

## PILOTed Newsletter – December, 2005

The 2005 ECAR (Educause Center for Applied Research) Study of Students and Information Technology, available at: (<http://www.educause.edu/LibraryDetailPage/666?ID=ERS0506>) depicts how college students use technology today:

- IT and technology are ubiquitous
- Students prefer technology in moderation in their courses
- Students are comfortable with some core technologies but lack proficiency in some key skills
- Students view technology as supplementing curriculum, not as integral or transformational.

In this issue of PILOTed, we interviewed Robert Kvavik, a co-author of the study. He is associate vice president at the University of Minnesota and has published extensively, increasingly on the impact and organization of information technologies on institutional services.

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**It is not surprising that a study of college students showed that they use computers and other digital devices for academic, social, and entertainment purposes. To you, what were the most surprising findings of the ECAR study?**

We hear all this hype about digital natives and millennial students, and then find that they only had a moderate preference for technology in the classroom. I was surprised that they were not more aggressive about the

use of technology. When you look at the qualitative data, they want to be linked in the network, but they want a lot of face-to-face time. At this point, technology is not pedagogically transformational. It makes some evolutionary changes in the way students are taught, so the students may be thinking that if there isn't that much of a learning difference they'd prefer the faculty just do what they do best and what they are most comfortable with, which is to be in front of them.

I was also surprised that so many students had access to broadband, 90% but that may be a function of the sample, a group under 25 and who look very much like traditional students. Perhaps if we had more Associates Degree or Community College students the results might look very different.

Another surprise might have been that the results do not vary much by the institutions, nor by grade point average, which may be the typical ways we measure ability; that the use of IT transcends this, that students have an innate ability to work with and learn technology regardless of academic performance.

### **What can you extrapolate from them?**

I think the fact that technology has not had a transformational effect on teaching is a short-term issue. It's not surprising that the short term payoff is in transactional efficiencies for institutions. To rethink how you teach is a tougher nut to track, but there

is a lot of innovative stuff going on. The use of CMS's in universities has just been what, about seven years? It hasn't been a long period of time. As faculty becomes more aggressive in using new techniques, we should get a much bigger payout. Simulations, for example, we haven't been able to measure the payoffs yet, but I suspect we very well might.

It's not that tech doesn't affect learning, it's that we are only at the beginning of seeing how tech can be used in support of that goal.

There are innovators doing really great things. One of the things all the students seem to like is having instantaneous access to data that they can use to solve problems. Search agents can do that. One woman was involved with a class that put a camera on a kite, that gave students with tablet PCs instantaneous information and pictures about the topography. In real time they could ask questions to a geologist as to how that topography was formed.

It's the live experiential learning that they really relate to.

**Under the heading of conjectures, one mentioned in the study is that college will become a place where digital natives come to mature. That they know how to use technology, but not always for some defined purpose. Can you elaborate?**

We find that unless there is a requirement to use spreadsheets, or PowerPoint, they don't use it and thus don't know how to use it well. Instead, they use technology for entertainment and communications. To use it for analysis, organization, collaboration, and presentations, that's something we should build into the curriculum. I think the employers have those expectations. There are disciplines that do this better than others, like engineering and business, where the expectations for using technology are set higher. If you take graphics and multimedia, when the students learn them, they learn them out of a personal interest but it's only a small subset who use them with any amount of sophistication.

One of the interesting things with Google is when you ask a question, you always get an answer. But you don't know if it's a good answer. So how do you show students how to sort that and digest it so they can tell the difference?

One of the things is that these students have more and quicker access to information than our generation did, but there would be a great benefit to learning how to winnow it out and apply it in a sophisticated way to a problem.

**Was there any indication that students are rebelling against any older or analog methods of instruction, such as textbooks or lectures?**

Not now, a lot depends on the faculty member. I once had a colleague who we scheduled at 8 in the morning to keep the number of students in his class under 500. . Twenty years later, alumni still remember the school by remembering their class with him. But I'm not sure he could use a cell phone. If he had had to use technology it would have been a disaster; he could never have used this technology but he was just a fantastic teacher

Technology isn't a panacea, it can make some teachers better, but it could make some good teachers worse. In the survey, students would complain that they wasted 15 minutes while the professor was trying to hook up a projector. Some students complained about PowerPoint. But if all a professor does is just take all of his notes and feed them into

PowerPoint, it's a bad class. While others can use PowerPoint to make a presentation come alive.

**Why do you think significantly fewer students (40% vs 49%) obtained broadband access outside of the university in 2005 vs just a year earlier?**

I don't really know. There is only one explanation that I've heard that makes sense, but you need to take it with a grain of salt. You can go into an off campus apartment building, one person buys a network, and everyone shares that link.

What came up is that when they are connected off campus, then they can do things that the university won't let them do, for example they can't use a cool email address like hotlips@mnu.edu, but they could use hotlips@comcast.net.

At one point Higher Ed invested a ton of money in modems, and today they are not used at all. Perhaps at some point we don't need to be providing the kids with network access, it might be cheaper for them to just have a cable line in the dorm that gets them Comcast service, that way they get greater freedom but are not in our network, using up our bandwidth.

As one colleague pointed out, if you see an enormous spike in the network, you should not assume it is a scholarly thing that has caused it, it's more likely something like a new movie.

Of course, all of this is pure speculation.

**The survey reported that students, in general, like their course management systems. Do you think this is a due to universities making great choices in CMS's, or that any CMS is better than what they had in High School, or somewhere in between? And how do you see this evolving?**

I don't think it makes much difference what the school buys, people are happy with all of them. The real value is convenience. To the extent the faculty uses the CMS so that students can take sample tests, access readings, contact the professor, and submit assignments; the CMS has made it easier for the students. The biggest complaint is that the use is not consistent, it's only used in about 20% of the classes in a lot of the institutions. Why in one university, would the Poli Sci dept decide not to use the CMS at all while the history dept is 90% using it? Students do not like the inconsistency.

Some of the students said that the university should make it obligatory for all the faculty to use it in all courses.

Students said they learned more, not because the CMS was such a great learning tool, but because when you make it easier to communicate and get information, you have a positive effect on the learning experience.

Why don't more faculty use the CMS? Faculty will say it's more work and they are not getting paid for it. Actually it is more work. In another ECAR study, Glenda Morgan of the University of Wisconsin found that the features that the faculty used were mostly the administrative features, the features they used least were the pedagogical ones where you

had to think about how to use it. You get the mindset, “I’ve been teaching for 30 years, I get good evaluations, what’s in it for me to start using this thing.”

One interesting qualitative result is how students’ expectations changed. Students love the ability to email their professor and get a response back. But what they don’t understand, and then what they complain about, is that if they email the professor at 2:30 in the morning, they’re not going to get that 10-minute response-time, because the professor has long since gone to bed.

**It seemed that the biggest negative factors regarding the CMS were instructor knowledge and the reliability of the CMS. Are there interventions you would recommend or will these issues work themselves out over time?**

There is a real merit in training and making it easy to transition to the CMS. You have to provide incentives and take the front-end costs out. We haven’t been clever enough about that.

No professor is getting a raise or being denied tenure because they use or don’t use a CMS. The faculty that use it do it out of pride. If this allows me to teach a better class, I’m just going to go and do it.

Really, it’s the same as before technology, teachers who teach good courses generally reside in a culture where teaching is important.

I’m doing a course on separation of church and state. Knowing the amount of material that’s available on the web will make this 3 hour presentation a lot more interesting than anything than what I could do in the classroom 15 years ago. I can bring in a clip of FDR talking on the radio about how he intended to pack the court. I can play actual recordings of some of the debates that were going on at the time. You can make a subject come alive and you can do it in a way that appeals to the particular audience.

**The survey found that many students lacked IT skills that they needed, but learned them as required by their curriculum. It would seem to me that if students are learning the skills as required, there doesn’t seem to be a strong case for IT remediation. Do you think this is a problem that needs to be addressed or can institutions focus on other issues, like students who don’t have college-level writing or math skills?**

If you’re learning a new technology, you should have training in supplemental skills. Students come with email skills, but still need training in the many areas that they don’t know. There is an enormous amount of peer to peer training going on. A lot of institutions have set up effective learning commons, students can come in at any hour and sit down at a terminal designed to teach them a particular piece of software. Emory has a great program at their Cox center.

Maybe one person just needs the rudiments of creating a presentation in PowerPoint. But if I’m going to do 5 presentations in a month, it’s important for me to know how to put one together fast.

**The study indicated that students are on the computer 11 to 15 hours a week. That seems awfully low. I have a college age son, nieces, and nephews. Most of them seem to be online for 25 to 40 hours a week. I see their IM handles online and, once they wake up, by noon or so, they are almost never not-available when I message them.**

I think they are on more. We changed the question a little this year. We are going to ask more specifically about the number of hours. I think that was a fault of the survey.

**What differences do you think you'll find in, say, 4 years?**

Right now we are finishing 2006 survey questions. The technology changes quickly, now we are putting in questions on blogging and social networking we did not ask in 2005.

What I'd like to see is for technology to have a direct effect on the learning experience. I'd like to see 50% say that instead of the 12% of today. Four years might be ambitious, but it's a good target.

I think a lot of the findings from the survey are not new information, but it puts the findings on an empirical base instead of based on a lot of anecdotal information. It gives a little of a 10,000 foot perspective of the state of the practice.

Participating universities get to compare the results of their students against the national pattern of change. What do my students look like and how does that compare to what happens nationally. This becomes valuable when you think of how much universities need to invest in technology and what they get from their investment. This is a way for them to get valuable information on something that they are spending tons and tons of money on.

## **About Mitchell Weisburgh:**

Mitchell Weisburgh is Managing Partner of Academic Business Advisors, LLC. He has over 20 years experience running training and education companies. He has written over 100 course manuals on both technical and soft skills. He publishes the PILOTed Online Learning newsletter (<http://nl.pilotonlinelearning.com>), runs the Westchester Online Learning Consortium, and is on the Board of the Westchester Chapter of the ASTD.

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