RESEARCH

Perceptions and Use of iPad Technology by Pharmacy Practice Faculty Members

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Objectives. To explore the potential of tablet technology to address the specific workload challenges of pharmacy practice faculty members and to evaluate tablet usage after a department-wide iPad initiative.

Methods. After conducting a needs assessment to determine pharmacy faculty attitudes towards tablet technology and to identify potential usage scenarios, all faculty members in a department of pharmacy practice received an iPad. After iPad distribution, training sessions and virtual tutorials were provided. An anonymous survey was administered to evaluate the pilot.

Results. The needs assessment survey revealed positive attitudes towards iPad technology, identified use scenarios, and led to a department-wide iPad pilot program. Most faculty members used iPads for connectivity with students (86%), paper/project annotation (68%), assessment (57%), and demonstration of tools used in practice (36%). For teaching, 61% of faculty members used iPads in seminars/laboratories, 57% used iPads in the experiential setting, and 43% used iPads in the classroom. Use of iPads for patient-care activities varied and depended on site support for mobile technology. The 23 faculty members with external practice sites used iPads to a greater extent and had more positive attitudes towards this technology compared with campus-based faculty members.

Conclusion. Integration of tablet technology into the pharmacy education setting resulted in faculty-reported increased productivity and decreased paper waste. It also allowed faculty members to experiment with new teaching strategies in the classroom and experiential setting. Administrators at institutions exploring the use of tablet technology should allocate resources based on faculty needs and usage patterns.

Keywords: instructional technology, pharmacy faculty, health care, iPad

INTRODUCTION

The 6-year doctor of pharmacy (PharmD) program at the School of Pharmacy at Northeastern University consists of campus-based and off-campus instruction. The school's department of pharmacy practice has 34 faculty members who perform research and scholarship, provide clinical and professional service, and deliver most of the PharmD curriculum to over 800 students. The department consists of 5 social and administrative sciences faculty members and 29 pharmacy practice faculty members who are either fully funded by the university or co-funded with practice partners. These faculty members are responsible for campus-based instruction as well as teaching many of the advanced pharmacy practice experience

(APPEs) in healthcare settings off campus. Many faculty members spend substantial amounts of time off campus (3 to 4 days a week) at hospitals, pharmacies, clinics, and other healthcare facilities teaching APPEs, and providing patient care and other services throughout the calendar year. Faculty members in the department have been challenged to remain engaged in teaching, research, and service activities on campus while spending much of their time teaching and providing services off campus.

Tablet technology is an attractive mobile solution for the specific challenges of clinical faculty members because of portability and applications that can be used to improve connectivity, workflow, and provide readily accessible informational resources. While the popular media and academic blogs tout the iPad as an ultimate teaching and learning tool, few studies have assessed the impact of this technology on faculty productivity in the academic setting.¹⁻³ The objectives of this study were to explore the potential of tablet technology to address the specific

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workload challenges of pharmacy practice faculty at our institution and to evaluate tablet usage after a department-wide iPad initiative.

METHODS

Given the challenges of performing teaching, scholarship, and service activities at multiple locations, the pharmacy department leaders began exploring and holding conversations with faculty members in fall 2011 about how tablet technology could be used to address these challenges. Based on the information that was gathered, an anonymous, voluntary, Web-based survey was conducted in November 2011 to collect data about pharmacy faculty attitudes towards using iPads for job-related activities and possible use scenarios if such technology became available to them. At the time of the needs assessment survey, several faculty members already owned iPads. A section of the survey asked these users questions about their iPad usage. The survey was developed by the authors and reviewed by 2 faculty colleagues and 2 technology staff members from Northeastern University's Education Technology Center to establish face and content validity.

By January 2012, the needs assessment survey results were evaluated and used to justify the purchase of iPads from the department's operating budget for all departmental faculty members, regardless of whether they had an external practice site. Department leaders worked with academic technology staff members in the Education Technology Center to facilitate iPad purchase and implementation. Considerations during this phase were the type of device to obtain, including memory and other specifications, security of the devices, and initial training needs. In March 2012 (shortly after the iPad 3 was released) the department purchased 34 iPad 3 (16 GB, WiFi and 3G/4G capable), 34 Apple VGA adapters (to allow integration with existing classroom presentation technologies), and 34 \$25 iTunes gift cards (to allow faculty members to purchase applications to be used for teaching and other productivity needs) for \$23,222. The iPads arrived and were distributed to faculty members in April 2012, at which time they each received a document describing resources to allow them to best use their tablet. Faculty members were responsible for the costs of purchasing a data plan (3G/4G), protecting their devices, and purchasing applications over and above the \$25 iTunes card. If faculty members left the department, they agreed to either return their iPads in original condition or purchase their iPad for their personal use (\$629).

Immediately after iPad distribution, the department, working with the university's Academic Computing Services and Educational Technology Center, provided a series of opportunities for faculty members to become

familiar with the use of the iPads. Web-based screencast tutorials were developed by technology staff members on how to set up an iTunes account (Apple, Cupertino, CA); getting started with the iPad, including set up, touchscreen interface, and hidden gestures; activating security features such as passcode and "Find my iPad" utility; and cloud-based computing and collaboration using applications such as DropBox (DropBox, Inc, San Francisco, CA). These tutorials were shared and faculty members were encouraged to complete the setup of the device prior to live-group training workshops. The Education Technology Center staff also offered live assistance to several of the faculty members who wanted help to set up their iPads. Two live workshops were held in May 2012. With 19 attendees, the first one was 2 hours long and covered the basics of using tablet technology, e-mail, and calendar functionality, cloud computing and collaboration using applications such as DropBox or the university's file storage system, and integration of files with various productivity applications. Faculty members who already owned iPads prior to this initiative demonstrated several applications that they identified as essential to augment their workflow. The 1-hour long second workshop was held as part of the department meeting and was attended by most of the faculty members in the department. This particular workshop trained faculty members on how to access student-submitted work from Blackboard Learning Management System (Blackboard, Inc, Washington, DC), use annotating applications to provide feedback to students, and use the rubric feature of Blackboard to grade student work on the iPad. The annotating application Notability (Ginger Labs, Inc, Palo Alto, CA) was chosen for demonstration because of its low cost and simplicity of use. The digital workflow discussion focused on reviewing and annotating papers using iPads because most departmental faculty members grade papers as part of the Drug Literature Evaluation course taught in the summer trimester. Additionally, a collaborative workspace was created using Blackboard Learning Management System (Blackboard Inc, Washington, DC) to enable faculty members to share useful advice or pose and discuss questions. Periodic discussions of iPad use for teaching were held during the department meetings in the fall trimester to encourage idea sharing.

In January 2013, nine months after iPad distribution, a followup anonymous, voluntary, Web-based survey was conducted to measure how pharmacy faculty members were using iPads in teaching, clinical practice, and other responsibilities, as well as to examine faculty attitudes towards the impact of mobile technology on their workflow. This survey instrument was developed similarly to the needs assessment survey instrument, by soliciting input from faculty colleagues and technology staff members

involved in this initiative. We also obtained feedback on additional training needs. Northeastern University's Institutional Review Board approved both the needs assessment survey and the follow-up surveys.

Descriptive statistics were generated for all variables on both surveys. The independent samples Mann-Whitney U test was used to compare Likert scale data both within and between surveys, while the Fisher exact test was used to compare nominal data. Given that the surveys were anonymous, dependent group comparisons between the 2 surveys were not possible. All data were analyzed with PASW, version 18.0 (SPSS, Quarry Bay, Hong Kong).

RESULTS

In November 2011, 29 faculty members (85%) completed the needs assessment survey instrument. However, only 27 (79%) respondents answered enough of the questions to use their responses in the data analysis. Twenty-one respondents (78%) had teaching, scholarship, and service responsibilities at 2 or more locations (with the 2 locations typically being on campus and a clinical practice site). Seven respondents (21%) owned and used an iPad at the time of the needs assessment. These faculty members reported using iPads for connectivity (100%), student assessment (71%), and teaching in the classroom and experiential setting (57%). Six of the current users had off-campus clinical practice sites, where they used iPads to access drug information resources (83%) and electronic medical records (67%), for documentation (83%) and medication reconciliation (67%), and to educate patients (50%).

Of the 20 nonusers, 16 (80%) were interested in using an iPad for teaching and practice, while the rest responded "not sure." The most likely uses reported were connectivity (85%), student assessment (80%), paper/project annotation (65%), teaching in experiential setting (65%) and

seminars and laboratories (60%). Fifteen faculty members with clinical practice sites planned to use tablets for accessing drug information resources (73%), and documentation and patient education (53%).

Respondents reported an overall positive attitude towards iPad use and potential positive impact on workflow, including anticipated increase in productivity, decrease in paper waste, enhanced innovations in teaching, and more efficient student assessment. All but 1 of the faculty members were supportive of the development of activities in seminars and laboratories that would require faculty members to use iPads for teaching and assessment. When asked about wireless networks, 88% of faculty members reported Wi-Fi access at home and 81% (of those with external practice sites) had Wi-Fi networks at their practice site.

Twenty-eight (82%) faculty members responded to the followup survey in January 2013. In this cohort, 23 (82%) respondents had teaching, scholarship, or service obligations in 2 or more locations and 9 faculty (32%) were long-term users (ie, they had been using iPads before department-wide implementation). Respondents used iPads most frequently for e-mail access and management (92.8% of faculty), file access (85.7%), connectivity (85.7%), paper/project annotation (67.9%), teaching in laboratories/seminars (60.7%), and student assessment, such as completing rotation evaluations, assignment rubrics, and grading work (57.1%). When use was compared based on faculty responsibilities (off-campus responsibilities vs only on-campus responsibilities), higher levels of use were observed among faculty members with off-campus responsibilities, with significance for access to files, research-related purposes, and paper/project annotation (all $P < 0.05$) (Table 1).

While all faculty members in the department received iPads, we were particularly interested in tablet usage by the

Table 1. iPad Use Scenarios Related to Productivity, Teaching, and Research Postimplementation

Use Scenario	Campus-Based Faculty (N=5), No. (%)	Faculty With Outside Practice Sites (N=23), No. (%)	P^a
Email access and management	4 (80.0)	22 (95.7)	0.33
Access to files through cloud services	2 (40.0)	22 (95.7)	0.01
Creating/editing documents, slides, spread sheets	1 (20.0)	10 (43.4)	0.62
Research and scholarly productivity	0	13 (56.6)	0.04
Connectivity (email, Blackboard)	3 (60.0)	21 (91.3)	0.13
Paper/project annotation	1 (20.0)	18 (78.3)	0.03
Teaching in the classroom	0	12 (52.2)	0.05
Teaching in seminars/labs	1 (20.0)	16 (69.6)	0.06
Teaching in experiential setting	0 ^b	13 (56.5)	0.04
Assessment	1 (20.0)	15 (65.2)	0.13

^a P calculated using a 2-tailed Fisher exact test.

^b Some on-campus faculty members serve as preceptors to experiential students completing academic and research practice experiences.

subgroup of 23 (43.5%) faculty members with off-campus practice sites. Among these faculty members, 13 (56.5%) were at hospitals and 10 (43.5%) were in the ambulatory care setting. Most frequently, faculty members used iPads in the clinical setting to access drug information resources and medical records, as well as for patient education (Table 2). Further tablet use was analyzed depending on whether the practice site supported iPad use, defined in the survey instrument as having Wi-Fi available and special setup instructions or mobile applications to securely access patient databases. Faculty members at sites that supported iPad technology (N=9; 39% of all clinical sites) used their devices more frequently for all uses, and used their devices significantly more for accessing electronic medical records and documentation ($P<0.05$), compared to faculty members at sites with no iPad support (Table 2). Hospitals were more likely to support iPad use; 8 hospital sites (61.5% of all hospital sites) supported iPads compared to only 1 ambulatory care site (10% of ambulatory care sites).

Nine months after implementation, 86% of respondents agreed or strongly agreed that iPads improved their connectivity while out of the office. Table 3 compares respondent perceptions towards iPad technology before and after department-wide implementation. Perceptions about the usefulness of iPads declined after implementation with significant declines for iPad potential to be used to try new teaching strategies in the classroom, in the experiential setting, or to be used to assess students more efficiently. Faculty members at sites that supported iPad use (N=9) were overall more positive about tablet technology than their colleagues at practice sites not supporting iPads (Table 4). They were more likely to agree that the device allowed them to improve productivity and decrease paper waste. There were also trends for improved efficiency in patient care and trying new teaching strategies and tools in the experiential setting.

Twenty-four respondents (85.7%) agreed or strongly agreed that they supported the development of activities

and simulations that required faculty members to use iPads for teaching and assessment. The same respondents also agreed or strongly agreed that they supported further development of activities that would require students to use tablet technology. All but 2 respondents (92.8%) were also supportive of moving away from giving quizzes and examinations on paper and toward administration using electronic devices.

Only 4 respondents (14.3%) reported activating 3G/4G connection on their iPad, with only 1 subscribing on a recurrent basis. Most respondents (64%) reported using their iPads daily, while 24% used them on several occasions per week and 12% used them several times a month. Respondents reported using their iPad for work-related reasons $74.4 \pm 15.4\%$ of the time, with the rest of the time spent on personal use. Of the 19 (67.9%) respondents who participated in the initial training session, 84.2% agreed or strongly agreed that the training was helpful in getting them started. Twenty-two (78.5%) respondents agreed or strongly agreed that they would like to participate in additional group training sessions.

DISCUSSION

Our investigation was prompted by the specific challenges experienced by pharmacy practice faculty members with off-campus site responsibilities in our increasingly digital age that demands nearly constant connectivity. Faculty members frequently make requests for technologies to help augment their workflow. In light of availability of tablet technology with the release of the iPad in 2010, we explored the usefulness of such technology to assist our faculty members. Our selection of a particular tablet was informed by the collective experiences of members of our pharmacy practice department. At the time of the initial conversations and decisions, the iPad was the most common brand of tablet used and the one best supported by our university. We did not receive any financial incentives from Apple (Cupertino, CA) beyond the standard discounts afforded to all educational institutions.

Table 2. iPad Use Scenarios Related to Patient Care at Off-Campus Practice Sites Postimplementation

Use Scenario	Faculty at Practice Sites Supporting Ipad Use ^a (N=9), No. (%)	Faculty at Practice Sites Without iPad Support (N=14), No. (%)	P ^b
Accessing electronic medical record	8 (88.9)	2 (14.2)	<0.01
Accessing drug information resources	8 (88.9)	8 (57.1)	0.18
Patient care documentation (notes)	6 (66.6)	2 (14.3)	0.01
Patient education	4 (44.4)	6 (42.8)	1.0
Medication reconciliation	5 (55.5)	3 (21.4)	0.18
Discharge counselling	4 (44.4)	1 (7.1)	0.06

^a Definition for practice site support of iPad technology included WiFi access and specific setup instructions or applications that provided secure access to patient databases.

^b P calculated using a 2-tailed Fisher exact test.

Table 3. Faculty Attitudes Towards iPad Technology Before and After Implementation^a

Using the iPad has the following benefits to me:	Survey	Strongly Agree, %	Agree, %	Disagree, %	Strongly Disagree, %	Unable to Comment, %	P ^b
Increased productivity	Pre	40.7	44.4	11.1	0	3.7	0.69
	Post	28.6	60.7	3.6	0	7.1	
Decrease in paper waste (ie, being “green”)	Pre	59.3	29.6	7.4	0	3.7	0.53
	Post	50.0	39.3	7.1	0	3.6	
Improved efficiency in patient care	Pre	29.6	55.5	0	0	14.8	0.64
	Post	21.4	10.7	14.3	0	53.6	
Trying new teaching strategies/tools in the classroom setting	Pre	48.1	44.4	0	0	7.4	<0.01
	Post	14.3	42.9	21.4	0	21.4	
Trying new teaching strategies/tools in the experiential setting	Pre	55.5	25.9	3.7	0	14.8	<0.01
	Post	14.2	42.8	14.2	0	28.6	
Ability to assess students more efficiently	Pre	44.4	37.0	11.1	0	7.4	0.02
	Post	14.3	42.9	14.3	3.6	25.0	

^a N=27 for preimplementation survey; N=28 for postimplementation survey.

^b P values calculated using Independent Samples Mann-Whitney U test.

The needs assessment survey identified the potential for tablet devices such as the iPad to positively augment faculty workflow. The followup survey revealed that iPad use and perceptions of usefulness varied significantly for campus-based faculty members vs faculty members who had off-campus practice sites. Faculty members whose practice sites supported iPad use by providing Wi-Fi network access and ability to access patient-related databases used their iPads the most and had the most positive perceptions about iPad technology.

None of the 5 campus-based faculty members used iPads in the classroom for teaching. This can be explained by their teaching assignments in large-enrollment courses (100 to 150 students) in large classrooms equipped with

computers. Many large enrollment courses in the department use audience response (Turning Point, Turning Technologies, Youngstown, OH) and lecture capture (Tegrity, Tegrity USA, Burr Ridge, IL) technologies that did not provide iPad support at the time of initial adoption, necessitating the use of desktop or laptop computers in these courses. Faculty members with off-campus practice sites are more likely to teach in clinical courses with break-out seminars that meet in smaller rooms that are not equipped with desktop or laptop computers. They are, therefore, more likely to use iPads for teaching in the classroom.

Overall, pharmacy faculty members did not find iPads useful to assess students. This can be explained by the standard evaluation rubrics that our faculty members

Table 4. Faculty Attitudes Towards iPad Technology Postimplementation Based on Off-Campus Practice Responsibilities^a

Using the iPad has the following benefits to me:	Survey	Strongly Agree, %	Agree, %	Disagree, %	Strongly Disagree, %	Unable to Comment, %	P ^b
Increased productivity	Support	66.7	33.3	0	0	0	0.01
	No support	7.1	71.4	7.1	0	14.3	
Decrease in paper waste (ie, being “green”)	Support	77.8	22.2	0	0	0	0.03
	No support	28.6	57.1	7.1	0	7.1	
Improved efficiency in patient care	Support	55.6	22.2	11.1	0	11.1	0.08
	No support	7.1	7.1	21.4	0	64.3	
Trying new teaching strategies/ tools in the classroom setting	Support	44.4	22.2	22.2	0	11.1	0.17
	No support	0	50.0	14.3	0	35.7	
Trying new teaching strategies/ tools in the experiential setting	Support	44.4	33.3	11.1	0	11.1	0.05
	No support	0	57.1	14.3	0	28.6	
Ability to assess students more efficiently	Support	22.2	44.4	11.1	0	22.3	0.26
	No support	7.1	35.7	14.3	7.1	35.7	
Improved connectivity when out of office	Support	66.7	33.3	0	0	0	0.19
	No support	35.7	35.7	14.3	0	14.3	

^a n=9 for respondents with at external sites with iPad support and n=14 for those with external sites without iPad support. Practice site support of iPad technology included Wi-Fi access and specific setup instructions or apps that provided secure access to patient databases.

^b P values calculated using independent samples Mann-Whitney U test.

use that are embedded within the Blackboard Course Management System (Blackboard Inc, Washington, DC) and E-Value (Advanced Informatics, Minneapolis, MN). These management systems are Web-based and not yet optimized for tablet use. It is difficult to scroll and navigate within rubric forms, which makes it difficult to use tablets for assessment and rubric completion. Tablet use for assessment depends on software vendors creating a user-friendly mobile interface or application.

We found it interesting that overall attitudes towards iPad technology did not improve, and in some cases actually got worse after 9 months of iPad use. It is possible that faculty members were excited to consider having access to new mobile technology during the initial needs assessment survey, creating high expectations based on the perceptions of what the device could do for them. More faculty members chose the “unable to comment” response on the post-survey, indicating that decline in perceptions may be attributed to the fact that some faculty members did not fully use tablets in all of the ways they may have anticipated, either because their classroom activities or practice sites did not fully support tablet devices. There were also cases where faculty members were already satisfied with their established methods and did not care to take the time needed to learn how to use a new technology. While we provided initial training and assistance to help faculty members use these devices, not everyone may have attended or actively participated during the training.

We did not identify any studies that examined the impact of iPads on faculty workflow in a comprehensive manner. Most investigations have focused on student use of tablets to augment their learning. Our pharmacy students were not required to own tablet devices. They were also not required to own laptop computers or any other technology at the time of this study. Mang and Wardley explored the integration of tablets, such as the iPad, in university classes and provided recommendations for other instructors to consider when adopting tablet technology.³ They focused on student use of tablets and developed recommendations for faculty members who are considering adopting iPads as a mandatory technology for students in their classrooms. Some of their recommendations, such as working closely with the information technology department and devising an effective distribution strategy, were applicable to our study. Mang and Wardley also emphasized the importance of providing sufficient training to allow faculty members to be proficient with the devices and to design course materials in a way that makes it possible for students to use tablets for taking notes and studying. If our pharmacy students were required to own or were provided with tablets, training for our faculty members would need to be further enhanced.

Additional investigations have examined the use of portable mobile devices in healthcare settings. Positive outcomes were reported from integration of tablet personal computers with pen-friendly applications on the workflow of pharmacists at University of Michigan Health Systems.⁴ Emergency room physicians who used a tablet computer spent 38 minutes less per shift at the computer workstation, measured by login time, which had a presumed, but unconfirmed benefit of spending more time at patients’ bedside.⁵ Residents at an academic medical center incorporated the iPad as an educational tool and learning aid for radiology; however, most also concluded that the incorporation of the iPad into clinical workflow was less pronounced.⁶ All of these investigations confirm not only user interest in tablet technology, but also the promise of mobile devices to positively impact workflow.⁴⁻⁶

The cost investment for the iPad initiative was feasible and justified. Faculty members frequently require replacements to their laptop computers, and tablets may be a viable alternative at a lower cost for some faculty members, particularly those who split their time between a campus and a clinical site. Our findings on patterns of iPad use can be extended to other types of tablet devices, such as Android or Windows platform tablets, which may offer competitive pricing and advantages for faculty members who are more familiar with the specific platform. The major advantage of tablets over smart phones is their larger screen, which makes it more useful for teaching, patient education, access to medical records, paper annotation, and student assessment. Many tablets can also be equipped with keyboards to make standard connectivity tasks, such as e-mail, more efficient. Device selection should be based on user preferences, costs, and information technology support, whether at the college or school of pharmacy or external practice site.

After evaluating patterns of use, we determined that it was not necessary to purchase devices that are 3G/4G capable, which could have saved \$4,420 or \$4,290 if we only purchased 1 such device for a faculty member who actually activated 3G/4G service. While we were hoping to realize some cost savings from decreased expenditures on printing and photocopying, further analysis did not reveal cost reductions in these areas after iPad distribution. Most of our printing costs are attributable to examinations and other assessments, which continue to be on paper. We are exploring electronic testing as means to further decrease paper waste and associated expenditures.

Our study had several limitations. We evaluated iPad use after a relatively short implementation period (9 months). Our data were gathered via surveys. While we established face validity for the surveys, no reliability or other validity testing was performed. No specific definitions

were provided on various use scenarios, which may have opened them to some degree of different interpretation by the faculty members taking the survey. In our presurvey validation process and discussion of survey results, we did not encounter any confusion from the faculty members regarding the scenario descriptors. Limited training was provided to faculty members, which may have influenced tablet technology usage; however, these devices are known for being very easy to use, even for the most nontech savvy users. While one of the major objectives for our study was to address specific challenges faced by our clinical faculty members, practice sites did not always fully support iPad use, which did not allow faculty to fully use the technology. We did not compare change in perceptions for individual faculty members and instead compared these in aggregate for 2 slightly different faculty cohorts. Assessment of perceptions of use and actual use were challenging, as the needs assessment and followup surveys inherently provided snapshots at a given point in time, while factors impacting the use of these technologies (ie, integration into classroom teaching technologies, support by clinical practice sites) constantly evolve over time. It is challenging to estimate true return on investment as it is difficult, if not impossible, to take into account the impact of the iPad on faculty time, efficiency, connectivity, and impact on student learning or patient care. Finally, we evaluated the use of iPads and not other types of tablets, such as Android or Windows tablets, which may offer advantages in enterprise network environments at healthcare facilities and university campuses.

Our iPad initiative had several unexpected benefits. The Drug Literature Evaluation course, in which faculty members grade 5- to 10-page-long research papers prepared by 150 students, changed to a paperless workflow. Adoption of iPads by faculty members to grade these papers decreased paper waste on the scale of 7,500 to 15,000 printed pages (estimated 50 to 100 pages per student for 2 drafts and reference materials) that were previously printed and submitted for traditional grading. Numerous discussions with faculty members regarding using technology to engage students and to enhance teaching and learning led to a department-wide innovation challenge, which called for all faculty members to experiment with a “new for you” teaching strategy in the coming year. Additionally, the iPad initiative sparked several research and scholarly projects, including 1 which investigates the use of the iPad as a vector for microbial contamination in clinical sites.⁷

Going forward, we plan to provide more training through informal lunch workshops targeted towards

different use scenarios where experienced users can share tips and strategies with those who would like to use their iPads to a greater extent. New tablets, applications, and abilities to integrate tablets with existing educational technologies will continue to be explored. We will continue to evaluate the impact of mobile technology on faculty workload, strive to decrease paper waste, and explore funding and opportunities associated with tablet use by the students.

CONCLUSION

Pharmacy faculty members used iPads for a variety of responsibilities, including connectivity, teaching, patient care, and research. Use of iPad technology among pharmacy faculty members depended on the need for mobile technology, such as off-campus responsibilities, and support for tablet technology in the classroom and at clinical practice sites. Institutions seeking to provide their clinical faculty members with mobile technology should allocate resources, particularly to those with off-campus practice responsibilities, at institutions that support tablet technology.

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