

## **LEADING CHANGE: “GOING GREEN” WITH iPADS**

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### **Abstract**

*This paper describes a vision-based change effort enacted through an environmentally responsible professional development initiative using iPads. The focus of the initiative was to collectively learn iPad touch technology skills and reduce paper usage in department meetings. The initiative was part of a vision to develop a collaborative department culture with transparency, autonomy, and interdependence sustained through communication and capacity building. Data collection revealed that collective learning contributed to adoption of touch technology, with 95% of department members using iPads to conduct department business after three months. The initiative influenced the behavior of department members and shaped the identity of the department.*

**Key Words:** collaboration, technology, change, iPads, organizational identity, professional development

### **1. INTRODUCTION**

In the fall of 2010, our department began a “green” professional development initiative designed to reduce paper usage as we collectively learned to use iPad touch technology for department meetings. The adoption of an iPad initiative was a manifestation of an expectation and commitment to communication and capacity building within the department. Effective implementation would result in responsible resource utilization, effective communication and communal learning. This initiative was part of the chairperson’s effort to enact a vision of a collaborative culture with transparency, autonomy, and interdependence within the department. Edgehouse, et al (2007) offer four models for leading change through visioning and learning. These models describe how leaders create cultures by providing broad parameters for learning and work that enact an organization’s values (p.10). Wheatley (2006) applied chaos theory to organizations and posited that an organization’s vision and values act as a force field influencing people’s behavior (p.13).

This suggests that communication and capacity building efforts aimed at fostering a culture of transparency, autonomy, and interdependence would create an unseen field; influencing the learning and work behavior of department members and ultimately shaping the identity of the department. The iPad initiative offered the opportunity to focus department members’ efforts on effective communication and collectively developing touch technology capacities. The chairperson’s initial capacity building efforts began with managing resources in ways that created equity and optimization. Faculty are expected to be productive therefore it is incumbent upon the department chairperson to facilitate their best work by providing optimal support via administrative assistance, appropriate teaching load, professional development funds, and technology tools. Initially, this involved realigning administrative support, making equitable adjustments to supplemental contracts for program advisors, hiring additional faculty members, and providing a pool of funds for faculty and graduate students to engage in research, professional conferences, professional development and scholarly publishing.

The iPad initiative was an extension of these capacity building efforts in that it introduced collective learning to use iPad touch technology as a tool to more efficiently accomplish the work of the department while reducing paper usage. These capacity building efforts contributed to the development of a department identity for collaboration and innovation. Improving communication in the department began with modeling and fostering positive in-person interactions as well as the use of technology tools to provide information updates, honor the work of our members, and share ideas. In *Unnatural Leadership*, Dotlich and Cairo (2002) highlight dialogue, active learning, and welcoming varied opinions as important and necessary components of leading change.

Applied to this specific context, this meant ensuring the department members took time to listen to one another respectfully especially when there was disagreement; to reflect upon information and decisions even when timelines were compressed; and to make the sharing of work, ideas, and learning together as efficient as possible. These communication efforts also contributed to the development of a department identity for collaboration.

These capacity building and communication efforts were especially timely since the entire public university system within the state was engaged in the curricular work of transitioning from a quarters to semesters instructional calendar. The curricular work requirements for transitioning to semesters had created a great deal of Schein's Type One and Type Two Anxiety, both "the fear of learning something new" and "the uncomfortable realization that in order to survive and thrive I must change" (cited in Calabrese, 2002, p. 141). In addition, semester transition work was beginning to and would continue to generate enormous volumes of paper documents that were shredded once the materials were reviewed and approved. Even the pro-paper contingent experienced some discomfort at the waste of resources. Effectively leading the transition to semesters change effort would necessitate finding ways to reduce faculty anxieties and the iPad initiative offered an innovative solution. We could transform the anxiety and drudgery of curricular revision into an opportunity for learning a new technology together while embracing a more environmentally responsible use of paper. The iPad initiative offered a more engaging "green" approach to sharing documents and the opportunity to learn something new together.

As a department of leadership, leading the way in the only whole-department adoption of iPads to conduct business was intrinsically rewarding and identity enhancing. Faculty gratitude for being given an iPad, not as a reward but as an act of trust, was overwhelming; and unexpectedly influenced the department's growing identity as innovators even as it engaged them in the work of thoughtfully redesigning programs and converting curriculum. The process of collectively learning to use touch technology unified department members and drew less technologically savvy members into participating in the initiative. It also created a new department image as innovators that gave license to thinking more creatively about the purpose and delivery of the programs being converted to semesters.

## **2. IMPLEMENTING THE iPad INITIATIVE**

The initiative was implemented at the beginning of the 2010-11 academic year. Twenty-two iPads were purchased and arrived the week before Fall Quarter began. The department chair took delivery of an iPad immediately so as to be familiar with the set-up process and prepared to explain it step-by-step to her faculty and staff. The iPads were distributed to faculty and staff during the department meeting segment of the college retreat that kicked off the academic year. When the technology support team arrived to distribute the iPads, the room erupted with excitement. Faculty repeatedly expressed their feelings of affirmation and gratitude during the distribution process. Once everyone received and signed for their iPads, spent was time going over the steps in the set-up process; beginning with downloading iTunes onto a desktop or laptop computer, and then connecting the iPad which would automatically start the download and initiate set-up. The steps of how to set-up email to access a university account were also explained. Four tech-savvy faculty members offered to make themselves available to assist those who might want help. One faculty member was on sabbatical all year and received an iPad at retreat but was not expected to participate in curricular conversion work or department meetings. Thus, 21 members (18 faculty, the department chair, and 2 support staff) participated in the implementation of the iPad initiative.

In order to optimize the initiative and facilitate joint learning during meetings, it was agreed that everyone would have their iPads operational by the next department meeting. That gave faculty and staff two weeks to complete the set-up and get familiar with basic iPad operations. Some department members went immediately to their offices or homes and completed the set-up process. Several sent "Thank you" emails to the department chair using their iPads that first weekend. Others found time or requested help with the set-up during the first week of classes. The goal of completing the iPad set-up within two weeks was met by 75% of the members. This meant that by the second department meeting, 15 members had iPads ready to use. During that second meeting, a mix of iPads and paper copies were used to conduct department business; read the agenda, take notes, read and approve minutes, and review curriculum materials. Feeling some remorse at not being ready to use their iPad for the meeting, four of the unprepared members got help immediately after the meeting and set up their iPads. The fifth member, a semi-retired former administrator, did not bring the iPad to department meetings but looked on with a neighbor to review documents. Finally after four meetings, the department chair met with the member privately to discuss the issue.

The individual admitted they just hadn't gotten around to asking for help to get their iPad set-up, so the chair immediately called tech support and assistance was provided within the hour. All classrooms and meeting rooms in the college have WI-FI access allowing emails to be opened and read during meetings. Together, the group learned that to efficiently use the iPads for document review during meetings, additional software was needed. Word files would not always open properly, so support staff embedded information in the body of an email. Larger files were sent as PDFs and Word attachments that could be opened in Pages, Notebook, or PDF Reader. To encourage the use of additional software that wasn't free (many applications are free), the department reimbursed faculty and staff for the purchase of Pages and Notebooks. The chair also had the support staff implement the practice of embedding the meeting agenda and minutes into emails for easy access during meetings.

Another important aspect of the initiative was that the department chair role modeled using the iPad and learning from others. To encourage sharing the facilitation of collective learning, the chair asked one of the department technology professors to plan to talk the group through opening an attachment in Pages during the second department meeting of the Fall Quarter. Interestingly, even though having previously agreed, when given the floor at the beginning of the meeting the faculty member stated that the "group talk-through" approach didn't work well and they did not think it helped to talk a whole group through process steps, but preferred to meet individually with faculty to offer help. Frustrated, several faculty members asked that someone else talk them through the steps so everyone could look at documents being reviewed during the meeting. The chair asked if the group preferred individual assistance later or wanted to take a few minutes for group learning before starting the formal agenda of the meeting. The vast majority wanted to take time for collective learning, but no one volunteered to do the talk-through. So the chair explained the process step-by-step and participating faculty and staff were able to open the documents needed for discussion.

In hindsight, this was a crucial moment and had the Department Chair been unprepared to facilitate collective learning about the use of the Pages application, the meeting's agenda could not have been accomplished without sending someone to make paper copies; and the concept of collective learning would have been undermined. The chair being able to explain the process steps allowed everyone to use iPads rather than paper documents, initiated collective learning, and set the tone for future meetings. During the next two meetings, one or two volunteers took the group through a step-by-step process of using a new software application. It took five to ten minutes at the beginning of each meeting, but it helped people try new applications and adjust to using iPads to conduct department business. From that point on, the department officially conducted paperless meetings and did not provide paper copies of the agenda, meeting minutes, or curriculum materials. One or two members occasionally brought their own paper copies of curriculum documents being reviewed but department practice was not to provide paper copies. The demands for reviewing curriculum kept growing, and with all members able to use iPads to review documents, the practice of sharing new applications for group learning was discontinued in order to devote the entire meeting time to curriculum review.

The iPad review process for curriculum changes enabled faculty to discuss curriculum planning for semesters and typically caught formatting errors, lack of alignment between catalogue course descriptions and syllabi course descriptions, or missing components required in every master syllabus. Using iPads to review documents established processes for electronic review, and created a system that was then able to be adapted to conduct a remote review of documents when the university unexpectedly closed for a major snowstorm. Having an electronic review system in place because of the iPad initiative enabled the department to accomplish a scheduled curriculum review remotely, eliminating the need to find time to reschedule the cancelled meeting. Rather than email large groupings of syllabi, the department experimented with using Google Docs and Dropbox. This enabled the use of a jigsaw approach to reviewing the curriculum that involved assigning small faculty teams to review an assigned list of syllabi and make recommendations for changes or approvals to the whole group. It also enabled faculty members interested in reviewing all the syllabi to contribute to any team review. During the first six months of the iPad initiative, the department reviewed 178 revised syllabi and 25 programs of study for semester delivery.

### **3. FINDINGS**

During the first department meeting at the beginning of winter quarter, four months after starting the iPad initiative, department members were asked to anonymously complete an eight-question iPad Use Survey (Appendix A).

Of the twenty-one members participating in the iPad initiative, nineteen completed the survey (two members were absent due to illness). The survey took less than ten minutes to complete. Survey responses were tallied and frequencies calculated and converted to percentages. Written narrative responses were typed as a list, preserving comment clusters from each participant. Survey results indicated the vast majority of department members had made progress incorporating iPads into department life. Nearly all participants (95%) reported using the iPad to conduct business during department meetings and to email using their university account. Eighty-nine percent reported using the iPad at least weekly to read e-documents or PDFs. A full two-thirds (68%) of the participants reported they used the iPad to read e-books on at least a monthly basis and one-half (53%) used the iPad for e-book reading on at least a weekly basis. About half reported they used their iPads to listen to music, play games, or watch movies and approximately one-third reported having used the iPad during teaching. Table 1 lists some highlighted findings from the iPad Use Survey.

### **Insert Table 1. iPad Use Survey highlights**

An interesting finding related to e-reading was the difference in the specific applications used for e-reading. Nearly twice as many members reported using iBooks (58%) compared to Kindle for iPad (32%) for reading e-books. It would be interesting to know whether previous Kindle ownership is related to the use of Kindle for iPad versus iBooks, or whether the availability of e-books for the different applications contributed to the application selected for e-books reading. One of the more surprising findings was that only one-third of the members had downloaded the iTunes for Multi-tasking upgrade, which allows switching between applications, organization through folders and several efficiency options. This survey item provoked a lively discussion once the surveys were completed, and revealed that many members didn't know there was a multi-tasking upgrade available. The multi-tasking option became available during the time period when the department stopped sharing new applications as a group during department meetings due to increased curriculum review demands. This finding suggested there was value in allocating five to ten minutes during meetings to engage in group learning and the practice of continuing collective learning during meetings was revisited.

The most comprehensive survey item provided a list of seventeen popular applications taken off the Apple for iPad website and asked, "Which functions on your iPad have you used more than two times?" Figure 1 displays a chart with the percentage of department members reporting they used each function/application at least twice. Of the seventeen applications, five (Pages, PDF Reader, Maps, iBooks, and Contacts) were identified by more than half of the respondents; three (Photos, Dropbox, and iPod) were used by slightly less than half; and three (Airprint, Airplay and Spotlight Search) had been used by only one or two people. It is not surprising that Pages (68%) and PDF Reader (63%) were the applications used by the most members, since those applications were explained during a "talk-through" and were regularly used in department meetings to review and discuss curriculum changes. It is also not surprising that so few had used Airprint and Airplay since these applications are only available with the multi-tasking upgrade, which just one third of the faculty had downloaded. Another finding worth noting was that only 43% reported using Dropbox more than twice. Dropbox was used on two occasions by the department to make a large number of syllabi available for review. Responses on this item suggested that the other 57% only used Dropbox on those two occasions that required them to do so, and they have not explored the application's use for other purposes. These usage findings support the value of collective learning and the role of necessity in prompting the use of applications.

### **Insert Figure 1. Percent of respondents who have used iPad function more than two times**

At the bottom of the survey a space was provided for "Any Additional Comments" and garnered statements like, "Now that there is some understanding, a workshop to explore opportunities would be purposeful"; and "I would like to learn more about the variety of uses and software and how to use them." One member wrote, "I am still struggling and will ask for more help," and others wrote, "What a great gadget!" "I love using it!" "Thank you!" But the most affirming comment was, "Having the iPad has accelerated my move to digital vs. hard copy. Having the entire department using iPads has also contributed to my acceleration. Thanks." These comments and the survey findings suggest the iPad initiative had a positive response among nearly all the department members and resulted in the development of basic touch technology skills. These comments also suggest that collective learning and use by necessity contributed to the successful adoption of the iPad and should be included as department practices for expanding the use of iPads. Paper usage was reduced by this "green" initiative. The department electronically reviewed 178 master syllabi and 25 programs of study.

Under a paper review process, 21 copies of every document would have been made for use during department meetings and then shredded. Given that a master syllabus is typically at least three pages in length and a program of study is one to three pages, electronic review saved an estimated 12750 pages of paper. Added to that the department meeting agendas and minutes from twice-monthly meetings, and the iPad initiative saved an estimated 27 reams of paper during the first six-month period of use. The savings on paper may seem insignificant from a simple dollars perspective, but when coupled with the time and resources saved from not making and shredding copies, the resource savings was notable.

#### **4. SUMMARY**

The iPad initiative was undertaken as part of an effort to create and sustain a culture of transparency, autonomy, and interdependence by enhancing communication, developing the capacity of department members, and conserving resources. The primary justification for adopting iPads was to review programs and curriculum changes related to a mandated transition to a semesters calendar in state universities. The department was the first and only whole department to adopt an electronic review process using iPads, contributing to a department identity of collaboration and innovation. This department image as innovators also manifested in more creative approaches to organizing content and discussions of innovative delivery options for the programs being converted to semesters.

An iPad Use Survey completed after four months of using iPads for department meetings, revealed that 95% of department members were using iPads for emailing and to conduct business during meetings. The high percentage of users and the written comments on the survey suggested that successful adoption of touch technology was positively affected by the availability of collective learning opportunities. The most used applications were those taught and used during department meetings and the least used applications were part of an upgrade made available after the department discontinued the practice of brief group learning during department meetings. The use of iPads by all department members facilitated collaboration and the adoption of electronic document review processes. The department electronically reviewed 178 master syllabi and 25 programs of study, saving an estimated 27 reams of paper during the first six-months of the initiative. These outcomes aligned with the articulated expectations for the iPad initiative to reduce paper consumption, facilitate communication related to the curricular work of transitioning to semesters, and aid in the collective development of iPad touch technology skills. Survey responses indicated more than half of the department members would like more training on the iPad, especially in uses for teaching.

This request supports the positive impact of collective learning, which should be continued along with providing other learning opportunities to optimize and expand iPad use by department members. Since only 37% of the members reported having used the iPad for teaching, this is an area where iPad use could be greatly expanded. The communication and capacity building efforts aimed at through the iPad initiative appear to have acted as Wheatley (2006, p.13) suggested, creating an unseen field influencing the behavior of department members and shaping the identity of the department. Within the college, the department has acquired a reputation for collegial collaboration and innovation. The iPad initiative motivated department members to collectively learn touch technology skills, reduced paper consumption, and aided in undertaking curricular improvements while accomplishing the work of transitioning programs from quarters to semesters delivery. Others interested in adopting iPads to improve work processes and save resources may benefit from this initiative's findings, especially the important role of collective learning as it contributed to adoption of touch technology.

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**Table**

**Table 1. iPad Use Survey highlights**

- 95% Have iPad set up for use with email
- 58% Email daily using iPad
- 95% Use iPad to conduct business in department meetings
- 58% Use iPad to conduct business in college meetings
- 37% Use iPad during teaching/lecturing
- 63% Have downloaded more than 10 additional applications
- 37% Have downloaded the iTunes Multitasking Upgrade
- 63% Use iPad to read e-books

**Figure**

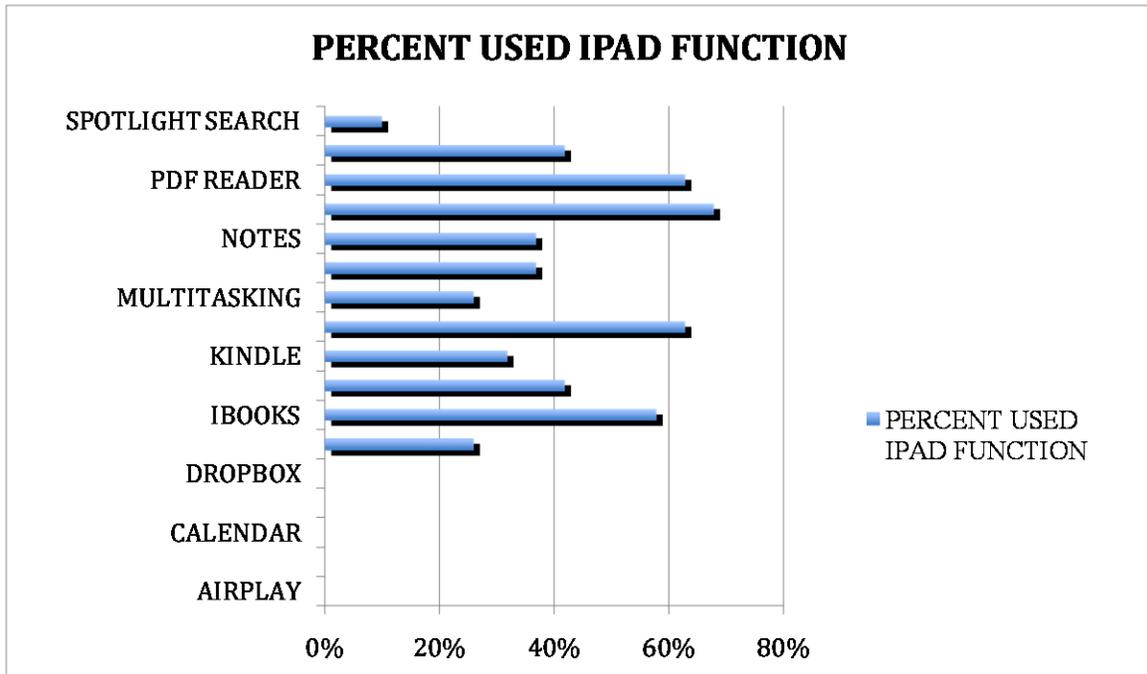


Figure 1. Percent of respondents who have used iPad function more than two times

**APPENDIX A  
iPad Use Survey**

1. Which functions on your iPad have you used more than two times?

- Notebooks
- Notes
- Fast PDF or PDF Reader
- Calendar
- Contacts
- iPod
- Airplay
- Airprint
- Multi-tasking
- Game Center
- Spotlight Search
- Pages
- Maps
- Photos
- Dropbox
- iBooks
- Kindle for iPad

2. How many applications have you downloaded to your iPad?

- \_\_\_\_\_ 0
- \_\_\_\_\_ 1-3
- \_\_\_\_\_ 4-10
- \_\_\_\_\_ 11-20
- \_\_\_\_\_ 21-30
- \_\_\_\_\_ 30+

3. Have you upgraded to iTunes for multitasking?

Yes\_\_\_\_\_ No\_\_\_\_\_

4. Is your iPad set up to use your WSU email account?

Yes\_\_\_\_\_ No\_\_\_\_\_ If No, why?

5. Do you use your iPad for conducting business during:

- \_\_\_\_\_ department meetings
- \_\_\_\_\_ college meetings
- \_\_\_\_\_ university meetings
- \_\_\_\_\_ partnership activities
- \_\_\_\_\_ supervision/evaluation activities
- \_\_\_\_\_ teaching/lecturing
- \_\_\_\_\_ other:

6. Has your iPad ever crashed or had the screen go blank with no access to functions? Yes\_\_\_\_\_ No\_\_\_\_\_ If yes, what did you do?

7. Which of the following do you do on your iPad?

Daily	Weekly	Monthly	
_____	_____	_____	e-reading pdfs/documents
_____	_____	_____	e-reading books
_____	_____	_____	e-mailing
_____	_____	_____	access the Internet
_____	_____	_____	watch movies/videos/TV shows
_____	_____	_____	participate in webcasts
_____	_____	_____	listen to music
_____	_____	_____	play games

8. Would you like training on the iPad?

Yes\_\_\_\_\_No\_\_\_\_\_ If yes, any specific areas?

Any Additional Comments: