers used Facebook for project announcements, sharing iPad tips and tricks, and encouraging participants to share their experiences with each other. The webpage provided links to iPad video tutorials and printable manuals; links to websites providing quality mobile app evaluations, such as PCWorld, CNet, and iMedicalApps; and links to help further explain issues surrounding security risks when using an iPad.

Data Coding and Analysis

Data from the participants' applications and the final questionnaire were used to evaluate the project. (Appendix A and B). Both the application and final questionnaire included closed and open ended questions. Responses to the open ended questions were coded to identify trends. To sort the participant responses, codes were used. Table 1 lists the codes with examples to illustrate the kinds of activities covered by the code. Table 2 lists the codes for participants' perceptions of how others in their institution viewed their adoption of a new technology.

RESULTS

Out of forty-eight participants, forty-five (89%) answered affirmatively when responding to the question about whether they would continue to use the iPad now that the project had ended. Four (9%) were undecided and one (2%) reported they would not. Many said that the

iPad was now part of their daily life. Some of the participants conveyed future plans to purchase peripherals (most mentioning keyboards) and explore more apps. One participant was considering purchasing iPads for other library staff.

When applying for the project, participants were asked how they planned to use the iPad. The top three projected uses were:

- point of need services;
- helping users with mobile technology by recommending mobile resources, teaching users to use the iPad, and helping to trouble shoot problems with the iPad;
- experimenting with the iPad and apps that could be loaded on it.

At the end of the project, participants were asked how they used the iPad. Participants reported using the iPad primarily for two purposes:

- productivity activities
- point of need services

Examples of productivity activities included: note taking at meetings; keeping up with email; watching webinars; and maintaining calendars. Point-of-need-services was the most frequent response when participants were asked how they were able to extend their services. Examples included situations where the librarian could: answer reference questions, demonstrate resources, and instruct how to access resources without being physically in the library. The iPad allowed one librarian to start participating in nursing rounds. Another librarian, by using a public Wi-Fi connection, was able to “...demo sites that are blocked on the hospital Intranet”. The iPad allowed librarians to increase the depth of services by “...trouble shooting, demonstrating installing and using apps provided by the library and the National Library of Medicine”. Quality was also a feature aided by the iPad. The librarian could now “...double check that my instructions to patrons for downloading, etc. were accurate”.

One question, where participants could select more than one response, asked them to describe the ways that using the iPad affected the status or image of the *librarian* and the status or image of the *library*. There were sixty-six responses to this question with fifty-two (79%) that were positive and twelve (18%) that were neutral, where there were no changes in status or image. There were two (3%) comments where the use of the iPad had a negative impact on the library or librarians’ image or status. At one hospital, offering mobile services and using the iPad was not seen as professional. At another facility, the library was seen as being *rogue* since IT controlled all technology and the librarian's iPad came from an outside source. About one-third of the participants perceived no change in status or image. In some cases it was because iPads were already commonly used by people at their institution, “...many of my university colleagues and administrators have been using an iPad for some time”. In other cases, the participant simply was not aware of or had not perceived a change, “Not sure it affected the status/image of the library”. One librarian responded that library staff has always been known to be early adopters of technology so having new technology was seen as normal.

For the majority of the participants, the data suggests an enhancement of the image and status of the librarian and their library. Seeing the librarian with the iPad attracted attention, where “...they noticed me more”. Participants used it as a marketing tool, showing off the library's services resulting in “potential stakeholders are now regular patrons”. It opened up opportunities that “included, for the first time, participation in broader technology innovation committees on campus”. One participant reported that it enhanced the technology image of the library “... as the place to go for help with the technology”, and “...for training and testing physicians in technology and applications”. The librarian was perceived “[as]... an active player in learning new technology to improve patient care” and more broadly the project “...shows that librarians, as a professional group, are looking at the technology in a professional way”.

CONCLUSIONS

When health sciences librarians are provided with a new technology to experiment with, such as an iPad along with training to aid in its use, they will incorporate new technology into their daily workflow and extend library services. The data from this project shows that most health sciences librarians can quickly identify the best uses for an iPad. Most health sciences librarians were able to maximize their participation in the project by improving their image among their colleagues by demonstrating they can be new technology leaders or by maintaining an existing image as a technology leader.

The high percentage of participants who said they would continue to use the iPad is further evidence the project was successful in getting them to adopt the iPad. Help aids, such as online training and a website, assisted in the adoption. Participants support for each other also led to the project's success. Those at the same institution assisted each other, participants in the same city met to share how they were using the iPad and their favorite apps. Participants chronicled their experience on Facebook sharing what they were doing with their iPads.

The adoption of the iPad had a positive impact primarily as a productivity tool followed by a tool to extend library services. The participants took advantage of the mobility of the iPad to untether themselves from their libraries. With their mobile devices in hand, they provided information services wherever they encountered reference or library related questions.

Adoption of a new technology can enhance the prominence of the librarian within an institution. Carrying an iPad was visible evidence that the librarian understood how to use this new technology. Recognition of this technological expertise resulted in appointments such as working on an effort to configure the electronic medical record for the iPad. In some cases health sciences librarians became identified as technology leaders by offering trouble shooting services for the hardware and recommendations for mobile applications.

The authors conclude that both primary and secondary objectives were met for this project. Although this project only ran for fifty days, it illustrates that health sciences librarians can successfully adopt new technology and play a key technology leadership role at their institution.

Acknowledgments

This project has been funded in whole or in part with Federal funds from the Department of Health and Human Services, National Institutes of Health, National Library of Medicine, under Contract No. HHS-N-276-2011-00006-C with the University of Utah Spencer S. Eccles Health Sciences Library.

Appendix

APPENDIX A: APPLICATION QUESTIONS

iTest iPad Program

The NN/LM MCR has been monitoring the increased use of iPads in healthcare. We view this development as an opportunity for health sciences librarians to employ this technology and demonstrate its use to their institutions and their users. To support the adoption of new technology, we are making available approximately 100 iPads (16GB) to librarians working at full Network member institutions in the region.

Qualifications

- * Librarian at a Full member institution in the MidContinental Region.
- * The applicant must be the one who will be experimenting and reporting back on the use of the iPad in the workplace.
- * WiFi must be available in your workplace. (The iPad connects to the Internet via WiFi)

Responsibilities of Recipients

- * Use the iPad in your workplace.
- * Chronicle your experience on the MCR's facebook page during the program period (until April 30, 2012).
- * Add a picture illustrating your experience to the MCR's facebook page.

Awarding the iPads

- *Applications will be reviewed by NN/LM staff.
- *All applications that are clear and reasonable will be eligible.
- *Eligible applicants who do not have an iPad will be given priority.
- *Recipients will be randomly selected.
- *If there are still iPads available, additional applicants from the same member institution and member librarians who already have an iPad will be randomly selected.

DEADLINE for Applications: Monday, January 23, 2011

* For more information, contact your State Coordinator.

***1. Are you a librarian working at a Full member institution of the National Network of Libraries of Medicine, MidContinental Region?**

☐ Yes

☐ No

1. Enter your LIBID (if known)

***2. What type of library do you work in?**

☐ Hospital library

☐ Academic health sciences library

☐ Academic library

☐ Health association library

☐ Biotech library

☐ Law library

Other (please specify)

iTest iPad Program

***3. Please provide your contact information**

Name:

Institution:

Delivery Address:

City/Town:

State:

ZIP Codes:

Email Address:

***1. Do you already own an iPad that you use at work?**

☐ Yes

☐ No

***1. We want Full Network member librarians to experiment with the iPad in the workplace. If you received one of the iPads how do you plan to use it? (250 word limit)**

***1. Briefly explain how you are currently using your iPad at work and how a second iPad would be beneficial. (250 word limit)**

Thank you for completing your application for an iPad. We will notify you at the end of January whether or not you have been selected.

APPENDIX B: END OF PROJECT QUESTIONNAIRE

iPad Experience: End of Project Questionnaire

Welcome to the iTest iPad questionnaire! The NN/LM MCR wants to better understand how health sciences librarians used the Apple iPad in their workplace and would appreciate your input.

You can exit and return to complete the questionnaire. It should take you 10-16 minutes.

By selecting the "Next" button, you are acknowledging your consent to participate in this questionnaire and to allow your responses to be used in any subsequent publications. If you decide to participate, you are free to withdraw your consent and discontinue participation at any time.

1. What type of library do you work in?

- ☐ Hospital library
- ☐ Academic health sciences library
- ☐ Academic library
- ☐ Health association library
- ☐ Biotech library
- ☐ Other (please specify)

2. Generally, I would rate my adoption of new technology as:

- ☐ Innovator (You immediately embrace brand new technology)
- ☐ Early adopter (You adopt new technology fairly soon after it becomes available)
- ☐ Early majority (You start to use new technology slightly faster than the mainstream)
- ☐ Late majority (You prefer to wait until technology becomes mainstream)
- ☐ Cautious majority (You prefer to be the last to adopt technology)

3. I used the iPad for the following purposes (Please select all that apply):

- ☐ Serving patrons (e.g., ready reference, literature search, presentation)
- ☐ Managing the library (e.g., project, personnel, collection, budget)
- ☐ Meeting my own needs (e.g., email, calendar)
- ☐ Other (please specify)

4. Please choose the one most appropriate answer: I found the iPad most useful for

- ☐ Serving patrons (e.g., ready reference, literature search, presentation)
- ☐ Managing the library (e.g., project, personnel, collection, budget)
- ☐ Meeting my own needs (e.g., email, calendar)
- ☐ Other (please specify)

iPad Experience: End of Project Questionnaire

5. The RML designated its Facebook page as a place where participants could set up a community to share experiences and ask questions. Did you find using Facebook for this project helpful?

- ☐ Yes
- ☐ No
- ☐ Didn't visit the Facebook page
- ☐ Didn't know about the Facebook page

Comment

6. If you used resources other than the Facebook page to help you with the iPad, what other resources did you use? (Please select all that apply)

- ☐ Used no other resources
- ☐ Other NN/LM MCR resources
- ☐ Resources found on the Internet
- ☐ Colleague(s)
- ☐ Family Member(s)
- ☐ Other (please specify)

7. Please indicate whether the iPad gave you access to resources NOT ordinarily available because of firewalls or institutional policies.

	Have always had access	iPad gave me access	Still do not have access	Have not tried to gain access
Facebook or LinkedIn	☐	☐	☐	☐
Twitter	☐	☐	☐	☐
Communication tools: (e.g., Skype, Google Talk, instant message, texting)	☐	☐	☐	☐
Other (please specify in the box below)	☐	☐	☐	☐

Other resource the iPad gave me access to:

iPad Experience: End of Project Questionnaire

8. Did the iPad give you access to software that you were not permitted to load on your workstation?

☐ Yes

☐ No

If you answered yes, please specify software.

9. Please describe the ways that using the iPad allowed you to extend or improve library services.

10. Please describe the ways that using the iPad affected the status or image of the librarian.

11. Please describe the ways that using the iPad affected the status or image of the library.

12. Will you continue to use your iPad in the workplace now the project has ended?

☐ Yes

☐ No

☐ Undecided

Please briefly explain your response.

13. Any final comments you have on the iTest iPad program?

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FIGURE 1.
Number of Participants in Each State

TABLE 1

Coding of Responses to Open-ended Questions

Code	Examples
Develop Resources	Develop a website for mobile devices or profile on users who use mobile devices.
Experiment	Learn about the device, see how it fits in with work, test how resources purchased by the library appear on mobile devices.
Point of Need Service	Provide services for patrons wherever and whenever the service was needed.
Productivity	Take notes during meetings, send / receive email, view calendar, synch events, and attend webinars.
Support Users	Help users with mobile devices to access resources, teach the use of mobile devices, trouble shoot user problems.
Apps	Respond to questions about apps, provide descriptions about app resources or peripherals.
Workaround	Use mobile device to gain access to blocked or restricted resources.

TABLE 2

Coding for Perceptions of Librarians and Libraries

Code	Examples
No or Negative Impact	No impact, negative impact on the library or librarian.
Recognition	Technology leader, interest in project award, competency, conversation starter, progressive, attracted attention.