

Addressing 9 Trends in Campus Technology

Fredrick Miller

Associate VP for Information Technology
Illinois Wesleyan University

A copy of a newsletter named “EduExec” landed on my desk recently. An article talking about “Trends and Trials in Campus Technology”¹ caught my eye. It provides an interesting framework for thinking about technology initiatives at Illinois Wesleyan University. Following are the nine headings from the article, along with a brief description of how the university is addressing (or not) that technology topic.

1. *Taking it to video*

We’ve been providing network video streaming for some time, although our Internet bandwidth does place limits on the numbers of off-campus users that can view real-time events like commencement. We’ve also noted a rising use of digital video for student projects. Students from various majors can often be seen waiting for digital video stations in Ames and Buck as end of a semester approaches. Our current data storage capabilities are a limitation and a concern. IT has proposed a network file system to simplify file storage of items such as digital video data.

There are additional digital video capabilities to consider. We could think about providing video for campus surveillance using the network, but have no plans to do so at this time. We also have done some limited testing of desktop video conferencing using Apple’s iChat software, but have no plans for network based video conferencing capabilities at this time. Should the University move in the direction of needing more video conferencing, we would need to be concerned about resource limitations for support and training.

2. *IP telephony comes of age*

IT looked at IP telephony as part of our telephone switch upgrade review last summer. We concluded, and our consultant agreed, that the university had no need for IP telephony at this time since almost all of our telephone switch users are on campus. In the future IP telephony to off-campus may provide an opportunity for long distance savings, but those savings are not yet a realistic alternative. Our upgraded telephone switch has IP telephony capabilities, and we bought eight IP phones as part of the upgrade. (It was cheaper to buy the upgrade with this equipment than without.) IT has not had time to test the new IP phones.

Student use of University phones continues to decline. It appears that most students now bring “long distance” cell phones to campus. This trend has also reduced the University’s long distance revenues. Recent traffic studies show that we can reduce the number of T1 lines used for external phone traffic by 40% (i.e. five T1 lines to three; each T1 can carry 24 simultaneous calls.) This could provide savings to add Caller ID for incoming calls to faculty and staff phones (student phones would require additional phone switch hardware.)

3. *Developing e-learning capabilities*

The University, and the TLTR in particular, has had considerable discussion about e-learning over the years. I know of no plans to develop a pure e-learning course at Illinois Wesleyan. We do support some e-learning tools in support of traditional classroom instruction.

Our existing e-learning toolset is part of the University’s My.IWU portal (i.e., Luminis.) These tools have improved over the years, with course based file sharing the most recent addition. The biggest limitation we have with the Luminis courses tools is the lack of online testing. We have looked

at other Course Management Systems such as Blackboard and WebCT. These work with Luminis, but are expensive. We are watching the Sakai Project with interest (<http://www.sakaiproject.org>). The Sakai Project is an open source course management system developed by Indiana University and other academic institutions.

In addition to e-learning tools for instruction, the University licenses on-line tutoring modules from ElementK. These modules provide on-line training for standard office software such as Excel, Word, Powerpoint, Photoshop and other applications used by the University community. ElementK is one of our most expensive licenses, and we are planning another assessment of its use for the Fall 2005 semester.

Finally, there has been some discussion about using e-portfolios to help with the University's assessment of student outcomes. Educational Studies currently is using student created web pages for student portfolios. There is some faculty interest in making an e-portfolio a general education requirement. IT has begun looking at e-portfolio systems; of particular interest is OSPI, the open source portfolio initiative (<http://www.theospi.org>).

4. *Smart purchasing and e-procurement*

The University has done little for smart purchasing and e-procurement. This will require investigating Banner's purchasing capabilities, as well as considering centralized University purchasing.

5. *Upgrading the network*

Internet use is growing. The University's current Internet connection contract expires in October. When we do our next contract the University should increase its Internet capacity without incurring additional cost.

IT staff have begun considering the need to replace our existing network electronics. Our last network electronics upgrade was a three-year project that began in the 2001-2002 academic year. We recommend that the University plan to begin replacing the campus network electronics in the 2007-2008 academic year. We also need to consider how wireless networking fits into our overall network plans (see #8 below.)

6. *Protecting against threats*

Network and computer security continues to need attention from IT staff. We spend considerable resources protecting the campus from computer viruses, spam, spyware, and denial of service attacks. IT staff continue to pursue ways to make our efforts more effective, and less disruptive. The campus authentication system installed last summer gives us increased ability to secure our campus network. We continue to work to improve security for both on-campus and off-campus network access. We have ongoing initiatives to provide more secure e-mail services, intrusion detection, and Virtual Private Networking (VPN) for selected network services.

Redundancy and disaster preparation are high priority in IT planning. Plans for summer 2005 include burying the above ground cabling that connect the University network and phones to the rest of the world, providing redundancy for the campus authentication system, and improving battery backup for campus servers. In addition, we will upgrade software in network electronics for improved reliability and functionality.

7. *Reengineering business practices*

The University continues to devote considerable resources to reengineering its business practices. The recent creation of an additional systems analyst position to help lead the review of the Development

Office's information system policies and procedures is one example. Other targeted efforts to review and reengineer business practices include billing and accounts receivables, the new web content management system, payroll, the Registrar's curriculum audit system, residential life systems, the library's digital asset management initiative, and more.

8. *Cutting the cord*

The office of Information Technology is continuing our efforts to architect a way to add secure wireless network access to our campus infrastructure. Existing wireless networks in the Ames Library and Hansen Student Center are not secure, and are open to anyone who has a wireless card in their computer: whether affiliated with the University or not. IT staff are testing VPN access. VPN access should let us provide secure, authenticated access to wireless networks on campus (similar to the wireless security used at the University of Illinois.) When we have a secure wireless access solution, we can begin extending wireless access to other locations on campus.

While the University has not deployed a campus wireless solution, we are seeing instances of students and others on campus deploying their own wireless hubs. In some cases, these unauthorized wireless access devices have disrupted network traffic in university residence halls. IT staff are encouraged to see that the issue of wireless access has been raised as part of the University's strategic planning process.

9. *Investing in human assets*

This trend calls for more training of IT staff, yet on a per person basis, Illinois Wesleyan provides adequate financial support for training its IT staff. Where Illinois Wesleyan needs to improve is the number of IT staff. There is ample evidence that IT is severely under-staffed compared

to peer institutions. The EDUCAUSE COREDATA survey, the COSTS project, and Consortium of Liberal Arts Colleges' surveys show Illinois Wesleyan's IT staff size below the 25th percentile for liberal arts colleges. Our recent IT helpdesk survey showed a large percentage of students dissatisfied with IT support, in particular the speed of service. If the university expects to continue to have effective technology resources it will need to increase its investment in the number and quality of IT staff.

Conclusions

Considering its relatively small staff size, the Illinois Wesleyan IT staff are doing a commendable job keeping current with IT trends on campus. There is much work to be done. It is our hope that the University's strategic planning process will help the university make the correct decisions for providing the quality and quantity of technology services needed for our campus community to be successful.

¹ "Trends and Trials in Campus Technology: Nine Issues Your Campus Must Address", EduExec, April 2005, V24, no 4.. pp 1, 3-4.
http://www.magnapubs.com/pub/magnapubs_ad/24_4/