Good Things Come in Small Packages
The ultra-mobile devices are here! Teaching, learning and collaboration will never be the same. p. 30

Business Intelligence
Project Management

Your Help Desk: Guaranteed ROI

MIT Visionary on the New ‘Openness’

Mini-Device Roundup

Are You a Technology Innovator?
Enter to Win! p. 23
We don’t know much about Molecular Biochemistry. But when it comes to technology, we’re quite educated.

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Are you a 2009 Campus Technology Innovator? Tell us about your campus technology solutions! See page 23.
The Era of Innovation

Nothing spurs creativity like dire need and urgency. Just ask our president.

One of my favorite books is Jonathan Alter’s The Defining Moment: FDR’s Hundred Days and the Triumph of Hope (2006, Simon & Schuster). Though it may be a great deal more relevant today than it was when it was published, I came upon the Newsweek editor’s tome before I had heard much about then-Sen. Barack Obama, let alone witnessed his ascension to the presidency during a period in history that may turn out to rival the Great Depression.

Given my nature (impatient, and always impressed by any ability to innovate past stumbling blocks), it’s not surprising that the book left an indelible impression upon me. It’s all about how our 32nd president, descended from a dynasty of activists and charged with the mission to rescue a nation swirling into despair, tried every creative, out-of-the-box solution he or others could come up with, to make a difference—and make it quickly.

In fact, it was Roosevelt’s resolve to try anything and everything—without fear of failure (“The only thing we have to fear is fear itself”)—that impresses me most. Certainly, this fearlessness must be a mark of some form of greatness, for the trait is shared by so many of history’s innovators, including so many intrepid explorers, inventors, and researchers, most of whom struggle against time and lack of resources. And it will fall upon our 44th president, as well, to do the impossible with little more than the visions he and his cabinet can conjure up, and with no real models or benchmarks by which to navigate. This kind of scenario is ripe for missteps, misfires, and mishaps—and true innovation.

Yet what better environment and impetus for every possible form of innovation, including those previously unimagined technology advances taking place right now, on your own campus(es)? We know that these initiatives, too, are often fueled by little more than imagination, drive, and urgent need, which make them all the more inspirational.

That’s why, here at Campus Technology, we once again are set to kick off our Campus Technology Innovators Awards on Feb 1. This special program is designed to recognize you, the campus technology innovator, and to motivate the technology dreamers and activists to come. The Innovators program culminates in our July Innovators Awards ceremony in Boston at Campus Technology 2009, followed by our August in-depth editorial coverage of the winners’ technology initiatives. This year, as last year, look for our Innovators to join our 2009 conference track presenters and other speakers, as they share with attendees their forays into new frontiers of higher education technology exploration.

Add your name to the list of those who make technology dreams reality, even in these most challenging of times! See our 2009 Campus Technology Innovators competition Call for Entries on page 23. And to find out more about Campus Technology 2009, head to www.campustechnology.com/summer09. You have nothing to fear but—well, you know the rest. We want to hear from you! CT

—Katherine Grayson, Editor-In-Chief
What is your opinion on this issue?
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UPCOMING EVENTS

February

FEB 18 - 20  
Society for Applied Learning Technology  
New Learning Technology Conference  
(www.sallt.org/fl/orlandop.asp)  
Orlando, FL

FEB 22 - 27  
The Data Warehousing Institute  
TDWI World Conference  
(www.tdwii.org/education/conferences)  
Las Vegas, NV

FEB 23 - 25  
Gartner  
Gartner Wireless and Mobile Summit  
(www.gartner.com/it/page.jsp?id=669708)  
Chicago, IL

MAR 2 - 6  
The SANS Institute  
SANS 2009  
(www.sans.org/sans2009)  
Orlando, FL

MAR 4 - 6  
California State University and California Community Colleges  
Secure IT 2009  
(www.securityconf.com)  
Los Angeles, CA

MAR 8 - 11  
National Association of Campus Card Users  
NACCU 16th Annual Conference  
(www.naccu.org/2009)  
Orlando, FL

MAR 13 - 17  
National Association of College Stores  
CAMEX 2009  
(www.camex.org)  
Anaheim, CA

MAR 15 - 18  
League for Innovation in the Community College  
Innovations 2009 Conference  
(www.league.org)  
Reno-Tahoe, NV

MAR 20 - 22  
American Society for Information Science and Technology  
Information Architecture Summit  
(www.isasummit.org)  
Memphis, TN

MAR 22 - 25  
The Community College Foundation  
TechEd 2009  
(www.techedevents.org/2009)  
Ontario, CA

April

APR 4 - 7  
American Association of Community Colleges  
89th Annual AACC Convention  
(www.aacc.nche.edu)  
Phoenix, AZ

APR 13 - 16  
American Association of Collegiate Registrars and Admissions Officers  
AACRAO 2009 Annual Meeting  
Charting the Path to Institutional and Student Success  
(www.aacrao.org/chicago)  
Chicago, IL

APR 19 - 22  
Association for Information Communications Technology Professionals in Higher Education  
38th Annual Conference and Exhibition  
(www.acuta.org)  
Atlanta, GA

APR 20 - 24  
RSA Conference 2009  
(www.rscconference.com/2009/us)  
San Francisco, CA

APR 26 - 29  
Association of College and University Auditors  
2009 Midyear Seminar  
(www.acua.org)  
Austin, TX

APR 26 - 29  
United States Distance Learning Association  
USDLA 2009 National Conference  
(www.usdla.org/2009_Conference/)  
St. Louis, MO

>> For more events, go to:  
www.campustechnology.com/mcv/events/eventcalendar/

>> To submit your event:  
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Opinion

- **USB Device Nightmare Becomes Reality**
  A year ago I wrote a fictional account of how malware can be transferred between USB memory devices and a PC. Now, the nightmare has become reality. [www.campustechnology.com/articles/2008/12/usb-device-nightmare-becomes-reality.aspx](www.campustechnology.com/articles/2008/12/usb-device-nightmare-becomes-reality.aspx)

- **Communities of Learners Redefined: Customized Networks That Impact Learning**

Case Studies & Interviews

- **NCCC: Data Cleansing Key to Managing Growth**
  Niagara County Community College (NY) is using technology to cleanse its burgeoning enrollment data. [www.campustechnology.com/articles/2008/12/nccc-data-cleansing-key-to-managing-growth.aspx](www.campustechnology.com/articles/2008/12/nccc-data-cleansing-key-to-managing-growth.aspx)

- **IT Automation Speeds Process Management at Indiana U**

WEBINARS


ON DEMAND!

**Google Search for Your School**
What you need to know and consider when deploying a scalable search solution.

**Education Learns the Benefits of Archiving**
Experts offer tips for archiving and managing high-volume, user-generated content like e-mail.

**Selecting and Implementing Web Content Management at the University of Minnesota**
Secure access to sensitive information, while at the same time granting your constituents access to the information they need. Here’s how.

**Improve Student Recruitment and Retention—Affordably and Efficiently**
Using class-capture services to expand and enhance instruction without adding facilities and resources.

**Open Source IT Monitoring: Trends and Case Studies in Higher Education**
From cutting costs to better managing the IT environment, experts discuss the benefits of open source over proprietary solutions.

NEED TO KNOW

**State College Wireless Coverage Effort Dies in South Dakota**
In South Dakota, an effort by the Board of Regents to implement pervasive wireless on all six public campuses has fallen victim to the failing economy and employee lobbying. The Board of Regents sent an e-mail memo to university administrators and regents, announcing the suspension of what was called the Mobile Computing Initiative, owing to a lack of funding. They did, however, encourage individual schools to implement wireless networks on their own. Read more at [www.campustechnology.com/articles/2009/01/05/state-college-wireless-coverage-effort-dies-in-south-dakota.aspx](www.campustechnology.com/articles/2009/01/05/state-college-wireless-coverage-effort-dies-in-south-dakota.aspx).

You Told Us

- Is your IT organization more focused on energy-efficient technology now than it was a year ago? (70 respondents)
  - About the same 40%
  - Less 13%
  - More 47%

Weigh in on our latest poll at [www.campustechnology.com](www.campustechnology.com).

Top Stories

- **Facebook Still No. 1 Among College Students**

- **Growth of Market for Videoconferencing, Video Streaming, and Lecture Capture Driven by On-Campus Students and Worried Workers**

- **IT Security: Expect More Misery in 2009**

- **Gartner: Enterprises Are Getting More “SaaS-y”**
  [www.campustechnology.com/articles/list/news.aspx](www.campustechnology.com/articles/list/news.aspx)

Security Focus

**U North Carolina at Chapel Hill Launches Mobile Alarm System**
UNC-Chapel Hill has launched the Rave Guardian personal mobile alarm system to provide students, faculty, and staff a direct connection with campus police. When triggered, the application can automatically send the user's picture, mobile number, and personal information to public safety officers. [www.campustechnology.com/articles/2009/01/05/u-north-carolina-at-chapel-hill-launches-mobile-alarm-system.aspx](www.campustechnology.com/articles/2009/01/05/u-north-carolina-at-chapel-hill-launches-mobile-alarm-system.aspx)
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BOOSTING THE BARS. At Ave Maria University (FL), getting a cellular connection was difficult—even with four major carriers operating in the area. And, explains University Operations Manager Wally Hedman, “Cellular coverage was a safety issue. We needed cellular service inside the library building, and we needed to be able to reach resident occupants via cell phone in each of our dormitories, in case of an emergency.” Rather than live with the poor coverage or wait for the cellular vendors to expand their coverage, the university took matters into its own hands. Using ADC’s (www.adc.com) InterReach Fusion system, Ave Maria boosted coverage and brought the cellular signals of all four carriers indoors, with an in-building distributed antenna system. Now, the cellular signal is always strong, even inside newly constructed buildings with walls more than two feet thick (architects designed Ave Maria’s campus to stand up to Florida Gulf Coast hurricanes). The system allows coverage for existing campus facilities and will scale with the planned growth of the institution.

14,000 NOTEBOOKS SUPPORT UW E-SCHOLARS. During each of the next four years, the University of Wisconsin-Stout will deploy to students about 3,500 HP (www.hp.com) notebook computers with accessories, software, network storage, e-mail, web page space, and wired and wireless access. The technology is considered essential to student success and is offered as part of the university’s “e-Scholar” program. E-Scholar Program Coordinator Jane Henderson explains, “The e-Scholar program is included in the undergraduate tuition so that UW-Stout students are provided with the tools that they will need to be technology-literate in this environment.” Read more at www.campus technology.com/articles/69797.

REACH MORE, FASTER. Reaching the greatest number of students in the shortest time possible was top priority as campus officials at Pacific University (OR) built out the university’s emergency notification system. The university’s “Boxer Alerts” system now automatically includes Facebook (www.facebook.com) and Twitter (www.twitter.com) accounts in its e2Campus solution from Omnilert (www.omnilert.com). That means that the university can send e2Campus alerts to campus constituents simultaneously via Facebook and Twitter, without the need to log in to the sites separately, and at no extra cost. In addition, students who have not yet enrolled in the school’s official alert system may still receive the alerts through the two popular social media outlets. Omnilert notes that Pacific was the first school to integrate those social networking sites with the e2Campus mass notification service.

ENTERPRISE INTEGRATION, SIZE XXL. The University of Nebraska and the Nebraska State College System have selected PeopleSoft Enterprise Campus Solutions (www.oracle.com) to replace a legacy student system from another vendor. As a joint project, the college systems will implement the Oracle software at the four campuses of the University of Nebraska and the three campuses of the Nebraska State College System, providing integrated services—registration, financial aid, grades, billing, and more—to a whopping 49,700-plus students. CedarCrestone (www.cedarcrestone.com) will complete the implementation.

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SAFETY FIRST. This past summer, DePaul University (IL) implemented 225 Axis Communications (www.axis.com) network cameras in its residence halls, to ensure the safety of its students and property. The school’s two main Chicago campuses are interwoven with surrounding residential and commercial communities, making security a top-of-mind issue. The IP video technology enables the university to review incidents of interest occurring at any residence hall, from one central location; a video management system from Milestone Systems (www.milestonesys.com) and five centralized servers have replaced the need for individual digital video recorders at each residence building. Read more at www.campustechnology.com/articles/2008/12/depaul-replaces-analog-cameras-with-axis-and-milestone-ip-based-system.aspx.

KEEPING ON TASK. Syracuse University’s (NY) Information Technology and Services department has deployed the TeamDynamix (www.teamdynamix.com) project and portfolio management software, to manage IT projects, meet university goals, and make sure that work gets done on time. The web-based solution provides a single, centrally located view of the ITS organization’s work from budget, resource, and progress perspectives.

GREEN HD. The Los Angeles Community College District has chosen the LifeSize Communications (www.lifesize.com) HD videoconferencing platform as part of a comprehensive environmental initiative to take each of the nine LACCD campuses off the energy grid. The district’s campuses are distributed across a service area of more than 882 square miles, and some district decision-makers were driving upwards of 60 miles or more to attend meetings. Now, real-time HD video has given them a cleaner, more efficient way to communicate, and is helping offset those commuter miles. The district’s future plans include expanding the HD video network for distance learning purposes.

INTELLIGENT RECRUITMENT AND RETENTION. Slippery Rock University (PA) is using the SAS (www.sas.com) Enterprise Intelligence Suite for Education to improve student learning and success, meet performance goals, and obtain state funding. The software automates enrollment reports, allowing staffers to access information from their desktops, including up-to-the-minute data on new enrollment, quality performance measures, graduation rates, retention, registration, orientation participation, and enrollment broken out by gender, race, and religion. The system also helps the university market itself to prospective students more effectively, by targeting regions from which students are more likely to enroll. Slippery Rock is also working with SAS to predict which factors create successful students.

WSU’S E-MAIL security solution is catching a half-million spam messages every 24 hours. University has deployed Proofpoint’s (www.proofpoint.com) SaaS e-mail security solution. Proofpoint on Demand is now catching over half-a-million spam messages per day, blocking them before they reach WSU’s various downstream mail servers. The system will scale to accommodate continued growth, without WSU having to invest in new hardware or worry about capacity-planning issues.


CA ACQUIRES EUREKIFY. CA (www.ca.com) has acquired Eurekify (www.eurekify.com), a provider of privilege, role, and policy management solutions. Eurekify’s compliance- and role-based-identity management technology will be integrated into the CA security software portfolio.

SECURITY TECH PAIRING. McAfee (www.mcafee.com) has acquired enterprise security solution provider Secure Computing (www.securecomputing.com). Beyond consolidating the companies’ security solutions, McAfee plans to utilize Secure Computing’s Trusted-Source technology to expand intelligent “in-the-cloud” security services for an additional layer of defense.

For daily industry news, go to campustechnology.com/mcv/news/
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BEYOND ACCESS

What’s behind quality education? According to MIT’s Vijay Kumar: openness.

By Mary Grush

n the book Opening Up Education (The MIT Press, 2008), Vijay Kumar, his co-editor Toru Iiyoshi, and contributors explore the realm of open knowledge. Here, Kumar, MIT’s senior associate dean and director of the Office of Educational Innovation and Technology, tells CT how open education reveals and shares pedagogy along with content resources, taking us beyond access, to educational transformation.

We’ve heard about open content, but how does open education or open knowledge differ from that? At times we have talked about opening the doors to education, or making educational resources more accessible. We have talked about open content or open resources, and about open standards. But open education, or an open knowledge ecology, is the open sharing of not just educational resources, but also of practices and pedagogies that underlie the content and resources.

This kind of sharing leads to a very participatory and generative form of education where people actually co-produce educational resources, actively reviewing and giving feedback to improve educational practices—revealing what is usually kept tacit, that which lies underneath the content and materials. It’s a scholarship around teaching and learning that’s about putting up everything that leads to the production of educational resources. So, it goes far beyond just making educational opportunity more accessible, to making what’s behind quality education much more visible. That is really important if we want to make productive and sustainable change in education.

What are some examples of institutions pursuing this? Being at MIT, I like to point to OpenCourseWare [ocw.mit.edu] as a very significant movement in bringing the world’s attention to all this, because what we put out there is a snapshot of basically all the courses at MIT. But still, what you see is the content and structure, rather than the thinking behind the courses—so we really have only begun to share the pedagogy that led to the production and delivery of the courses.

And it’s not just MIT anymore, but several other institutions as well that are beginning to share similar information. In the OpenCourseWare Consortium [www.ocwconsortium.org] there are now about 200 institutions. Other examples of open resources and practices that have been widely shared include content repositories like MERLOT [www.merlot.org], or in K-12, Curriki [www.curriki.org].

These are all initiatives tending toward open education, but there is much more that has to be done to find ways to share more of the pedagogy along with the content. One clear example is a tool kit that the Carnegie Foundation [www.carnegiefoundation.org] has developed in its Knowledge Media Lab, called the KEEP Toolkit [www.cfkeep.org]. It allows people to share the motivation and pedagogy that goes into educational innovation. It’s an important step toward the goal of open knowledge.

Connexions [www.cnx.org] is another interesting project that’s been underway for years at Rice University [TX], where there’s a corpus of materials and a community of scholars in specific disciplines who are creating, selecting, and annotating materials. And OpenLearn [www.openlearn.open.ac.uk] at the Open University in the UK provides access to open education resources,
You talked about an open knowledge ecology. Is this coming about organically in a sense, or is it something that will require a lot of top-down development? The world today is highly distributed, very localized, and very participatory. Many things happen despite organizations and governments, but we do have schools, institutions, and governmental agencies which, in our current world, have roles and responsibilities such as creating capacity to meet the needs of a growing knowledge economy, making sure that industry is well-served by employable graduates, or ensuring that individuals’ needs for education are being met. All these agencies need to understand a world where there is extremely decentralized production of information; the amount of globalization and “flat-worldness” that we hear about is significantly on the increase, and there is much greater mobility. I think that the development of open education is going to be neither strictly top-down nor completely distributed. But it’s the force of this very distributed, connected global and mobile world that will be a very important factor in driving open education.

How does open education take advantage of Web 2.0 technologies, and how does it fit in with established programs like distance learning? When we talk about distance education, we typically consider standard mechanisms like delivering education via video. Often, we take the education that we are delivering in traditional forms on campus and just broadcast it with some degree of interactivity. But if you really want to deliver excellent quality, you have to start to think about a combination of open resources and network-based delivery. You use Web 2.0 functionality, and this becomes the central modality by which you deliver quality education at scale. There is no way that you are going to meet the demands of quality at scale any other way, particularly in the context of developing countries.

Would you say there is a nexus of open knowledge and Web 2.0? Yes, indeed. In fact, a lot of what we refer to as Web 2.0 becomes a very important part of this: the tools and facilitators of the intent of open knowledge. When we talk about sharing, we are talking about communities of practice and learning. It is all that Web 2.0 points to; it’s about collectivity. People are collectively viewing, reviewing, critiquing, and constructing knowledge based on Web 2.0 resources and tools. This is about the whole educational service, using open technologies and architectures to create localized communities, communities of knowledge sharing, and communities of learning. That’s the open knowledge vision.

How would you think globally about open education trends? Sometimes we talk about open education transformations at the micro level—how disciplines can change with blended practices; how learning in physics can improve by sharing good practices through open courseware and other open education practices. But then you move to a global conversation and context, and the considerations change. I can speak particularly about India as I have served as an honorary adviser to India’s National Knowledge Commission (www.knowledgecommission.gov.in). India is a country with a booming economy and a need for knowledge workers in practically every sector. How do you address the needs for education at that mammoth scale?

This is where you can take advantage of the open education movement by not just looking at all the content and best practices available, but also by leveraging the participation of experts and communities of learning so we can move toward an ecology that allows you to scale excellence. When we think about countries that are growing in a hurry and trying to participate in the global economy—usually we refer to them as developing countries—they have tremendous needs for skilled human resources. And for them, what open education brings is the ability to address new knowledge and continuous knowledge updates, while simultaneously providing general education at a scale we in the US can’t even imagine.

Do you think it would be helpful for colleges and universities to include an open education component in their formal strategic plans? Absolutely. I think it is the most vital thing institutions have to consider. Today’s economic realities press institutions to look urgently beyond what has been business as usual. We’re facing a climate that requires a re-orientation of practices and a rethinking of operational models, to deliver relevant education. Still, it is not simply that this has the potential to change the economics of education; it has to do with quality. By sharing pedagogy, critically reviewing it, and making that work much more visible, we can bring the practice of research into education and move collectively toward better practices and educational transformation.
Help Desk Is Spelled: R-O-I

You finally got those funds for new technology. To achieve your best return on investment, let your help desk ‘market’ technology smarts to users.

PROTECTING YOUR INSTITUTION’S TECHNOLOGY
assets and resources is all about maximizing return on those investments—and that means driving users to take full advantage of new technology rollouts, and not sapping or overburdening help desk resources because users are not fully versed in and encouraged to use the new tools. That means you’ll need to consistently push effective technology use to your technology users. In other words: Get your help desk behind ROI!

More Than a Tad of Help
That’s just what Louisiana State University IT help desk pros have been doing—sending a message to students. And their mantra is: Don’t be a Tad. That message, which implores users to learn from bad examples set by a bumbler named Tad, appears in cartoon advertisements on buses, billboards, and posters all over campus, and implores students to use technology wisely. Two recent ads, for instance, have highlighted Tad’s experiences after failing to install antivirus software on his laptop, and the consequences he faced from his involvement in a phishing scandal. (LSU’s Don’t be a Tad campaign was recognized with a 2007 Campus Technology Innovators award; www.campustechtechnology.com/articles/2007/08/2007-campus-technology-innovators-protecting-personal-data.aspx.)

According to Brian Voss, the school’s vice chancellor for IT and CIO, the campaign was designed specifically to get students to take advantage of an outsourced credit-monitoring service from Equifax (www.equifax.com) and antivirus technology from Symantec (www.symantec.com), to keep endpoints secure. “In order to make the hardware and software pay off, we need to add a critical third element: ‘humanware,’” says Voss. “This is delivered via a variety of means, but in the end it stands for employing efforts that inspire others to make effective use of IT.”

Voss is not alone in his mission: In fact, this kind of help desk marketing effort appears to be a growing trend on campuses across the nation and around the world. With national economies everywhere hitting new lows, now more than ever it’s vital for higher education institutions to demonstrate that technology investment in the help desk is providing a positive return on investment. Schools such as National-Louis University (IL) and the London School of Economics in the UK recently have launched concerted marketing initiatives, as well.

Still, perhaps no campaign anywhere in the realm of higher education is as creative as LSU’s, where the effort launched in 2006 when one of Voss’ colleagues in the IT department suggested that the help desk devise a cartoon character to market new technologies and promote more responsible behavior online. The campus
The Lumens DC260 represents the first ever generation of multimedia HD capable visual presenter. Equipped with a dedicated powerful processor, the DC260 will thrill and amaze even the most sophisticated consumer with such features as a 1080p HDMI output for a large screen flat panel high definition display, audio and video processor for a full frame video recording to SD card, ultra sharp 3x optical zoom, unparalleled true SXGA output with extended gooseneck, and a double lamp design to provide optimal lighting. And the output images and video quality are amazing! The DC260 is easily the most power-packed portable visual presenter on the market today!

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Improved Design: A new glossy piano-key white finish for the body is just the beginning. The DC260 is now available with a 22-inch gooseneck to capture larger or wide-angle subject matter. What's more, the DC260 includes dual cold-cathode lamps on the gooseneck to illuminate objects uniformly from any angle. It also incorporates a rectangular base that is tucked away in the right-hand corner of the working surface — instead of directly in the middle of the working surface. This unique design frees up the instructor's mobility so that they will be able to interact with the students face-to-face instead of trying to see through the camera device.

Features to Make an Instructor’s Life Easier: With the patent pending “Half-page” mode, instructors can use the “Half-page” key to toggle the captured page from full page to top half page in larger print to bottom half page in larger print without moving the actual paper. With the “Picture-by-Picture” mode, an instructor can compare and contrast live shots against previously captured ones side-by-side. Equipped with built-in microphone and internal memory storage, the DC260 can store up to 240 JPEG images. It also supports external SD memory cards for full frame audio and video recording. Instructors can now record the entire lecture and share it later. Built-in slide show capability can play back audio clips, images, and videos directly to the connected HD display monitor or projector.

High Speed connectivity to Windows and Macintosh: USB 2.0 High Speed supports the highest USB 2.0 specification for fastest connectivity to Windows PC and Macintosh. The DC260 also supports WIA and TWAIN standard for Windows and Quicktime for Macintosh directly for image and video capture without 3rd party application.

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icon “Tad” was born when the first advertisement debuted later that year. Since then, the LSU help desk has run nearly a dozen Tad ads. Voss says the campaign has “worked wonders” raising awareness about new services.

And it turns out that Tad has friends. As the school has added numerous tools and technologies, the IT department has built help desk marketing campaigns around other cartoon characters, too. Moodle (www.moodle.org), the school’s new course management system, is now depicted by a cartoon bison in a Superman costume, while cartoon monkeys have become symbols for general technology problems. Late last year, the school even printed T-shirts emblazoned with, “Fear the Monkey, Don’t Be a Tad.”

“The whole idea of these efforts is to make students stop and pay attention to what technology is available to them,” Voss says. “The more they know about, the more they’ll use, and the better our ROI will be.”

Learn While You Lunch
While LSU’s in-house help desk marketing efforts focus on students, a new campaign at National-Louis University is targeted at staff and faculty. The initiative, dubbed ‘Lunch ‘n’ Learn,” comprises a series of monthly get-togethers during which faculty and staff members can receive tutorials on emerging learning technology areas such as blogging, social networking, and podcasting, to name a few. The sessions take place both in-person and online; on average, about 30 users show up for each. Those users who attend the in-person sessions on NLU’s main campus in Wheeling are invited to bring lunch. Online users, who follow along via Centra Web conferencing from Saba (www.saba.com), are encouraged to eat lunch while they watch, as well.

CIO Bob DeWitt explains that the sessions are designed to familiarize users with new technology—a process that usually begets higher usage levels and therefore greater ROI. “We’re trying to ensure that faculty members are so comfortable with the technology that they’ll use these tools every day,” says DeWitt (who, as an outsourced resource, receives his paychecks from SunGard Higher Education; www.sungardhe.com). “The more people using a particular technology, the more the total cost of ownership goes down.”

This past December, for instance, a Lunch ‘n’ Learn lesson detailed new developments in podcasting. During the session, participants learned how to use applications like Audacity (www.audacity.sourceforge.net) and other audio editing software in which NLU has invested. Beginning with that session, NLU began offering podcasts as a third medium of distribution for Lunch ‘n’ Learn pointers and marketing messages. Users can now download this content on-demand.

Help From Afar
Overseas, even international institutions are thinking of ways to maximize help desk ROI. At the London School of Economics, for instance, help desk services revolve around remote assistance technology from software-as-a-service vendor LogMeIn (www.logmein.com). During a 2008 CT webinar about delivering real-time IT services (see “Web Extra,” below), Amber Miro, the school’s assistant director of IT services, explained the process by which the institution markets this service.

First, upon implementing the technology, Miro and her colleagues branded it “Virtual IT Assistance,” or VITA. Subsequently, the IT department has called attention to the service with colorful advertisements in an IT Services newsletter, and has promoted user groups and demonstrations across campus. At the beginning of the 2008-2009 academic year, London School of Economics technologists organized these demonstrations into an series of “introduction days” for faculty and students alike. Everyone who participated in the demonstrations received a VITA-branded stress ball.

“The whole idea was to tell them that instead of getting stressed, they can get help,” Miro quips. “There’s no point in having good service if nobody knows about it so that they can use it!”

Matt Villano, senior contributing editor of this publication, is based in Healdsburg, CA.

WEBEXTRA

Webinar: How the London School of Economics Delivers Real-Time IT Services to Remote Users Anywhere. This CT webinar, sponsored by LogMeIn (www.logmein.com), deals with the subject of delivering real-time help desk services, and marketing the technology to do it. Access the archived event on-demand at www.campustechology.com/pages/webinars/main.aspx.
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to the development and deployment of a data warehouse and online analytical reporting system delivered through an internal portal the college calls the Institutional Intelligence (I2) portal. Importantly, to reach this milestone, the college laid out several focused projects, each designed to move the institution farther along the BI continuum. Along the way, both project manager and project team members faced hurdles, but they adjusted and learned to focus on outcomes and results instead of rules and hierarchical roles. Here’s how they did it.

Develop a Vision
First, OCCC spent time formulating a vision for a BI program that would be ongoing and would contribute to developing a “culture of evidence.” This overall “umbrella” program, I2, served as the framework from which all BI projects would stem. The program called for improved information quality, reduced manual information compilation and distribution, and decision-making through data. Specific goals and objectives were developed that were then used as guidance for subsequent projects. Laying this framework helped in discussions of priority with institutional leadership, and led to a clear roadmap of projects as the program progressed.

Self-Organizing Teams
OCCC’s project leaders abandoned the traditional higher education team approach that involves a committee of people from across the organization with an unclear stake in the outcome of such an initiative. Instead, to form the core I2 project team, they built a cross-functional team of only seven professionals from across the organization: two from information technology, three from institutional research, and two who represented key stakeholders. Collectively, the team had an intricate knowledge of the goals, data challenges, and information needs of the end users. Given that neither the project managers nor project team members would be released from their everyday roles and responsibilities, the team needed to become “self-organizing.” In other words, team members needed to assign tasks to each other, coordinate and review each other’s work artifacts, collaborate on project activities, make project-related decisions (together), and take on another team member’s tasks when necessary.

While the project managers still had a role in guiding the team, instead of being “task masters” it was more important for the project managers to run interference on behalf of the team, when issues were difficult to resolve or political in nature. Both the team setup and approach were new to OCCC, and as one might expect, the changes were not without glitches at the start. Over time, however, the structure resulted in increased ownership and trust among the teammates.

The I2 team has since evolved to have a high degree of credibility within the institution, and it conducts regular meetings with representatives from across each of the business units to communicate project status, gain feedback on work products, and gather input on future BI initiatives.

Rapid Prototyping
One common mistake many project managers make is that they wait until the project is nearly complete before unveiling it to stakeholders. This is particularly problematic for enterprise BI projects, as managing data and information across the enterprise is more difficult and takes more effort, coordination, and resources than delivering silo shadow systems and point solutions. OCCC combated this by employing a system of rapid prototyping so that the working product could be reviewed and modified over time throughout the project, and not simply at the end. This technique helped to prevent projects from slipping or falling out of scope, as it provided more time to make changes based on user feedback. Certainly, there were setbacks, but rationalizing redundant data and inconsistent business rules in public at the end of the project would absolutely prove embarrassing, and rapid prototyping was one way to minimize the chances of building the wrong solution.

Get the End User Involved
A prerequisite for the rapid prototyping approach is the participation of intended end users on critical project activities. BI projects require much more involvement by end users than do most other projects. Traditionally, stakeholders participate in requirements-gathering interviews, project reviews, and user-acceptance testing. Other than that, the technical developers do all the development work with no involvement from the users. But, besides creating an “us versus them” atmosphere, this limited degree of involvement forces enterprise BI developers to make assumptions that often lead to unsatisfactory results. This is bad enough on projects with well-defined scopes and deliverables, but
on ill-defined enterprise BI projects, where scopes and deliverables are often a moving target, it can be catastrophic. Just think of how many times we hear that business intelligence projects are late, over budget, too costly, too complicated, and that the deliverables don’t meet end users’ expectations and are not utilized.

At OCCC, throughout the life of each BI project, the core project team regularly involved stakeholders from across the institution. From the start, key end users who might be impacted by the project deliverables were identified from each area of the college. Approximately 15 to 20 people formed this larger BI review team and were briefed regularly on the project status. When critical enterprise issues needed to be resolved, this review team served as a fount of business knowledge and a sounding board for the core project team. Most importantly, though, the review team members were provided with structured walk-throughs and access to the evolving prototypes, to allow them to provide direct feedback and validate the data they were seeing. This not only helped to improve the quality of the final deliverable, but also increased the ownership stake of the actual end users themselves.

Plan—and Be Nimble

In the end, a healthy and sustainable BI initiative (i.e., data warehouse, data marts, cubes, reports, dashboards, etc.) doesn’t just happen; it requires careful planning from the outset. Yet, most importantly, it is how projects are defined and managed that will have a significant impact on the initiative’s overall success. Specifically, successful BI project management is about flexibility, skill in interweaving methodologies, and actively engaging stakeholders. Attempting to use a single methodology simply will not work. The traditional linear “waterfall” and “big bang” methodologies, with their rigid order and highly structured teams, are just not agile enough or fast enough to meet the evolving information needs of today’s decision-makers.

OCCC recognized the need to be more nimble as an organization, in order to maximize its investment in enterprise business intelligence.

Clearly, an approach that incorporates a focused, self-organizing team; rapid prototyping of work products; and a high degree of end user participation throughout, will likely yield more rapid results for your institution while at the same time, increase ownership and trust in the output. CT

Graham Tracey is director of higher education services at ASR Analytics (www.asranalytics.com), a consultancy specializing in business intelligence, predictive modeling, and data mining. James Riha is the project lead and chief architect of enterprise business intelligence initiatives at Oklahoma City Community College.

Are You a Campus Technology Innovator?

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To nominate your institution, technology project leader(s) and vendor partner(s), visit: www.campustechnology.com/innovators/

Colleges and universities are discovering that social networking and other advanced web tools are now key to improving student life.

Like fine wines, Web 2.0 technologies get better with age. Gone are the days of the pointless chat room; this is the era of social networking juggernauts such as Facebook (www.facebook.com), MySpace (www.myspace.com), and Friendster (www.friendster.com). Services offered by these firms are helpful in facilitating connections among users in every industry and of every age. In higher education, however, a handful of schools are using social networking services to set new benchmarks for communicating with students. Some of the schools on this list include Middlebury College (VT), the University of Arizona, and Tulane University (LA). Following is a look at how such institutions have embraced these new applications to keep their most important customers satisfied.
Embracing Facebook

It’s hard to believe that about 18 months ago, Bob Jansen, manager of the Middlebury College bookstore, was unaware of Facebook. Today, Jansen is all about the social networking site, having set up a special Facebook page for the bookstore (www.facebook.com/pages/middlebury-vt/middlebury-college-bookstore/7096557396) that now boasts nearly 1,200 fans. More important: He’s leveraged the site to gain a competitive edge, both on campus and off.

In case you’ve been living in a cave for the last two years, Facebook is the wildly successful social networking site launched in 2004 by Harvard (MA) whiz kid Mark Zuckerberg as a way for students (and others) to connect. Today, with 100 million users posting photos, videos, and comments, it’s the most-trafficked social media site in the world. The downside? Only other Facebook registrants approved by siteholders as “friends” can access the content siteholders provide.

Back in 2007, when Jansen first gave the site a gander, he was surprised to learn that 93 percent of Middlebury students were on Facebook, and that most used it daily. Seeing an opportunity to reach out to students on a platform they were comfortable with, he joined the site, created a personal profile, and started promoting the store. Within weeks, he had amassed hundreds of friends.

That initial endeavor was a learning experience. Jansen first signed up under the name “Book Store” — a violation of Facebook rules, which state that members must use their real names. He then edited his profile to tell users more about himself, but cleverly manipulated the space to convey information about the store (www.facebook.com/profile.php?id=507717439&v=info&viewas=6798736477#profile.php?id=6798736477&ref=name). This time, Jansen posted photos of the store, video advertisements, and special discounts to his Facebook friends.

He also used the “update” and “event” features on the page to advertise promotional events at the brick-and-mortar store. The first event, dubbed “Friends of the Bookstore,” was held that April. The parameters of this inaugural effort were simple: Everyone who came in and mentioned the Facebook page received 30 percent off.

“Turnout was amazing,” remembers Jansen, who notes that sales increased 327 percent compared to SDLY (same day last year) on the clothing and gift

Eighteen months ago, the manager of the Middlebury College bookstore was unaware of Facebook. Today, he has set up a special Facebook page for the bookstore that boasts 1,200 fans and is leveraged for competitive edge, on campus and off.

SOCIAL TEXTBOOKING

Web 2.0-driven websites also are impacting students’ access to textbooks. Here are some new student services you should know about.

- **Chegg (www.chegg.com)**
  This online service allows students to rent books for a substantial savings off list price (rental fees vary depending on the text), with the option to buy at the end of the rental period. Chegg also has green appeal: It plants a tree for every book rented, bought, sold, or donated. The company’s affiliate program (open to all users; not just schools) encourages organizations to include Chegg banner links, text links, and search widgets on their websites; in return, Chegg kicks back 10 to 12 percent of sales driven its way.

- **Campus Book Swap (www.campusbookswap.org)**
  Campus Book Swap acts as a bulletin board, helping students buy and sell used textbooks. Students post their used titles with comments and asking price. Books are sorted by school, so students see only those texts listed by others on their campus.

- **Flat World Knowledge (www.flatworldknowledge.com)**
  Mixing tradition with innovation, this open source textbook site allows instructors to select free textbooks that are written by experts and rigorously reviewed. Educators can mix-and-match chapters or add their own materials. Students can select from a variety of formats: print, audio, by-the-chapter, and more. Flat World also offers its own community, where users can discuss the lessons, swap study notes, and learn from the book and each other.
Nine years into the 21st Century, a millennium that many expected to be characterized by the Internet generation, many classrooms at higher education institutions are looking a little...old-fashioned.

Sure, a growing number of institutions have embraced wireless 802.11n. And yes, more and more colleges and universities now boast hardware such as electronic podiums, interactive whiteboards, student response systems, classroom management software and lecture capture software.

Most schools, however, still need to incorporate more IT into their curricula—at least according to the CDW-G 21st Century Campus Study released late last year.

The study, which collected replies from 1,007 student, faculty and IT staff respondents, indicated that when ranked by an index that takes into account 20 different factors, the average U.S. post-secondary institution scored in the mid-range (46.08 out of 100) on technology integration. Ask any college professor: this essentially is a failing grade.

Analyzing Problems
The trouble stems from a gap between student expectations and in-class realities. While an overwhelming majority of surveyed students reported that technology matters most, only 33 percent of faculty members said technology is fully integrated into the educational experience.

Some interesting specific results:
• Students want regular and immediate communication with professors through online chat, but only 23 percent of IT staffs say their campuses offer it.
• Though 85 percent of all responding faculty members said their institutions provide IT training, 44 percent say they don't know how to use the technology.
• More than 63 percent of responding students said they use technology to prepare for class, but only 24 percent said they actually use technology in class.
• Despite the importance of collaboration in the workplace, 73 percent of students don't use Wikis, 83 percent don't listen to podcasts and 88 percent don't use Web conferencing.

What's more, technology resources at many post-secondary institutions spend most of the time sitting idle; 57 percent of faculty members who teach in smart classrooms said they don't use the technology daily.

Juxtaposed with soaring demand from employers for job candidates with technological experience, these findings raise some interesting questions. Why are technology resources sitting idle? Why aren't educators providing what their students want? Most important, what happens next?

Finding Answers
According to the CDW-G survey, some of the answers to these questions may be found by spending more time and money on technology overall.

To serve student needs more efficiently, schools can implement better IT resources for faculty, such as improved faculty training and online chat capabilities. To serve faculty more effectively, schools can emphasize academic applications, integrating education-oriented technologies directly into the classroom experience. To serve IT staffs more intelligently, schools can invest in next-generation tools that will remain modern well into the next decade. Other ideas:
• Monitor which technologies are relevant after graduation.
• Assess what's happening on campus every year.
• Train professors what they need to know.
• Figure out how to incorporate collaborative Web 2.0 tools.

The Future of Learning Technology, a report from the Alliance for Higher Education Competitiveness, indicates that trying to identify worthwhile experiments before they become commonplace is also important. To serve student needs more efficiently or public funding.

Whatever the strategy, it's high time that 21st Century classrooms catch up with the 21st Century. The future is a mix of wireless technology, sophisticated hardware, suped-up software and a commitment to training educators how to incorporate these tools into the everyday learning environment. At this point in history, anything less would be so 1998.

Go online at www.campustechnology.com/21stcenturyskills to read more and to listen to a podcast about one student’s perspective on the 21st Century Campus.
Financial Aid Goes Social

WITH THE ECONOMY IN THE TANK and lending frozen just about everywhere, there’s a great new way for students to find an “angel” to provide funds: a recently founded social networking website called GreenNote (www.greennote.com).

The site helps students turn their personal connections into low-cost loans for school. Students can get money for higher education without any hassle, and lenders (students’ friends and family) get a significant yield on their investment (6.8 percent). Loans can be as small as $100, or as large as full tuition.

Founder and CEO Akash Agarwal says he was inspired by the success of micro-loans in the Third World. “It’s an innovative way for students to bridge the funding gap,” he says. “People are already doing this offline. We’re trying to do this in a much broader, efficient way.”

In addition to providing the platform, tools, and promissory note to make the loan binding, GreenNote works with universities to certify that students are enrolled, and then distributes the money directly to the schools, assuring that no funds from well-meaning family and friends are frittered away on spring break.

According to Agarwal, more than 170 schools are already working with GreenNote, including Stanford University (CA), Santa Clara University (CA), and Occidental College (CA). The company also works with colleges and universities to help them develop programs that educate students about the GreenNote loan platform. Here’s how the program works:

- A student creates a profile on GreenNote.com, detailing her academic goals and career aspirations.
- She shares it with her network of family, friends, and associates.
- Lenders such as friends and family members sign up through GreenNote to help the student attend a specific university.
- GreenNote formalizes the agreement and draws up legally binding docs.
- GreenNote pays the school directly with funds from lenders.
- When the student graduates, GreenNote distributes the student’s payments to lenders, who abide by forbearance policies similar to the largest student aid lenders.

“60-Second Shopping Spree” in October 2007. During this event, bookstore officials randomly selected two lucky students from a batch of 427 customers who showed up to shop for supplies over a three-day period. Just as the clock was set to start, bookstore employees duck-taped the winners together back-to-back, and gave them 60 seconds to conduct the spree.

Jansen videotaped the entire episode and immediately posted it on the store’s Facebook page. Within 12 hours of an e-mail blast about the event, 30 new students were waiting to sign up as fans. “Generally speaking, Facebook promotions cost me nothing, and they are many times more effective than print advertising,” the manager says. “It’s allowed me to connect effectively with students and get our message across.”

Since the shopping spree, Jansen has held other events at the store and he advertises each of them on Facebook. In each case, anywhere from 500 to 700 current students participate. He also has put together Facebook promotions that extend to the school’s e-commerce bookstore website (bookstore.middlebury.edu/sitetext.aspx?id=3553). In some cases, these events have attracted alumni as well.

According to Jansen, the best part of using Facebook to connect with customers is that those students who have signed up as friends and fans can respond to event invitations and post comments, giving him instant feedback on specific promotions or marketing campaigns. “The whole experience becomes much more interactive,” he says of the sales relationship on Facebook. “I also have started looking at people in terms of them being friends rather than customers.”

Moving forward, he’ll continue to roll out Facebook-oriented promotions.

Toward the end of 2008, for example, Jansen installed technology in the store and on the store’s e-commerce website to augment the power of Facebook by creating a customer rewards program. The program, Panther Rewards, allows customers the ability to earn 5 percent cash back on their purchases, and has increased traffic...
Last year, nearly 40 percent of Tulane’s 1,600 incoming freshmen used RoommateClick to find a roommate. Even students who didn’t find roommate matches benefited from using the site by making new friends.

both in-store, online, and to Jansen’s Facebook page as a whole. “My goal is to create a technology ‘engagement vortex’ that over time begins to draw most of the Middlebury College community and events on campus through my networks,” he says.

Housing Without Hassle
Facebook isn’t the only profile-oriented social networking service making waves these days in the world of higher education. At the University of Arizona, technologists are utilizing a similar social networking technology from Lifetopia (www.lifetopia.com) to address a different challenge: room assignments.

The need for this technology was simple. For years, the 5,700 University of Arizona incoming freshmen who live in the campus’s 22 dorms have had the option of selecting roommates before they arrive, or accepting random roommate assignments from the Office of Residence Life. In most cases (those in which students have selected each other) these connections work just fine. In other cases (those in which Residence Life makes the matches) roommate connections can end in conflicts that Residence Life must resolve.

“Students who request to live together are far more likely to resolve their problems on their own, rather than dump on us,” says Steve Gilmore, assistant director of Residence Life. “If we choose their roommate, they look to us to solve those problems.”

Tired of being dragged into these battles, last year Gilmore set out to find a better way to manage roommate assignments. After investigating a number of solutions that didn’t fit the bill, he discovered RoommateClick (www.roommateclick.com), Lifetopia’s fully hosted roommate networking service that costs students $20 per year to use.

For student users, the service essentially provides a community of potential roommates. Here’s how it works: During their senior year of high school, incoming freshmen register with anonymous screen names and respond to questionnaires about everything from their hometown to study habits; personality type to sleep schedule. This information goes into profiles students later can personalize at will.

Once an incoming University of Arizona student has replied to the questionnaire, he or she has access to all of the other University of Arizona profiles in the system. In this pre-qualified community, users can meet each other, start communicating, and make connections. As they get to know each other, users then can request to connect outside the RoommateClick service (say, on other social networking websites or in person), and see if they might be compatible for a potential roommate assignment. They then apply for housing with a roommate request, eliminating the reliance on the Office of Residence Life to make a match.

“The more we can put the students in the position of making their own decisions to room together, the less likely we’ll have to deal with conflicts,” says Gilmore. Although Lifetopia allows him to have input into the questionnaire, Gilmore has opted to remain hands-off, in order to give students more control over the process. “At this point, it’s presented to students as an option they can take advantage of if they want to,” he explains. “We tell them, ‘If you are interested in finding a roommate but you don’t know someone already, here is a service available to you that could give you a little more control over who your roommate might be, rather than accepting a random assignment.’”

While it’s still too early to tell how dramatically the service has reduced housing conflicts, there’s no denying its reach: Out of 5,700 incoming freshmen, nearly 1,000 have forked over the $20 to sign up. A nice plus: The university has seen $5,000 of this $20,000 purse—just enough to cover expenses. The rest of the money goes to the service vendor.

In Louisiana, Tulane University also has had success with this same roommate-finding website. There, Veronica Marquez, housing assignments coordinator, reports that last year nearly 40 percent of 1,600 incoming freshmen used RoommateClick to find a roommate. Marquez notes that even students who didn’t find roommate matches benefited from using the site by making new friends. What’s more, “At least they can say, ‘I looked and I couldn’t find somebody,’” she offers. “That decreases anxiety, and whenever you can decrease anxiety for students and parents, you make everyone’s lives easier!”

Monica Gullon is a Southern California-based freelance writer. Matt Villano is CT’s senior contributing editor and is based in Healdsburg, CA.
MOBILITY

Good Things Come in Small Packages

AST FALL ON THE CAMPAIGN TRAIL. Barack Obama’s use of the phrase “lipstick on a pig” created a minor controversy in the media. It also allowed political science professors at Abilene Christian University (TX) to bring some immediacy to their classrooms. They asked students to use the web browsers on their iPhones (www.apple.com) to track down where the furor began, as well as previous uses of the phrase by politicians.

“It led to a conversation about the role of the blogosphere in the race,” says Bill Rankin, director of mobile learning research and associate professor of English at Abilene Christian. “Students could immediately pull up examples that were only hours old.”

Happily, everyone involved in the assignment had access to the Apple equipment: In an ambitious program launched in September, the university gave out 616 iPhones and 341 iPod Touches to incoming freshmen, and 169 devices to faculty members. (Students pay monthly service charges, so many of those locked into cell phone plans chose the iPods.) And faculty were right up to speed: Besides a basic introduction to the device, faculty members had attended sessions on mobile learning, including all the applications available to them. [Editor’s note: Abilene Christian University won a 2008 Campus Technology Innovator award in the Mobile Learning category, for the school’s iPhone pilot program; www.campus-technology.com/articles/2008/08/2008-campus-technology-innovators-mobile-learning.aspx]

The class survey was a breeze. Abilene’s IT staff had developed tools that allow for quick polling using the iPhones. For example, a history professor could ask students what they considered to be the three most important events of the 20th century. Studying the responses sent via iPhone might lead to discussions about student demographics and perceptions. “You could have done this previously with a paper quiz, but it might take a day to compile the answers and the immediacy would be lost,” Rankin says. “This can be done on the fly.”

by david raths
We may not have the ‘ultimate’ small device yet, but at pioneering schools, ultra-mobile PCs and smart phones are changing teaching, learning, and collaboration.
The decision to use the Apple mobile devices was not serendipitous. All along, Abilene’s instructional technologists had envisioned the iPhones as the next generation of student response systems (more commonly called clickers). Right now, in fact, the instructional technology team is working with student response systems specialist Turning Technologies (www.turningtechnologies.com), to create a product that will allow more sophisticated polling, analysis, and fully electronic student exams using iPhones.

It’s too early to assess the impact of the iPhones on the classroom, but five faculty members have been designated “mobile learning fellows” and with the guidance of the director of academic research, they are studying student usage patterns and the impact on the classroom.

Moving Beyond Laptops

Like other universities across the country, Abilene Christian is responding to the proliferation of mobile computing devices such as ultra-mobile PCs and smart phones, by finding new ways to incorporate them into the academic setting.

According to a 2008 higher education technology report, “The combination of social networking and mobility lets students and colleagues collaborate from anywhere they happen to be. Add to that connectivity the multimedia capacities of phones (and the storage they offer for podcasts, videos, photos, PDF files, and even documents and spreadsheets), and it’s not hard to see why phones are increasingly the portable tool of choice.”

More and more, instructional technologists see the innovative use of mobile devices in the classroom and for fieldwork as key to student recruitment and retention. “The reason students are excited about this iPhone program is not because it’s like getting a free toaster,” Rankin maintains. Rather, “They like it that we are actually thinking about the future of education. We’re saying to them, ‘Come study with us and help define the future of education.’ They like being active participants in that discovery.”

In its mobility effort, Abilene Christian explored personal digital assistants (PDAs) and piloted projects with ubiquitous laptop computing, but eventually decided that the iPhone could leapfrog them both. Campus technologists didn’t think the web browsers on PDAs were good enough. And, “When students open up laptops in class, it can create a physical barrier between themselves and the professor,” notes George Saltsman, director of the Adams Center for Teaching and Learning at Abilene Christian. He adds that students often failed to bring their laptops to class. “But because this is their phone, they bring it,” he says. “They keep it with them for the social aspect. They don’t leave home without it!”

The Campus ‘In the Hand’

Some mobile computing efforts are motivated by a desire to improve communications on campus more generally, before moving into the academic realm. Quinnipiac University (CT) developed the QU Mobile program after administrators noticed a change in student behavior. “They were simply on their cell phones at all times, text messaging,” says Jim Trella, director of IT project management. It was clear that students were no longer using landline phones or the voice mailboxes assigned to them. To stay in touch, campus community members weren’t referring to campus directories; they were devising
their own lists of cell phone numbers.

So, in fall 2005, Quinnipiac administrators decided the university would become, in essence, a cell phone service provider. In partnership with Rave Wireless (www.ravewireless.com) and Sprint (www.sprint.com), the institution began offering students smart phone deals that provided mobile access to several campus-focused applications, including the broadcast alert of emergencies and weather closures, real-time shuttle bus information, and group messaging.

Today, students use QU Mobile to set up texting groups to stay in touch with, for instance, other members of the chess club or lacrosse team. But faculty members have started using it, too. Trella, for one, teaches a computer science course on IT project management and puts his students into a texting group. This allows him to quickly text them about which materials to bring to class, or to communicate changes to the course schedule.

The Quinnipiac physician assistant graduate program was the first academic unit to take full advantage of the smart phones. Program participants had already been using PDAs for two years, but administrators and instructors wanted to transition to smart phones. In spring 2007 the program launched a pilot project, working with IT and the library system to move 50 students from PDAs to Palm (www.palm.com) Treo 700wx smart phones with the Windows Mobile operating system (www.microsoft.com), and three key applications: the Merck Manual (www.merck.com); Essential Evidence Plus (www.essentialvidenceplus.com), a diagnostic tool and dosage calculator; and Lexi-Comp (www.lexi.com), an electronic clinical reference and decision support tool.

It took some time to work through the challenges of installing and registering the applications, and determining who on campus would be responsible for which aspect of support, Trella says, but today all 110 students in the program are required to use the smart phones, and other academic units are studying their use.

**Will Netbooks Find a Niche?**

**Educators continue to** search for a computing device that offers students the portability of a smart phone and the computing power and keyboard of a laptop. Could the recent slew of "netbooks" be the answer? Netbooks are clamshell-style PCs with a 7- to 10-inch screen that retail for less than $500. In the last year, most laptop vendors have rolled out netbook offerings, and while they are seeing strong interest from the K-12 market, they say it’s too early to determine how big an impact the devices will have on college campuses.

“We absolutely believe the netbook is relevant to the higher education market because of its ultra-mobility. It could be used in both traditional undergraduate and grad school settings as a secondary or companion PC,” says Michael Schmedlen, director of worldwide education marketing for Lenovo (www.lenovo.com), which has introduced the IdeaPad S10 netbook. Because of the form factor and attractive pricing, he adds, it also could be used as a primary PC for those in community colleges, or for non-traditional students involved in distance learning.

John Mullen, vice president of sales for Dell’s (www.dell.com) higher education sector, says the initial market for its netbooks will be the K-12 classroom, but he sees them as fitting into a continuum of devices college students may soon own. “The smart phone tends to be for a three-minute web experience, and the full-featured laptop or desktop is for a three-hour content-creation experience,” he says. The netbook falls somewhere in between. Most students leave their laptops in their dorm rooms, so these mini-notebooks could be for the 30-minute web experience and for classroom note-taking, he suggests, and adds that some resellers are asking Dell to offer bundled deals of netbooks and laptops.

Bob O’Donnell, IDC (www.idc.com) VP for clients and displays, notes that the market research firm initially projected that higher education might be a substantial part of the netbook market, but “I don’t see a whole lot of universities buying these for their students,” he says. “They’re not that much cheaper than full-featured notebooks anymore, and I don’t think most college students are likely to buy two notebook PCs.”

George Saltzman, director of the Adams Center for Teaching and Learning at Abilene Christian University (TX), sees netbooks as “misfit” devices. “They are slightly too small to be used for extended periods of writing or design work like a full-powered laptop, yet they are slightly too big to be ultra-portable like a cell phone,” he says. “Ultimately, I think they would end up being left at the home or office most of the time, and that leaves the promise of ultra-mobile computing largely unfulfilled.”

But because college students don’t tend to bring their laptops to class with them every day, the netbook or a similar device could be of interest, insists Amy Campbell, assistant director and head of faculty services at the Center for Instructional Technology at Duke University (NC). The fact of the matter is, “The laptops tend to sit in the dorm room,” she says, “so I could see the potential for these smaller devices as a secondary computer—if the price point stays where it is.”
Richard Ferguson, vice president and chief information and technology officer, explains, “We’re still in our infancy with this, but others in the health sciences, such as nursing and physical therapy, are looking at the physician assistant program with interest.”

The university is developing an off-site, 60-acre marine park and science center, and Trella reports the biology department wants to develop applications so that students can do field research using handheld devices’ GPS and cameras for data collection.

He adds that the library also is quite engaged in working on how to deliver information on handheld devices. The students are clearly committed to using the devices, Ferguson notes. “We could see it as intrusive or as a problem, and push back against it, but we realized we needed to embrace it. We did that at the laptop level and reaped benefits. Now we are reaching down to the handheld level, and the effort is helping with a fundamental shift from a focus on teaching, to a focus on learning—outside the classroom as well as in it.”

Tablets for the ‘Edge’

Besides smart phones, some schools have been experimenting with tablet PCs to boost classroom interaction. Professors at Virginia Tech believe the 2006 shift from a laptop to a tablet PC requirement for incoming freshman engineering students has increased collaboration among students and altered classroom dynamics. In 2008, with the policy in its third year, all freshmen, sophomores, and juniors were routinely bringing their Fujitsu (www.fujitsu.com) LifeBook T4000 convertible tablet PCs to class with them.

According to Joe Tront, professor of electrical and computer engineering, in making the change, Virginia Tech first identified several pedagogical goals including: more active presentations, better note-taking, and greater student collaboration. And to make presentations more active, professors are utilizing applications such as the University of Washington’s Classroom Presenter (classroompresenter.cs.washington.edu) and DyKnow Vision (www.dyknow.com). Tront, for instance, teaches integrated circuit design and has to portray mask layers and parts of transistors.

Because colors are very important to the presentation, representation was something he couldn’t achieve well on a whiteboard. Using Classroom Presenter while talking, however, he can easily draw in varying shades and widths with a stylus.

In his Engineering Design and Economics course, mechanical engineering instructor Dewey Spangler uses Vision in class, three or four times a semester. He has students spend 40 minutes working in groups on a concept; then he asks one team to submit its drawings, which then appear on a panel on all the tablets in class. “There’s no need to run a projector at all,” Spangler says. At that point, he can make notes on the presentation or turn it over to another team, to annotate the drawings. The use of Vision with the tablets “creates an electronic forum,” Spangler maintains.

Outside of class, Spangler’s students use the tablets to collaborate using Microsoft OneNote (a note-taking and information management program), and happily exploit the program whether they are in the same room or across campus from each other. Three-person groups create an IP address for their team and hold remote sessions in which whatever one student writes on her tablet shows up on the tablets of the other two. “They used to write these things out by hand and store them in a paper log book,” Spangler says. “Then they had to meet face-to-face and make paper copies of everything.” The instructor believes his students are now more focused and motivated, because they know their work might be displayed to the class in 40 minutes, not just in a log book that their professor will examine five weeks hence. He also claims the perception of his course is much improved. “Because it’s electronic and they like using the tablets, they are taking it more seriously,” he insists.

As for Tront, he believes the move to tablets affords a true competitive edge, and continues a long-standing Virginia Tech tradition of being aggressive about new technology. “When I was the associate dean in charge of the requirement program in the 1990s, parents would call to tell us how they shopped around to identify where they wanted to send their children; they said that one of the big factors in choosing Virginia Tech was its progressiveness in using educational technology to teach and to prepare students for typical real-world working situations.”

‘Baby’ Boom, and Other Little Things

Brenda Neece, an adjunct assistant professor of music at Duke University (NC), is always experimenting with new ways technology can help her and her students in the classroom and in the field. She relies on the university’s 10-year-old Center for Instructional Technology (CIT) for guidance on new devices to test.
In the fall of 2007, for instance, Neece was looking for a device that would allow her graduate musicology students to perform research outside the classroom. She wanted a portable yet full-featured device that the students could tote to libraries, cathedrals, or museums—anywhere they might encounter ancient music. CIT staff recommended the students try out the Sony Vaio UX Series Ultra Mobile PC (UMPC; www.sony.com). The small tablet PC has a stylus that can be used to create sketches, and a built-in webcam and digital still/video camera. The music department provided licenses for Sibelius music-notation software (www.sibelius.com) for use during the project.

“We called them baby computers,” Neece laughs. But when the grad students were studying manuscripts, the UMPC “babies” were indeed easier to carry around than laptops. At research locations, students used the built-in cameras to capture quick images of sheet music or instruments for later reference. “The device has a surprisingly clear screen,” Neece says. “It’s perfect for students to take to conferences. I’d like to get them in the hands of our undergraduates, too.”

With the CIT’s support, Neece is just one of many Duke faculty members experimenting with mobile technology. Amy Campbell, CIT assistant director and head of faculty services, says there is interest among many faculty for devices that are smaller and can do multiple things. In fact, it is a CIT mission to make cutting-edge technology available to faculty, for experimentation. “Instead of faculty just getting 25 devices from the start,” Campbell says, “we encourage them to borrow something, understand how it could be used, and then make a plan.”

One current project involves a professor of the Hindi language, who has students using iPod Touches to locate internet videos of people speaking Hindi. Then the professor plugs their iPods into a projector and plays what they have found, to generate class discussions. In another pilot project, a nursing professor is experimenting with the use of Asus netbooks (www.asus.com) in a distance-learning program, to increase collaboration between working professionals. (See “Will Netbooks Find a Niche?” page 33.)

Campbell believes that faculty interest in smaller computing devices will continue to grow. “They feel the perfect device for them doesn’t exist yet,” she admits. “Some faculty members have described a device that sounds like a cross between a cell phone and a computer, but with a more usable keypad. We’re still looking for the sweet spot.”

[Editor’s note: Don’t miss “Space Savers,” our roundup of the latest in size-conscious hardware, page 37.]

David Raths is a freelance writer based in Philadelphia.
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Tiny Tablet
Fujitsu’s LifeBook U820 convertible mini-notebook weighs in at just 1.32 pounds, yet offers full Windows Vista (www.microsoft.com) functionality. Half the size of a traditional notebook, the U820 transforms from a notebook to a tablet by rotating and folding down the screen. The device features a 5.6-inch WXGA touchscreen and QWERTY keyboard, an Intel Centrino Atom Z-series processor (www.intel.com), integrated Bluetooth, a built-in GPS receiver and Garmin Mobile PC software (www.garmin.com), and 7.5 hours of battery life (with four-cell battery). The U820 is available with a hard-disk drive up to 120 GB or solid-state drive up to 64 GB. Security features include a fingerprint sensor, BIOS lock, and Kensington (www.kensington.com) lock slot.

Prices start at $1,049 for base configuration. www.fujitsu.com. [Editor’s Note: See “Good Things Come in Small Packages,” page 30, for more on the use of ultra-portable devices in the classroom.]

Compact Multimedia PC
The XPC Pro HD compact multimedia PC from Aurora Multimedia drives smooth multimedia playback, designed for digital signage and A/V system integration. Optimized for high-performance multimedia applications, the PC’s compact design makes it fit easily in public displays, classrooms, and places where limited space and security are a concern, such as podiums, instructor stations, kiosks, and A/V equipment racks. The XPC Pro HD offers multiple video outputs including HDMI, VGA, component, S-Video, and DVI with an optional cable. Price: $2,100. www.auroramultimedia.com.
Handheld Projector
Designed for sharing content on the go, the Optoma Pico PK-101 micro-portable DLP projector weighs only 4 ounces and measures a tiny 2 x 4.1 x 0.7 inches—smaller than many smart phones. The Pico allows users of personal media devices (such as iPods and smart phones) to project pictures and videos onto a screen or wall at sizes of up to 100x larger than the small screen of the source device. It features 430 x 320 native resolution, 1,000:1 contrast ratio, and 1.5 hours of battery power. MSRP: $399. www.optomausa.com.

Portable LCD Projector
The PLC-XW57 portable 3LCD projector from Sanyo weighs 6.4 pounds and boasts a small footprint of 13 x 9.3 x 3.15 inches. Rated at 2,000 lumens, the PLC-XW57 is outfitted with a 200-watt UHP lamp for high brightness and balanced color reproduction. A 3D Automatic Uniformity Correction Control circuit ensures picture uniformity, balancing uneven color and brightness gradations for a more natural image. Fan noise has been limited with Sanyo’s Intelligent Fan Operation Linear Control System, which reduces fan noise according to changes in the unit’s internal temperature. MSRP: $895. www.sanyoprojectors.com.

Super-Slim and Ultra-Bright
The XJ-S47 DLP projector is part of Casio’s Ultra Bright Series, designed for high-brightness applications and mobile presenters. At only 1.69 inches high, the super-slim device offers RS-232 connectivity, 2,700 ANSI lumen output, XGA native resolution, a 2x power zoom lens, and is compatible with Crestron (www.crestron.com), Extron (www.extron.com), and AMX (www.amx.com) products. The XJ-S47 includes a USB port for wireless connectivity through an optional wireless LAN adaptor that allows up to four PCs to connect to the projector at a time. The USB port also supports PC-less presentations with a USB thumb drive. Price: $1,199.99. www.casiousa.com.
whiteboard, and control computer applications without being tethered to a workstation. Users can view notes, presentation indicators, and input from students on the tablet’s LCD screen. They also can view student response data, requests for help, and control all standard SRS features when the device is used with Qwizdom’s Student Response System. Price: $429 ($300 when purchased with a Qwizdom SRS). www.qwizdom.com.

Pico-Portable Power
At 3.3 pounds, Mitsubishi’s pico-portable XD95U DLP projector blasts a bright 2,200 ANSI lumens and XGA resolution. For easy setup, color-wall support enables users to select a particular surface color (including light yellow, light green, blue, pink, and blackboard); once the color is chosen, the projector automatically adjusts its output to create the best possible image for that background. The XD95U’s quick-cooling instant shutdown feature allows presenters a rapid exit, accommodating tight classroom schedules. MSRP: $1,495. www.mitsubishi-presentations.com.

Solar-Powered WiFi
The Meraki Solar is a WiFi mesh device powered by its own solar panel and solar-charged lithium iron phosphate battery. Completely energy independent, the Solar can provide WiFi coverage in hard-to-wire areas without easy access to power supplies. Each unit is self-contained and ready to mount on roofs, walls, poles, and anywhere that receives sun exposure—no electrical cabling required. Meraki’s web-based Dashboard management system ensures that connectivity across the WiFi network is optimized and reliable. Priced from $848-$1,497, depending on the size of solar panel required. www.meraki.com.

Education Netbook
Designed for education, the IdeaPad S10e netbook from Lenovo combines the portability of a small and light PC device (starting under 3 pounds) with internet, word processing, and multimedia functionality. Users can utilize the device to connect to the internet for online research, or share ideas and converse via e-mail, social networking, and other applications. A built-in webcam on the 10.1-inch display enables video messaging. The Quick Start feature allows students to quickly check e-mail, browse the internet, conduct videoconferencing, view photos, or listen to music without having to fully boot the operating system. Prices start at $459. www.lenovo.com.

Space-Saving PC
Designed for space-constrained offices, the OptiPlex 160 from Dell is the company’s smallest commercial desktop system, weighing less than 5 pounds and featuring a space-saving design with innovative mounting options. The PC offers an energy-efficient internal power supply, up to 160 GB hard drive or up to 64 GB solid-state drive, optional wireless networking, up to 4 GB of memory, and a low-voltage Intel Atom processor. Contact vendor for pricing. www.dell.com.

Network-Ready Visual Presenter
The AVerVision SPB370 Platform Visual Presenter from AVerMedia combines a 5 megapixel camera sensor and 1080p HD output with real-time 30fps video speed. The 20x AVer Optical Zoom provides clarity when zooming in on small details or text, with a total zoom capability of 160x. The SPB370’s networking capability enables users to connect to and view a live presentation through a school’s local area network, and presenters can allow the document camera’s features (such as annotation, zoom, or image capture) to be controlled by remote LAN participants via a web browser. A full 8 x 11 inch lightbox accommodates the presentation of slides, transparencies, negatives, and X-rays in a clear, large format. MSRP: $2,999.99. www.avermedia-usa.com.

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Help Desk 411

Whether institutions outsource or run their own help desks, most question how they can make sure the services they provide are effective. “You need to take time to step back and look at who really is using your services and how,” says Bill Bradfield, CEO of PerceptIS (www.perceptis.com), a provider of customer support services to higher education. The following findings from PerceptIS’ study of its own client data may provide some valuable insights.

Most help desk inquiries come from faculty and staff.

It’s a common assumption that help desk services are created for and used by students. But PerceptIS found that nearly 60 percent of four-year college and university help desk contacts—including telephone, e-mail, chat, and other communications with help desk personnel—are in fact initiated by faculty and staff. At community colleges, the percentage of student use of the help desk increases; with less residential housing, there is less immediate peer support at community colleges—and so more use of the help desk by students. But in general, help desk volume is not overwhelmingly dominated by students.

Help is where you find it.

Whether it’s a faculty member feeling more connected via telephone, or a student who would rather fire off an instant message, you will most likely want to prepare for a wide range of “help” options. Bradfield comments: “A one-size-fits-all approach to service is an inadequate value proposition. People want to get help in the manner that is best suited to them. That could mean a phone call, a chat session, a web form, an e-mail, self help, self service, or the emerging phenomenon of crowdsourcing—whatever means is most convenient and most comfortable for end users. More and more, you will need a quiver full of arrows when it comes to support services.”

Faculty and staff prefer telephone calls; students favor electronic messaging.

Of the help desk and self-help options open to them, users go for a comfortable fit. PerceptIS noticed that students opt for electronic messaging (e-mail, chat, etc.) by far, over telephone contact with the help desk. Faculty and staff, on the other hand, will most often call for assistance. That means it’s a good idea to staff the phones with people who can deal with high-end customers. And what about new highly touted self-help services (use of a knowledge bank and/or other resources, as opposed to personal contact)? PerceptIS noted that faculty rarely if ever use self help, and students use it only a little more than that—data that correlate interestingly with an industry-wide data point from the Help Desk Institute’s 2007 Annual Survey (www.thinkhdi.com): Only 3 percent of inquiries get resolved at the self-help level!
Show and Tell

LG is changing the face of education.

Think of it as a digital chalk board, a projector, a map of the universe, a periodic table of the elements, a movie screen, a microscope, a telescope, and a global video conferencing center - all in one. Encourage imagination and expand knowledge with LG commercial grade products. A wide selection of LCD and plasma displays (up to 60 inch class) are available to fit your needs. Best of all, with the remote jack pack all you do is plug and play. And explore the world at large.

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For superb projected images in even the tightest spots, look no further. SANYO’s revolutionary new PLC-XL51 boasts the world’s shortest projection distance*. At approximately three inches away from a screen, it can throw a large 80-inch XGA image at an eye-pleasing 2700 lumens. The PLC-XL51’s new optical engine allows images to be projected vertically or horizontally. This means you can set it up on a wall, ceiling or floor - or even have it rear-projecting from under a table. In education, the PLC-XL51 offers countless new ways of projecting your message.

**LARGE SCREEN FROM REALLY CLOSE-UP**

For superb projected images in even the tightest spots, look no further. SANYO’s revolutionary new PLC-XL51 boasts the world’s shortest projection distance*. At approximately three inches away from a screen, it can throw a large 80-inch XGA image at an eye-pleasing 2700 lumens. The PLC-XL51’s new optical engine allows images to be projected vertically or horizontally. This means you can set it up on a wall, ceiling or floor - or even have it rear-projecting from under a table. In education, the PLC-XL51 offers countless new ways of projecting your message.

**A Range of Flexible Set-up Options**

The short throw distance prevents on-screen shadows.

- Networked
- Optional Pedestal for rear projection under tables
- Ceiling mount for multi-projectors
- Wall mount for multi-projectors

**THE ULTRA-SHORT THROW PROJECTOR**

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*As of Sept, 2008. Photos are simulated and do not represent actual quality.