The iPad: Implications for Higher Education

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Ken Yoshioka
October 19, 2011
Steve Jobs
1955-2011
iPad Ownership

Q1. Do you currently own an iPad?:

A. Yes
B. No
iPad Studies at other Institutions

Q2. Has your college or university conducted an iPad study?:

A. Have not conducted an iPad study
B. Planning to conduct an iPad study
C. Currently conducting an iPad study
D. Completed one or more iPad studies
Impact of iPads on Campuses

Q3: Over what period of time do you expect to see a proliferation of iPads and other tablets on your college campus?

A. Less than one year  
B. 1-3 years  
C. 3-5 years  
D. >5 years
Electronic Textbooks

Q4: Electronic textbooks will become the standard format for students during which timeframe:

A. Less than 5 years  
B. Five to 10 years  
C. More than 10 years  
D. Will never become the standard
About the Presenters

• John Bansavich, Director of Learning Technologies and the Center for Instruction and Technology (bansavich@usfca.edu)
• 15 years at USF, Ed.D. in Learning and Instruction
• Ken Yoshioka, Graphic, Media Training Specialist (yoshioka@usfca.edu)
• 11 years at USF, Help Desk background
About the University of San Francisco

• Established 1855
• Private, Jesuit, Catholic
• Urban and distributed campuses
• Approximately 10k students; 1000 faculty
• Emphasis on Service Learning
iPad Study at USF: Key Findings

• Further explore the potential of electronic textbooks for education
• The iPad needs added functionality to be a useful instructional tool
• Encourage opportunities for faculty to work collaboratively
• Support student iPad studies
• Full report available from: ipad.wiki.usfca.edu
Why an iPad Study?

Contributing Factors:

- eBook readers
- Rise of mobility
- Cost of Textbooks
- Support for faculty innovation
- Impact of tablets in higher education
Study Milestones

• April 3, 2010 the iPad is available to the public
• May 14-May 28, application period for the USF iPad Study
• June 1st, 112 applications received
• June 10th, study expanded to include 40 participants
• June 15th, first iPad meeting with Cohort #1
• July 6 & 13, First meetings with Cohorts #2 and #3
• July 20th, iPad Readiness Survey available
Call for Applications

The iPad Study at USF

The iPad study at USF is a six-month research project that will review, experiment and share potential uses of the iPad in higher education. The Center for Instruction and Technology (CIT) will sponsor the study with 10 USF faculty beginning in June and concluding December 2010. As a participant in the study, each faculty member will receive an iPad wireless (16 GB) computer to use during the period of the study and to keep afterwards (optional iPad case/cover and "pay-for" apps not included). USF full and part-time faculty are encouraged to apply before May 28th. Selected participants will be notified the first week in June.

Questions that this study intends to investigate:

- What are the potential uses of the iPad in higher education?
- How might iPad’s apps be used to support teaching and learning in a course?
- How could electronic textbooks be used on the iPad?
- What features and functionality of electronic textbooks would support broader adoption in higher education?
- What is the usability of the iPad; in particular, reading, writing, communicating, and
Timeline Milestones

• Fall 2010 semester: cohort meetings continue through the semester
• October 20th, iPad Mid-Semester Survey available
• December 17th, iPad study Research Questions (Final) survey available
• January 20, 2011, Study concludes with the iPad Study Luncheon (Faculty, Provost, VP of IT, and reps from Apple attend)
• March 2011, CIT Tech Talk
Study Wrap-up Luncheon, January 2011

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iPad Policy

Apple iPad Standard

In January 2011, the ITS Center for Instruction and Technology and 40 faculty members concluded a six-month research project that studied the potential uses of the iPad in higher education. The outcome of this study has resulted in a broadening of the University’s iPad policy for 2011. The new policy now allows for staff and faculty procurements of iPads. The revised 2011 policy is as follows:

All USF purchases of iPads must be funded by local departments, and must be procured centrally through ITS. Procurement of iPads must be handled by the standard hardware exception process and will be limited to full-time faculty and staff members. Purchase of iPads or computers with P-Cards is not allowed.

The iPad devices will not be eligible for automatic replacement at the end of their life cycles. The iPad, its rechargeable battery, and all included accessories are covered against defects for one year from the original purchase date by a limited hardware warranty. At present, an extended warranty beyond what is included with the device will not be procured. Additionally, USF funds may not be used to purchase iPad 3G cellular data plans associated with the iPad.
USF Mobile on the iPad
Mission

The iPad study at USF is a six-month research project that will review, experiment and share potential uses of the iPad in higher education.
Data Sources

• Participant application
• Three surveys
  • Readiness to use iPad (n=38)
  • Mid-semester evaluation (n=33)
  • Final: Research questions (n=29)
• Observation notes from meetings
• Informal interviews
• Email communication
• Wiki artifact
USF iPad Study

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- What are the potential uses of the iPad in higher education?
- How might iPad's apps be used to support teaching and learning in a course?
- How could electronic textbooks be used on the iPad?
- What features and functionality of electronic textbooks would support broader adoption in higher education?
- What is the usability of the iPad; in particular, reading, writing, communicating, and creating content.
- Other possible uses of the iPad in higher education?
- Improvements and suggestions for future software/hardware releases of the iPad?

Expectations of participants:

- Submit an application. Selection will be determined by the CIT staff and supported by the school Deans.
- Attendance at required monthly (one-hour) lunchtime (brown-bag) meetings where participants will share experiences.
- Regular contributions to an iPad study wiki.
Faculty Presentations
Research Questions

1. What are the potential uses of the iPad in higher education?
2. How might iPad's apps be used to support teaching and learning in a course?
3. How could electronic textbooks be used on the iPad?
4. What features and functionality of electronic textbooks would support broader adoption in higher education?
5. What is the usability of the iPad; in particular, reading, writing, communicating, and creating content.
6. Other possible uses of the iPad in higher education?
7. Improvements and suggestions for future software/hardware releases of the iPad?
Expectations

1. Submit an application. Selection determined by the CIT staff and Deans.
2. Attendance at required monthly (one-hour) lunchtime (brown-bag) meetings where participants will share experiences and ideas in a presentation.
3. Regular contributions to an iPad study wiki.
4. Maintain a personal log of uses, ideas, etc. during the period of the study.
5. Use the iPad in your classroom and for communicating with your students / colleagues.
6. Participation in an end-of-project tech talk (round-table) offered to the USF community.
7. Contribute to a report to be written about the study.
Participants

1. 25 men; 15 women
2. Three cohorts
3. A total of 19 monthly meetings to present findings
4. 9 hours=average number of hours per week using the iPad (N=33, 10/10)
Participants

- Professor
- Associate Professor
- Assistant Professor
- Lecturer
- Librarian
- Associate Dean
Participants

- Professor: 30%
- Associate Professor: 35%
- Assistant Professor: 28%
- Lecturer: 3%
- Librarian: 3%
- Associate Dean: 3%
Comfort Using Classroom Technology

% of faculty (N=38), 7/10

- Not at all comfortable: 3
- A little comfortable: 11
- Somewhat comfortable: 5
- Comfortable: 39
- Very comfortable: 42

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Frequency of Tech Use in the Classroom

- Never
- Seldom
- Several times during the semester
- Many times during the semester
- Every (or nearly every) class meeting

Percentage (N=38), 7/10
Readiness to use the iPad in the Classroom

July 2010

- Very prepared: 11%
- Prepared: 8%
- Somewhat prepared: 50%
- A little prepared: 16%
- Not at all prepared: 16%

Oct 2010

- Very prepared: 9%
- Prepared: 21%
- Somewhat prepared: 36%
- A little prepared: 33%
- Not at all prepared: 0%
iPad Use in the Classroom

Percentage % (N=33), 10/10

- Websites: 52%
- Audio (podcasts music): 15%
- Video (YouTube DVD): 39%
- Presentations: 39%
- Blackboard: 30%
- PDFs: 30%

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Strengths of the iPad

Portability/mobility/size/weight: 47
Design (interface, graphics, video): 20
Ease of use: 17
Apps: 15
Speed: 13
Touchscreen: 11
eBooks/eTextbooks: 9
Battery life: 9

Frequency noted in 7/10 and 10/10

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Weaknesses of the iPad for an instructor

- VGA Out Issues (resolved with iPad2)
- No USB
- Keyboard Issues (i.e., size)
- No Flash
- Lack of student access to an iPad
- Functionality (lack of familiar apps, no Office products, content creation, learning new apps)
Other areas where I’m using the iPad

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<thead>
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<th>July 2010</th>
<th>Oct 2010</th>
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<tbody>
<tr>
<td>Meetings</td>
<td>22%</td>
<td>28%</td>
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<tr>
<td>Entertainment</td>
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<td>Social Networking</td>
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<td>Productivity Tasks</td>
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The iPad Meetings are Helpful to my Learning

July 2010
- Strongly Agree: 35%
- Agree: 51%
- Neutral: 14%
- Strongly Disagree: 6%

Oct 2010
- Strongly Agree: 55%
- Agree: 36%
- Neutral: 6%
Have you introduced the iPad to your students?

• “I would say they're interested, but not 'blown away'. If it's not being used for textbooks...I'm not sure they see huge amounts of value above and beyond their smartphones.”

• “Yes. They are pretty excited and interested. They like the touch screen, the beautiful video and images. They also like how light and easy to carry it is.”
Have you introduced the iPad to your students?

• “Yes, though they often seem a bit bewildered why I am using it instead of my laptop ... I have been using it mostly to show images, some Power Point Presentations, and PDFs of primary source material. ... They also seem interested in using it for email, social networking, digital readings and eTextbooks.”
What apps have you found to be most helpful/useful in your role as an instructor?

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<tr>
<th>Astronomy Apps</th>
<th>GoodReader</th>
<th>Netflix</th>
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<tr>
<td>Keynote</td>
<td>Youtube</td>
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<td>Art Authority</td>
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<td>iAnnotate</td>
<td>Google Earth</td>
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<td>Pages</td>
<td>Citrix</td>
<td>The Cardiac 3D app</td>
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<td>AirSketch</td>
<td>Kindle reader</td>
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<td>Video player</td>
<td>Adobe Ideas</td>
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<td>Translation software</td>
<td>OmniFocus</td>
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<td>Numbers</td>
<td>OmniGraffle</td>
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<td>Language learning</td>
<td>CarbonFin Outliner</td>
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<td>Penultimate</td>
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<td>Noterize</td>
<td>Blackboard Mobile</td>
<td>New York Times</td>
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<td>ToDoMap</td>
<td>USFconnect app</td>
<td>The New Yorker</td>
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Research Questions
In your opinion, what are the potential uses of the iPad in higher education?

• eReader/eTextbooks
• Annotating/Note taking
• Multimedia - viewing/interacting
• Mobile learning inside/outside classroom
• Language learning, sciences
• Interactivity (teacher-student & student-student)
In your opinion, what are the potential uses of the iPad in higher education?

• “To go paperless: bookless, articleless, noteless - to allow for interactive classrooms: ability to look up relevant information in the moment it comes up - to share between users: notes, apps...”

• “I think that the *potential* uses are nearly limitless. I could see a tool such as this being used in the classroom, outside studying and in lab settings. Currently, however, the use occupies a more narrow spectrum.”

• “Mobile access to electronic resources ...(i.e., in clinical areas; Access to multimedia to supplement learning, esp. for ESL students and/or those with learning disabilities...”
How might iPad's apps be used to support teaching and learning in a course?

• “For clinical disciplines it could be used for teaching students, patients, staff by using multimedia (sound files, video, graphics with annotation functions, text-based reference documents and rubrics)”

• “There are interesting interactive applications for teaching such as the 3D brain, digital neurosurgeon, the medical version of Netter's Neuroscience Flash Cards, Brain Tutor 3D created from MRI scans, and Brain Science Podcast.”

• “Small group exploration (instead of instructor-led, single view), mobility-- taking information into the field/museum/etc.”
How might iPad's apps be used to support teaching and learning in a course?

• “Pleco is a great interactive Chinese dictionary. Students can simply hand-write the character and get the English meaning, pronunciation, and example sentences illustrating the use. Speak Chinese is a simple app for beginning students to practice tones and basic syllables. These apps, I believe, provide additional help to students in their effort to learn tones, pronunciation and characters, which are generally considered difficult to our students.”
How might electronic textbooks be used on the iPad?

• Interactive / simulations
• Annotation / collaborative note taking
• Quick reference during class
• Weight of iPad vs textbook(s)
• Keyword searching and tagging
• Not tied to the Internet for access
• Better pricing for eTextbooks (for limited "ownership")
How might electronic textbooks be used on the iPad?

• “I believe that the future of electronic textbooks lies with publishers, such as Inkling, which go beyond PDF versions of textbooks to providing interactive learning experiences for students.

• This generation of textbooks remains to be developed, but could change the face of education from a passive student learning experience to one that is active.”
What features and functionality of electronic textbooks would support broader adoption in higher education?

• Greater adoption from publishers
• Hyperlinks to other sources
• Interactive multimedia
• Embedded assessments
• Improved pagination
• Interactive activities
• Like the Kindle app, having access to a book on different devices, not just an iPad.
What features and functionality of electronic textbooks would support broader adoption in higher education?

• “Some features, like copying, highlighting, annotating and searching, should be standard. In foreign language teaching in particular, I would like to see audio and video clips be part of the texts, similar to the embedded videos in the Wall Street Journal app. Otherwise, e-textbooks will be no different from the pdf versions.”
What is the usability of the iPad; in particular, reading, writing, communicating, and creating content?

• Great for reading (overwhelmingly the leader with positive comments)
• Good for communicating
• Creating content is limited
• Keyboard issues
• Graphics / visual presentations
What is the usability of the iPad; in particular, reading, writing, communicating, and creating content?

• “Great for reading. Okay for writing, but only in limited amounts. Seems great for email, Tweeting, web surfing. It seems the best way to use the iPad for content creation currently is the use of outliners (e.g. carbonfin outliner) or mindmaps (iThoughts). Not tons of typing, but very helpful in creating a structure (for a paper, a presentation, etc.) with some beginning content.”
Other possible uses of the iPad in higher education?

• Student Advising
• Lab setting
• Fieldwork
• Research tool
• Tutorial viewing
Other possible uses of the iPad in higher education?

• “My dream would be that every one of my students in a course would have an iPad containing the class textbook, as well as my "reader," which contains articles and templates/worksheets for their use throughout the course. ...We would, then, have established a paperless learning environment.”

• “The big unintended consequence was using the iPad for student advising...The intimacy of the iPad, combined with its clear screen, makes it ideal for one-on-one interactions with students.”

• “We've almost completely ignored the research side of higher ed... I find GREAT utility for the iPad for research. People can use it to fill out surveys, we can use it to store data (imagine not carrying around 100 print surveys or consent forms or whatever)...
What improvements and suggestions do you have for future software/hardware

• Improved projection options (added to iPad2)
• USB Port
• Camera (added to iPad2)
• Support flash
• Ability to create content
• Printing functions
• Improved stylus capability
Do you support broader adoption of iPads for faculty and staff?

Percentage, N=29

- Yes: 48
- No: 17
- Unsure/Neutral: 35

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Do you support broader adoption of iPads for faculty and staff?

“I'd purchase one for every faculty member who wants one, no questions asked.”

“I don't think that there should be broader adoption of iPads for faculty and staff yet. First, I think that the tablet technology is relatively new. So, although the iPad is innovative and exciting, there may be other brands that will do similar things with less cost. Additionally, I don't think that the money for iPads should be expended unless there is a known pedagogical advantage to using them in our teaching and our students' learning.”
iPad Study Video
In reviewing your original goals for participating in the study, please reflect on how well you think you've achieved those goals.

“So, yes, the iPad has helped me pry open the window in that brave new world….”

“So, I feel that I came out way ahead when I look back at my original goals.”

“Above all, participating in this study has made me think more creatively about my teaching and more aware of the potential ways using new technologies might strengthen it.”
Conclusions

• The functionality of the iPad needs to be improved to make it a viable instructional tool

• Further investigation of eTextbooks

• Explore student use of the iPad

• Continued support for interdisciplinary faculty collaboration
Recommendations

• Expand study to include students
• Provide more opportunities for faculty to work collaboratively
• Monitor trends in tablet computing
• Further explore potential of eTextbooks
iPads at USF: One Year Later

• Talks to the USF community by Ken Yoshioka on iPads in education
• Digital Media and Learning iPad2 study with faculty and students: ipad2.wiki.usfca.edu
• Inkling Tech Talk
• Innovation Teaching Program