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6 students, 6 iPads, 60 photographs: A Qualitative Study of Undergraduate Information
Practices in the Mobile Landscape. Online Northwest, 2012. Corvallis Oregon, February 10,
2012.

Presentation Script

AMD
Introduction to the talk

<SLIDE 3 -- transition to "about iPad studies">

MM Script
I'm sure every one of you can think of an iPad study you've read or heard about recently. Since
we started doing this research, people have been sending us links to news articles and blog
posts about other iPad studies. These studies fall into some broad categories.

<Slide 3>.
First, numerous studies focus on the iPad as a **textbook substitute**. In these studies,
students are loaned the iPad for the duration of a class. The study pictured here is from Notre
Dame in 2010. Students in a business class use iPads with one of the goals of being to see if
iPads support going "green" – if they can create an e-publishing infrastructure that'll let them go
paperless – the iPad would ideally take the place of the textbook and other paper-based course
materials. Reed College all texts for a political science class were on iPad. And of course,
we've all heard about iPad's new iBook textbooks.

<Slide 4>
Second, there are studies that focus on the iPad in the **classroom**. These are not just about
replacing the textbook, they are also about examining learning outcomes in one or more
classes. Students are usually given the iPad for the duration of the class. This example shows
Penn State's Technical Writing program (2010), using iPads for group assignments in a math
class at Pepperdine,

<Slide 5>
Studies that focus on **faculty.** These are much more likely to involve handing out the devices,
rather than loaning them. The studies are usually focused on a particular classroom application
or on revising a class to include tablets in some way. EXAMPLES: Study pictured - Western
Illinois "faculty innovators iPad cohort" Faculty learning Community to explore innovative
teaching and learning with Apple iPad (2010- present); other institutions with faculty iPad
studies include Trinity College (Melbourne, Australia); Reed College and the University of San
Francisco http://uits.iu.edu/page/azxr

<Slide 6>
Many colleges and K-12 schools are handing out iPads to **all students or to cohorts** of
students. While there is probably research being done as a part of some of these programs, it's
not always described. The example in the photo is Stanford U med school. They're handing
them out, encouraging students to go paperless and then doing surveys to see how many
people do. Other EXAMPLES include: Seton Hall (all students); University of Maryland (to

students in a digital production/programming class – 2010 – part of a "mobility initiative");
University of Minnesota (College of Education and Human Development - given to all freshmen
-- news release calls it the "largest research based iPad pilot project in the nation. 450 students
and 38 faculty and staff involved with the first year experience in fall 2010)

<SLIDE 7 -- transition to "about *this* study>

AMD
<Slide 7>
So while there are lots of studies out there about iPads in education, we wanted to take a step
   back and ask what would our students do with an iPad, if they could use it any way they
   wanted??
• How they would fit the devices into their *existing* practices?
• How they would *change* their practices because of the device.
We decided to do an exploratory study, using a case study approach -- really, a "lets see what
   happens" kind of study.
While we didn't want to structure the students' experience with the iPad, we did want to be
   intentional and thorough in our data gathering -- using three different qualitative methods to
   gather different types of data: interviews, logs/diaries and the photos we're talking about
   today.
There 3 major factors we had to consider in study design:
1. Our thinking was heavily informed by research done by others in the areas of Everyday Life
      information seeking (ELIS) and information practice. It just made sense to us that a
      device that users personalize AND that is mobile and can come with them almost
      anywhere - would affect their everyday practices as much or more than their formal
      "information seeking" practices. So while we care if they use the iPad to search for
      journal articles, that's not all we care about. To really explore this, though, we wanted a
      group of students with complex information needs.
2. The work out there on ELIS frequently draws a Work/Life distinction, but we expected that
      with our group, things would be more complicated than that. We expected that there
      would be significant blurring between their "personal" "academic" and "professional" lives.
      This made it even more important to design a study that would go beyond "how does this
      help you with school"

So we're thinking about "information very broadly here" anyway - the information practice
   literature gives us some models to understand information in this broad way. But we also
   want to keep our minds open to the ways that they use the devices that might not even fit
   into the way we understand "information" going in.

3. The ideas of ELIS are heavily informed by sociological theories that suggest that we need to
      understand the habits, preferences and practices that people bring with them to a new
      situation, if we're going to understand how they deal or adapt to that new situation on their
      terms, instead of ours.

One thing we found useful here was an old blog post by Lorcan Dempsey - talking about our users' "flow" -- how understanding things like how they work out, how they commute, how they clean house, will show how information fits into those "flows" and will allow libraries to position themselves in a way to fit into those flows. A more useful and complex way of thinking about how to "be where our users are"

For all of these reasons, we believed that it was essential that the students own the devices themselves -- we talked to some people who participated in the classroom studies described earlier and to a person they said that their students took good care of their devices, but didn't personalize them in any significant way when they were loaners. We had also seen many examples of libraries buying an iPad for their staff to play with and people bringing it back saying "I just don't get it" - when they didn't have the chance to personalize it, buy apps, move things around, etc.

Challenges.
- How to balance the importance of making the iPad a personal device, with the risk of having them not complete the study activities?
- Ethics - would subject agree to do things they wouldn't ordinarily agree to because the possibility of reward (the iPad) was so great?

<transition to "about our 6 students>

MM
We chose to use a case study methodology because it was a good match for our research questions. We wanted to investigate how students would or would not integrate the iPads into their everyday life information seeking behaviors. Case studies are good for research questions that begin with "how" or "why." Case studies also are good for gathering detail, contextual information about "contemporary, real life situations." This approach matched our project very well. As Anne-Marie said, we chose a multi-modal case study method that included interviews, usage logs, and auto-photo-elicitation, which is the focus of this presentation. Anne-Marie will describe this piece in more detail in a few minutes.

6 students = 6 cases.

We could not reasonably do a random recruitment of students, because we really needed to know that the few students we worked with would be responsible enough to follow through will all the steps of the research process. We had to be careful - we had to select cases in a way that would maximize what we would learn over the duration of the study.

<Slide 11>

After talking about this research with people on campus, we realized that it would be beneficial to working with a specific program. We chose Bioresources Research (BRR) for several reasons… The program is:

      a.Interdisciplinary not just biology or math majors – not just Honors College – this gave us a broader diversity of students

      b.Research-focused. We wanted to make sure all of our subjects had multiple experiences with research. All of them do a major research project with a mentor to graduate. It was important to us that they understood research on many levels and they do, from seeing and participating their mentor's research and conducting their own research. We were interested in getting students who understand the importance of rigor in research, so they would do all the stuff we wanted them to do in our study. BRR students are exemplar cases in that they self-select into the program because of an interest in research.

      c.BRR students all have a required library class, so we knew there would be that common experience and that they had some background in using library resources. .

<Slide 12>

To be certain we chose the best participants we worked with the BRR directors/ advisors to identify 6 students. Wanted at least 4 to proceed.

<Slide 13>

Here are some quick basic facts about our 6 amazing students. 3 are seniors, 2 are juniors, and 1 is a sophomore. 4 are native Oregonians from various parts of the state (2 have international backgrounds), 5 are iPhone users and all of them remember life without a computer.

To give you a sense of the students' voices, on the handout are some quotes from the students. They are responding to the question "what was the first piece of technology that really felt like yours?"

<transition to "about the iPads>
MM
<Slide 14>

One of the important pieces of this study is that the iPads are theirs to use during the study and to keep afterwards. These are not "loaners" This was an important aspect to us, because we knew from experience that people treat loaner devices differently from something they OWN.

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The iPad 2 was new. We bought the devices as close to the beginning of the term as possible 16 GB, Wi-Fi enabled (we didn't spring for data plans) and we allowed the students to choose which color they wanted – we were somewhat surprised that 3 of them chose white.

<SLIDE 16 - transition to "about the photographs">

On your handout, there's a quick guide to a photo elicitation study, and that actually describes the "what" of what we did with this part of the study. We are doing four interviews with students over the course of the two terms, and the third of the four was focused on photographs.

- We asked them to take photographs that illustrated how the iPad fit into their daily life. We shared the concept of "flow" with them to encourage them to think about it as broadly as they wanted to.

- We gave them a three-week window at the end of fall term, but many students also included photos from the intersession. As it turns out, that was a good thing. We did decide to add a second round of photos so that we would also have one more focused on school-time.

- We also asked them to write a bit about each photo to as a memory aid. Some took this quite literally, doing no more than renaming the photos, while others wrote an essay.

- We did not specify format or device (for taking the photos).

- We ended up getting 62 photos; two students submitted a few extra.

<Slide 17> So why do photo elicitation?

Basically photo-elicitation occurs whenever you use a photo to get more out of a research interview. These can be photos you provide, or photos the subjects bring with them. In our case, we did what is called "auto-photo elicitation" - when the subjects take the photos themselves.

Many benefits to it - 3 illustrated here by our photos.

<Slide 18>
To replace shadowing. In most case studies, you balance information-gathering methods where the subject is reporting on their experience (e.g. interviews) with direct observation. The mobile nature of these mobile devices made that impossible. Therefore, we had to come up with data streams that would give us some of that observational perspective. While this isn't the same as shadowing, coupled with other methods it provides some of the same balance that shadowing does.

These photos show how the photos allowed us to "see" things in our subjects' lives we never could have seen otherwise. Stranded on the pass; traveling.

<Slide 19>
Photos can also provide a way to see things through the subject's "eyes" (and vice versa, if the researcher provides the photos). This helps us, as faculty, understand things about student

culture that aren't a part of our everyday life. Or it just helps us, as people with one set of experiences, understand our subjects who have another set of experiences. Example. They talk about using it in class - when I picture class I picture the class I teach, 25 students, etc. The photo brings me onto their page.

<SLIDE 20>
Finally Qualitative research is inherently collaborative -- the subject has more voice and agency than they would on a survey, etc. Some forms, like the case study, are even more collaborative. In this exploratory study, it's really important to us that we don't set the full agenda - that we give our students a voice and a choice in what we talk about. The photo method builds that in.

There are a lot of themes coming up in the study. We will just be touching on the themes that are illustrated/ enhanced by the photos.

<SLIDE 21 -- transition to "about the themes that are illuminated by the photographs">
MM
<Slide 22> {Map} Mobility is more complex than we originally thought – Clearly this theme is about taking it with you everywhere, whether that's on the bus to campus, in Portland, or at the coast, or on a plane to Puerto Rico.
One of the students told us that her iPad is "never far from my hand." While this is something of an exaggeration, the iPad definitely makes it easier for students to connect in more places.

<Slide 23>{Empty pack} But mobility is also about what you don't take…one of the students showed us this empty bag because he was showing us that he didn't have to take extra notebooks, graph paper, colored pencils, and note cards since he has been using his iPad.

<Slide 24>
Mobility is also about choice. These students think about what they need to do everyday, and decide whether to take their laptops or their iPads. If they have a lot of writing to do, they generally choose the laptop, but if they are going to class and studying, they choose the iPad. At home, they use both. The iPad becomes an auxiliary or second screen for them to have their assignment pulled up while they work, or to look up things, or to use as a music player.

Because they are not tethered to large computers, or even heavy laptops, they have tended to use new spaces to connect – they can use campus locations like the student union and the comfy chairs in the library. They can also move away from needing a power outlet, because the iPad has such good battery life.

Another aspect of mobility is that students found themselves using chunks of time that they couldn't use before. Because the iPad was light and easy to power up, the students found that they had it with them and could pull it out quickly whenever they had a few minutes. In contrast, if they had their laptops, they wouldn't try to get those out and powered up for chunk of time under half an hour.

<Slides 25, 26>
Flow/ Wi-Fi connections. Most of the students have a flow with their iPads where they only think about using them when they are able to connect to Wi-Fi. A couple of the students have figured out how to get around that limitation and pushed themselves to find new ways to use the iPad outside of the Wi-Fi environment. For example downloading TED talks to the device to listen to when they were not Wi-Fi-connected, and downloading maps ahead of time to use in the car. They planned ahead.

<Slides 27, 28>

Just Google It. This is a theme that has been coming very strongly out of the interviews - that their first step when they have a problem, need information, want to know how to do something, what to make the iPad do something - is to Google it. They use apps, but they're not usually their first thought. "There's an app for that" - not really their thing. (even though 5/6 of them have iPhones).

It's related to Wi-Fi, because when they're tied to Wi-Fi, then Google always works.

Now, this of course, we chose because it's an awesome photo. There probably isn't an app for playing the Guiro. But we also have photos where they've googled recipes, class-related information and other things that are available in apps.

When they do use apps it is because they want the iPad to take another form (like a piano), to DO something (photo editing), when they're free and when they are recommended by people they know.

<Slide 29, 30 >

 Email. This is another theme that 's been strong in the interviews, starting from the first week with their iPads. It's true, email didn't used to be in their flow. They're not sitting in front of a computer all day like people with jobs are. They might be carrying a computer, or check in with a computer, but for the most part they're not going to sit down and fire up a laptop just to do email. Similarly, they do have constant access with their phones, but they either don't like email on the phone or they don't know how to use it. With the iPad, email is in their flow. They check it several times a day and every one of them said they are more responsive, more caught up, and less likely to miss important information when it comes over email. It's become a normal channel for them to check in those down times that Margaret was talking about.

These Photos show one of our subject keeping caught up with work email while in PR. Another only uses the cafe area in the library between classes, to check email and BB on the iPad. And the last photo we have is the ONLY one provided of the students in their research space. This student is at a place in research where there's a lot of things to tend, with

downtime between activities. The iPad is important to her in the lab, because she can, wait for it, stay caught up on email.

<Slide 31, 32> Personal assistant.

This is an example of how a theme can be enhanced by the absence of something in a photo. These next two slides are the only photos in the entire set of 62 where the students intentionally used the iPad in a social way; with other people.

<Slide 33>
In these four it was mostly to use the iPad to show something to a friend or family member. One of our subjects used it on a winter break trip to Grandma's to show her photos -- it was also because he thought she'd get a kick out of the cool device. This one is from another subject whose brother was interested in seeing it. He didn't have Wi-Fi, though, so not much got showing. One of our subjects had a mother in love with Angry Birds, but she didn't know the game - just the merchandising. So our student thought the iPad would show the game better than the iPhone. And in this last photo, one of our subjects brought it along to show friends.

In these, the uses were a little more intentional. The top photos represents the whole family using the ipad to watch videos from Mexican television. The photo on the right is an artistic recreation of a study group where the iPad was passed around. The student who took this photo remarked that it was easier for the whole table to see the iPad flat on the table than it would be to see a laptop, and that it was much easier to pass around.

Finally, the last photo is the just google it recipe - two of our subjects wanted to cook an unfamiliar dessert, so they googled the recipe and propped it up in the kitchen.

The significance of this is that, for most of our students, this IS a highly personal assistant. As Margaret said, it's never far from them, and it's something they tend to use themselves, not in a social or collaborative way.

It is interesting, that there is also a theme emerging from the interviews that knowing other people with ipads is really important - but using them together isn't something we've seen very much of. We expect we are going to have to think about social and collaborative uses in a more complex way than "sharing the device"

<slide 34> Questions?
As we said, this is just one piece of a larger study that's still ongoing. We definitely have a lot of questions we're still answering. Now, let's answer some of yours.