21st Century LMS p. 34 ■ Social Media Marketing p. 16 ■ Warranties p. 23

CAMPUS TECHNOLOGY

Empowering the World of Higher Education

April 2012

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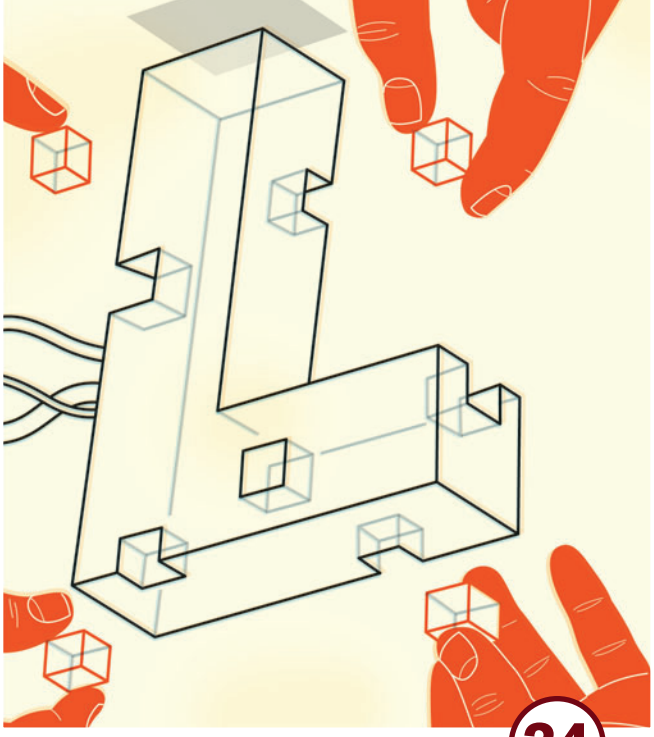
Contents

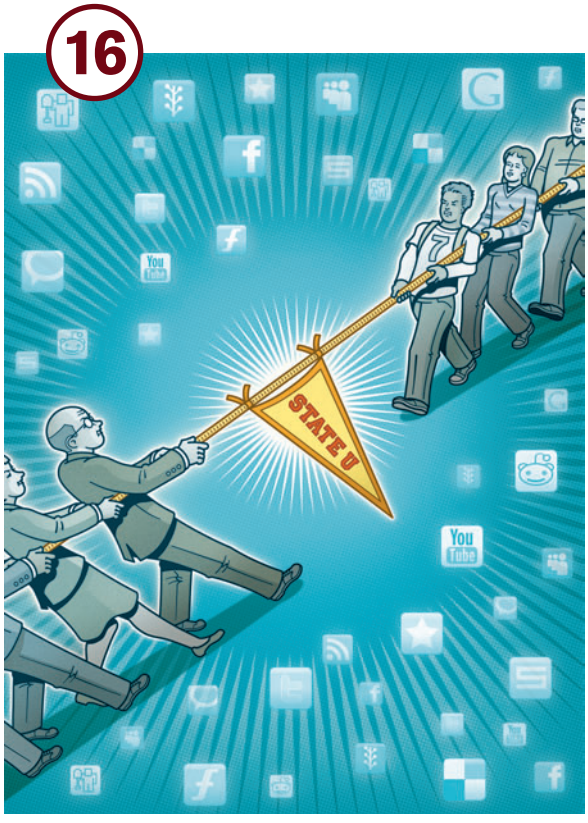
vol. 25 no. 8 April 2012



34

In This Issue

Focus



Cover art by Ryan Etter

Features

COVER STORY

Sign up now for CT Forum 2012, April 30 – May 2 in Long Beach, CA.
See page 38.

Redefining Shareholder Value

Apple's announcement about improving working conditions in its factories could introduce a new era of fair trade electronics.

Earlier this year, Apple made an announcement that has potentially significant ramifications for the technology marketplace.

No, I am not referring to the iBooks 2/iBooks Author news. I'm talking instead about Apple's decision to enlist the Fair Labor Association (FLA) to inspect the foreign factories where its products are made, specifically the Foxconn factories in Shenzhen, China, that have been the focus of much criticism (including my editorial in December; see *campustechnology.com/1211_login*).

Not that the FLA decision didn't meet with its own criticism. Almost as soon as Apple made the announcement, there were new voices of concern about the impartiality of FLA's president, Auret van Heerden. According to several news reports, including *The New York Times*, van Heerden said Foxconn's "facilities are first-class" and "Foxconn is really not a sweatshop." As Scott Nova, executive director of the Worker Rights Consortium, said in the same *Times* article, "Generally, in a labor rights investigation, the findings come after the evidence is gathered, not the other way around."

In spite of—or maybe because of—van Heerden's remarks, Foxconn soon announced that it was raising worker wages between 16 and 25 percent.

Do I think that these events are promising? Actually, yes. Even though Apple is by no means the only company that uses factories with working conditions that we would find unconscionable in this country, it is the only company, to my mind, that can lead the way toward some measure of justice for the people who build our electronics products. And even though the criticisms leveled against Apple and the FLA may be correct (and caution is definitely warranted), I think we are moving in the right direction.

To me, we are heading toward an expanded definition of "shareholder value" that goes beyond dollars and cents to include other elements of value, such as the health and welfare of workers, protection of the environment, and strong communities with good schools. I think Apple shareholders—who enjoy huge profit margins—could certainly agree to a small bite out of the company's bank account in exchange for these other investments.

But we, as consumers, have our part to play as well, because we are going to be asked to pay more for our products—as well we should. I'm mindful that not everyone can afford top-tier prices. But I believe there are people and institutions—especially mission-driven institutions like schools, colleges, and universities—for whom price is not the only concern when they consider a product's true value.

After all, many of us pay more for fair trade coffee because we don't think a cheap cup in the morning is more important than the welfare of the people who grow the beans. Likewise for the people who build our computing devices: Isn't the world ready for a Fair Trade Electronics organization? **CT**

—Therese Mageau, Editorial Director
tmageau@1105media.com

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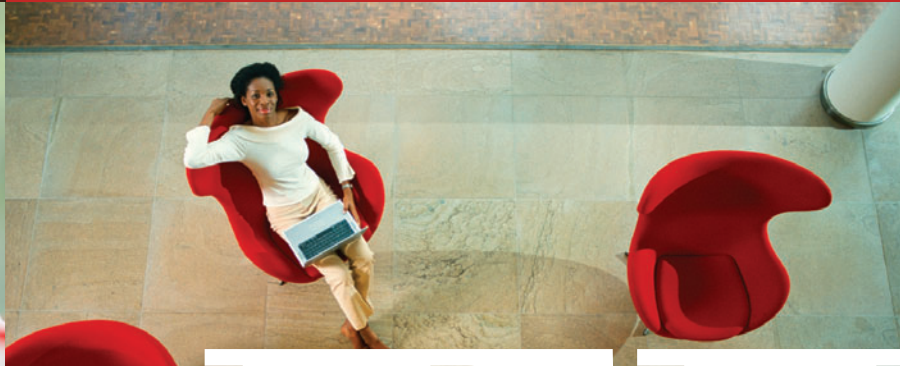

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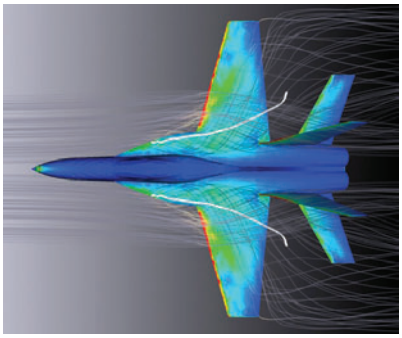
VIRTUAL-MEETING APP. FuzeBox's latest version of its Fuze Meeting app allows instructors and students to communicate in a virtual classroom using an iPad. With Fuze Meeting, users can host or participate in videoconferences from anywhere with an internet connection. Meeting hosts can use their contact lists to invite attendees to view presentations, photos, and movies. Participants can share their desktop or files, including Word, PowerPoint, PDF, and Apple Keynote documents. Videoconference presenters can use a laser pointer, zoom and pan using iPoint technology, and play or pause video. The iPad app is free, but users must buy a subscription to Fuze Hosted Telepresence Connect to view video. The service is cloud based and also available on Mac and PC operating systems, as well as Android and BlackBerry smartphones. Read more at *campustechnology.com/0212_FuzeBox*.

SCALABLE STORAGE. **Cornell University**'s (NY) Institute for Biotechnology and Life Science Technologies is now using Red Hat Storage (formerly known as Gluster), a scalable storage software appliance, to support the institute's data-intensive research projects. Cornell implemented the software solution on its existing disks without affecting the system's performance. Red Hat Storage is available as a storage software or virtual storage appliance. The storage software solution is a software-based, network-attached storage (NAS) appliance. The virtual storage appliance is a software-only solution that is optimized for Amazon Web Services. Read more at *campustechnology.com/0212_scalable*.

3D ANALYSIS SOFTWARE. **Louisiana State University** has signed an agreement with Visualization Sciences Group to license Avizo's complete 3D analysis software suite. Avizo Fire provides tools to visualize and find complex quantitative and qualitative information about material structure images, used especially for food analysis, industrial tomography, material microstructure evolution, modality inspection for nanostructure, core sample analysis, and nondestructive testing and evaluation. Capabilities include importing 2D and 3D data; volume rendering; integration with third-party applications, such as Matlab; the ability to analyze the internal structure of complex material structures; and tools to create presentations, annotations, animations, movies, and automated scripts. Read more at *campustechnology.com/0212_LSU*.

WIRELESS UPGRADE. In an effort to support the rapidly increasing number of wireless devices on campus, the **College of the Holy Cross** (MA) has completely overhauled its WiFi network. The deployment involved replacing the college's legacy Cisco-based 802.11a/g network with an 802.11n network using Aruba Networks gear, including Aruba S3500 Mobility Access Switches. The new network is built on Aruba's Mobile Virtual Enterprise (MOVE) architecture, which is designed to unify network management, policy enforcement, and user access across wired and wireless infrastructure. Read more at *campustechnology.com/0212_wifi*.

E-TEXTBOOKS VIA LMS. Ingram and Blackboard have teamed up to offer an integrated platform that lets Blackboard Learn users access digital materials from their LMS. The new platform, Blackboard Building Block for VitalSource, enables delivery of e-textbooks and resources in mobile, online, and offline environments. With Building Block, students and instructors can access VitalSource's digital library from their desktops, laptops, smartphones, or tablets. Course materials can be viewed online or downloaded to a device, where users can make notes, highlight, and share notes with others from within a single sign-on environment. Instructors can preview and customize material for their courses, link to assignments and activities from within the e-textbooks, and share information with their students. Read more at *campustechnology.com/0212_etextbooks*.



LOUISIANA State University is using Avizo's 3D software in a variety of research applications.

APPLE HONORS UNIVERSITY. **Freed-Hardeman University** (TN) has received an Apple Distinguished Program award for its use of mobile technologies in classes. Through its iKnow Initiative, started in fall 2008, the university provides students and faculty with MacBooks, iPhones, iPods, or iPads that are used to access learning materials, including podcasts and interactive digital textbooks. The university increased the scalability of its wireless network to support thousands of mobile devices, and has created a Center for Instructional Technology to assist faculty. Read more at *campustechnology.com/0212_honor*. CT

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jay bhatt

Search Rescue

As a way to instill better research skills, a university librarian discusses innovative ways to move students—and faculty—beyond their reliance on Google.

Jay Bhatt, liaison librarian for engineering at Drexel University, works with students to develop their research skills and wean them off an overreliance on Google.

WITH THE ADVENT OF digital content and tablets, some pundits wrote off the library as a relic of a paper past. How wrong they were. Even as print wanes, libraries are probably more important than ever. This is not your father's library, though. Today's institutions are a reflection of the new technology and digital media, and the services we offer are a blend of book smart and tech savvy. For librarians such as myself, our responsibilities are actually expanding.

The reason is simple: The explosion of data online is putting a premium on being able to sort, search, and evaluate information critically. The campus library is ideally positioned to serve as both a comprehensive resource for authoritative information and the place where students can learn the skills needed to utilize that information.

Unfortunately, too many students—and too many faculty—believe that Google can serve as their guide to this new world. It's a misplaced confidence that threatens to undermine the quality and rigor of their intellectual inquiry. While internet searches have a valuable role to play, they can take students only so far. The challenge facing librarians today is to educate students about proper research techniques—and persuade faculty that they should not accept internet search engines as one-stop research tools. Given how ingrained this search habit has become, however, it is no small task.

As a result, I cannot afford to sit behind a desk and wait for students to stop by with research questions. As liaison librarian for engineering at **Drexel University** Libraries, I spend much of my time reaching out to student organizations, faculty, and other campus organizations to make sure that our students are well prepared for the demands of the engineering profession. I do this through extensive use of both social media and old-fashioned meetings and training.

Getting Beyond Google

While Google's ease of use and accessibility have made it a primary tool for research, it is important for students to understand that a simple search can also lead to misinformation. While accessible information is increasing exponentially, so is the challenge of finding what is relevant.

Young scholars need to learn how to discern what is reliable and what is misleading. Too many students are citing inadequate sources, and it is the role of the librarian to teach students to find reliable sources, interpret them, and evaluate the quality of the information they present. Online scientific encyclopedias such as Thermopedia or AccessScience can help students discover

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the content they need to develop a solid background in specific subject areas.

It's very difficult for students to access this data if they rely on traditional search engines alone, so we provide our students with valuable alternatives. Knovel, for example, provides students with access to a number of validated technical references. Using its simple data search tool, students can find specific properties of a particular material. Engineering Village gives students the ability to refine search results using facets so that they can find more relevant technical papers quickly.

Students don't arrive at Drexel with knowledge of these alternatives—or of Google's limitations—so it is up to us to teach them. The earlier we reach them, the better. I can't tell you how many times I have heard students say, "Wow, I wish I had known that sooner."

Drexel is still in the early stages of rolling out a comprehensive program to address this shortcoming, but the results and enthusiastic responses we have seen—from students, faculty, and fellow librarians alike—lead us to believe we're on the right track. By partnering with educators, researchers, and practitioners, libraries such as ours are able to collaboratively guide learners in and beyond the classroom. In the process, we contribute to their intellectual growth.

Key to our success to date is involving students, faculty, and staff as much as possible. I work hard to get on the agendas of student engineering groups and departmental planning meetings. I am now listed as a resource on the syllabi for several courses. We are enrolling graduate students to help train new students on these research tools and techniques. We're creating multimedia training content, and leveraging social networking platforms such as Facebook, Twitter, and LinkedIn to reinforce our presence. More than 800 engineering students follow my updates in Facebook alone.

In addition, we plan to introduce a formal classroom-style training program for freshmen on engineering research skills. This will include online assessment to track our students' progress and more social media involvement.

Personal Librarians

Getting students into the library is the first step. Once there, however, many students find it rather overwhelming, with large stacks of physical items, numerous online databases, and many different types of staff. To help make this experience less intimidating, Drexel University Libraries established the Personal Librarian Program. Through this program, each freshman is automatically enrolled and assigned a librarian. Personal librarians teach students about the information resources and staff they need to succeed, not just in their freshman year but throughout their time at Drexel.

The Library Learning Terrace, Drexel's newest library, was designed with this teaching mission as a central tenet. Located in the heart of the residence district, it features flexible furnishings that allow students to work individually or collaboratively in groups. The Learning Terrace also provides a whiteboard wall, covering nearly a quarter of the space, as well as a mobile whiteboard to aid in learning. Librarians hold instructional sessions and offer individual assistance at a stationary hub in the space.

To engage students, the libraries use a variety of other strategies, including online tutorials and videos, websites, research guides, and blogs, as well as workshops and presentations held in collaboration with a variety of organizations.

One of our most effective outreach strategies is partnering with other university groups. The Drexel Smart House is an excellent example. As part of this multi-disciplinary project, students are building an urban home that will serve as a living laboratory for exploring cutting-edge design and technology. Students conduct research and develop designs in the areas of environment, energy, interaction, health, and lifestyle, with the goal of improving the quality of life in urban residential settings.

Students use library services to find resources for projects related to the Smart House. Through this collaboration, Drexel Libraries offer workshops, as well as individual and small group consultations that are focused on enhancing information-literacy skills. Another workshop demonstrates how students can find information and keep current with the latest developments about their projects.

For instance, if a group of students were conducting research on lumber and wanted to know moisture properties and impacts on construction, they could quickly find answers through a targeted search. Several resources including IEEE Xplore, Knovel, and Web of Knowledge are highlighted. By using authoritative library resources, students save time and find accurate information.

Over the past few years, we have seen an increase in the use of our library services. We believe this stems from the number of one-on-one consultations that we conduct, as well as our outreach programs across campus. We are also receiving support from university administrators. Students in freshman English classes, for example, are required to attend training on library services, and similar programming exists for first-year engineering students. This past year alone, more than 3,000 freshmen and 1,200 engineering students received instruction on library resources. **CT**

RESOURCES

For links to the research tools mentioned in this article, visit *campustechnology.com/0412_library.*

***Jay Bhatt** is liaison librarian for engineering at Drexel University Libraries.*

SPECIAL ADVERTISING SECTION

CAMPUS TECHNOLOGY Focus

A Win-Win-Win Situation: 3 Universities Pool Resources to Fund Lecture Capture

In 2011, Tom Lewis, director of academic and collaborative applications for the University of Washington (UW) in Seattle, WA, wanted to implement a lecture capture system to benefit student studies and supplement instructor lectures. But he was faced with a problem common to many universities across the country: a limited technology budget.

After considering his budgetary options, Lewis came up with a unique cost-saving idea: create a joint services contract with two other Washington state universities and the lecture capture provider, Tegrity, for a cloud-based solution.

Lewis took his idea to David Dean, manager of e-learning services at Eastern Washington University (EWU) in Cheney, and Guy Westhoff, director of IMS at Washington State University (WSU) in Pullman. Both Westhoff and Dean immediately jumped on board with the idea. Each one had reviewed various lecture capture vendors in the past and had independently concluded that Tegrity's platform was best suited for their needs.

Tegrity's lecture capture solution enables instructors to record lectures or supplementary course material. Students can stream lectures anytime, anywhere to their computer or mobile device and use Tegrity's "Search Anything" technology to search across multiple lectures quickly and easily.

The universities' joint contract enabled them to meet their tight budgets while providing instructors and students with access to the learning technologies they need.

At WSU, for instance, faculty use Tegrity to record live lectures and then give students access to the recordings for review purposes. "We also have faculty members using the tool to pre-record their lectures and then make those lectures available by date to coincide with when they are away from campus," says WSU's Westhoff.

Both WSU and EWU are also exploring the flipped classroom model, where faculty record their lectures, make them available to students prior to class, and then start class with a discussion and dialog about the content presented in the recording. "We are continuing to work with our faculty," says Westhoff, "in support of their exploration of how our lecture capture tool can assist them within the flipped classroom model."

At the same time, WSU is exploring ways to utilize Tegrity's student recording features for oral presentations, speeches and focused conversations. "Rather than taking a large portion of class time to do all of the student presentations, students use the lecture capture tool to record their presentations outside of class time, thus freeing up valuable class time for the faculty and students to interact and engage with the class content," Westhoff explains.

At EWU, faculty members are exploring "desktop capture," authoring short lesson recordings. When asked about the advantages of the Tegrity solution, EWU's Dean quickly checks off a number of benefits: cloud storage, thumbnailing of content slides, and student-personalized content bookmarking.

WSU's Guy Westhoff agrees and adds there are benefits for both faculty and students. "Faculty can walk into the classroom and use either their laptop or the classroom computer to record their lecture and by the time they return to their office after class, that recording is available."

For students, Tegrity offers options that go beyond simply viewing a recording. "The benefits we are seeing with students relate to [the] access[ibility of] the class lectures so that they can enhance their own notes, review and search the material, and re-engage with the class lecture a second time," Westhoff says.

So how have faculty and students responded to the system? "During our pilot at WSU," Westhoff says, "we started with about 10 faculty members and that quickly grew to about 90 in a few weeks. Our most recent report shows we have had 632 instructors using the lecture capture system," he says. That's out of a total academic staff of about 1,300. At the same time, Westhoff adds that they are seeing more and more faculty inquire about the technology.

Dean adds that faculty at EWU has been equally enthusiastic about the system. The goal is to have 50 faculty members test the system by the end of 2012. They have 40 to date and are on track to meet or exceed our target. "Faculty interest and enthusiasm has been high," Dean says. "We are pleased to see instructors succeeding with this tool."

In the future, EWU plans to make it possible for students to use Tegrity's video technology to create their own recordings. "It is becoming increasingly common that students submit video projects as homework," explains Dean. "Tegrity allows students to author recordings and demonstrations. This work can be shared within the class and added to the course resources."

Of course, for these three universities, one of the biggest benefits is cost savings. "We saved costs in licensing Tegrity by partnering with two other universities in the state," Dean states. "We also saved by going with Tegrity versus a much more expensive set of tools that we considered to provide similar functionality [desktop capture, lecture capture and live streaming]."

In the end, everyone agrees that the joint services contract with Tegrity and WSU, EWU, and UW has proved to be a win-win-win for all three universities.

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What Are They Thinking?

Leadership Insights on Issues in Educational Technology

Program Summary:
The proliferation of mobile devices and the push toward collaborative learning in today's K-12 schools has presented new security challenges for district IT departments. How do schools and districts ensure the security of their infrastructure while fulfilling the needs of new learning initiatives? *T.H.E. Journal* spoke with two schools and security vendor SonicWALL to get their insight.

PARTICIPANTS

Matt Morton, security project consultant, University of Nebraska at Omaha

Kyle Bowen, director of informatics for information technology, Purdue

Joy Hatch, vice chancellor, Information Technology Services, Virginia Community College System

Dr. Richard Sebastian, director of teaching and learning technologies, Virginia Community College System

SONICWALL

What does collaboration mean for today's digital learner and why is it important?

JOY HATCH AND DR. RICHARD SEBASTIAN: Collaboration is vitally important for today's digital learners, a term that now applies to all learners. Learning is slowly making a fundamental shift away from the content delivery model—still found in college lecture halls—to one that engages learners more deeply with content by asking them to solve messy problems, work on teams, and develop their own firsthand understanding of course material. This shift has been caused by rapid innovations in technology—especially the Internet and more recently social media networks—with these same technologies are also providing the solutions.

Now, learners can not only read an important text, but also discuss it with the author via Skype. They can group-author a paper using Google Docs anywhere they can access an Internet connection. And, after writing the paper, they can share it publicly by posting it to a blog or wiki, annotated with images and videos they created with the sophisticated digital media tools they carry around in their pockets. A learner's understanding can now be easily demonstrated through the creation and sharing of digital artifacts as well by the number of correct answers on a multiple choice test.

SONICWALL: With the ever increasing volume of traffic driven by user collaboration—including large media file attachments and links to streaming content—throughput is now a major consideration in evaluating security equipment. The closer to line speed a security measure performs, the better. Some organizations seek to address the issue with increased bandwidth and an increased number of switches accessing the network, each with their attendant security measures with load-balancing solutions often in front of it all.

This can get expensive and complex. And any piece of equipment through which traffic passes can become a chokepoint. Underpowered processors or store-and-forward architectures in the appliances can introduce latency into the flow. When threats are detected, remediation can further slow traffic. Fewer, faster systems can assure better performance and lower costs.

What is the role of anytime, anywhere learning in higher education?

KYLE BOWEN: The pervasiveness of mobile devices offers new capabilities for changing when and where the moment of learning takes place. For many students, mobile devices and social networks are their native environment—where they live their digital lives.

The benefits of mobile devices such as smartphones and tablets go well beyond access to digital content in the classroom, laboratory, or field. Mobile devices enable connections between students both inside and outside of the classroom. Within the classroom, they can create a backchannel of discussion between students—adding additional layers of interaction to place where learning was already happening. This same technology can also enable students to reach out beyond the classroom and the class to find new ideas that can further extend the classroom discussion. This virtual discussion medium also makes it possible to ask stupid questions, comment on taboo topics, or help introverted students find their voice in a large group dynamic.

Mobile technology also enables students and instructors alike to easily create new digital media in the way of video, audio, or images that can be used for learning and assessment. Rich media is found in nearly every part of our everyday lives. Instructors are weaving media creation into their course assignments—for some students the first time they create a digital video for someone other than themselves may be for an assignment in their science, personal finance, or american sign language (ASL) class.

SONICWALL: Secure Remote Access (SRA) has moved from being a small, precious component of the network for a core constituency to becoming the vast outer ring of the network serving many—if not all—users. Of course, users can fall into several different groups, each of which has its own needs and permissions. The smarter the remote access solution, the better the user experience and the easier it is to manage.

Trusted users can be expected to gain access via devices with client controls in place. Casual users cannot, especially with the proliferation of various endpoints like tablets and smartphones. Intelligent SRA can recognize the different levels of control required, prioritize traffic accordingly (including latency-sensitive streams like VoIP and video), and integrate with intelligent security appliances to enforce centrally managed policies.

What are the top three challenges facing colleges and universities that are trying to implement an effective, safe and secure 21st century learning environment?

MATT MORTON: Information Security. Besides the obvious issues

surrounding privacy and data security the integrity of the IHE's academic data including collaboration platforms must also be secured. That means looking at the learning management systems (LMS), conferencing solutions, and other data sources that support the learning process and ensuring that those are safe from attack or abuse.

Bandwidth to support "on-demand" environments.

Data analytics to measure what is working and what isn't, as well as providing a view into how the content is being used (or not used). Feedback on whether or not students are actually getting the material, or if they are actually putting forth effort will help ensure that this "anytime, anywhere" model is successful.

SONICWALL: The technical expression of how users are interacting with the network is on the application layer. The applications users are running are either permitted, or not. Inside the permitted group, some applications deserve higher priority than others. Next-Generation Firewalls supplying Application Intelligence, Control, and Visualization (AICV) enable granular scanning and filtering for the most targeted and intelligent security possible. This improves the quality of threat detection—especially the new web-borne application layer threats—and minimizes the disruption when threats are detected. It also gives IT administrators application-level controls for policy enforcement and traffic prioritization.

These capabilities can, in effect, free bandwidth and allocate it where it is most needed. They can automatically implement policy and prioritize flows by application type and user. And they can provide the analytics necessary to fine tune the network moving forward.

What are the biggest mistakes you've seen institutions make in securing their networks for digital learning?

KYLE BOWEN: The greatest mistake is believing that the technology can protect everyone from everyone. Being "secure" is something that requires constant vigilance because the work of those seeking to do harm can outpace the work of those who seek to protect us. Despite this, it is critical that a digital learning environment be open and easy to use. Restricting how the network can be used or the devices it can be used with is counter to the idea of providing this type of access at all. Collaborative learning environments require anywhere access to a wide range of tools that can be adopted at a moment's notice. Some of these web or mobile apps introduce new security or privacy concerns—this is why it is important to create an awareness of safe online behaviors.

SONICWALL: Aided by Application Intelligence and Control built into Next-Generation Firewalls, the right application controls are granular enough to enforce permissions by application, by user group (say, students vs. faculty), and even by individual users. The permissions can be modulated from full on, to throttled, to blocked…even by time of day or point of origin. What's more, this Application Intelligence—knowing who is using what applications—is an invaluable tool for addressing regulatory compliance and budget planning.

This enables an optimization between real, important security issues and the best user experience possible. It also relieves users and administrators from struggling with human behaviors and focuses network management where it is most practical: how the network and applications behave.

What advice do you have for campuses wanting to create a secure infrastructure that will ensure safe and effective 21st century learning?

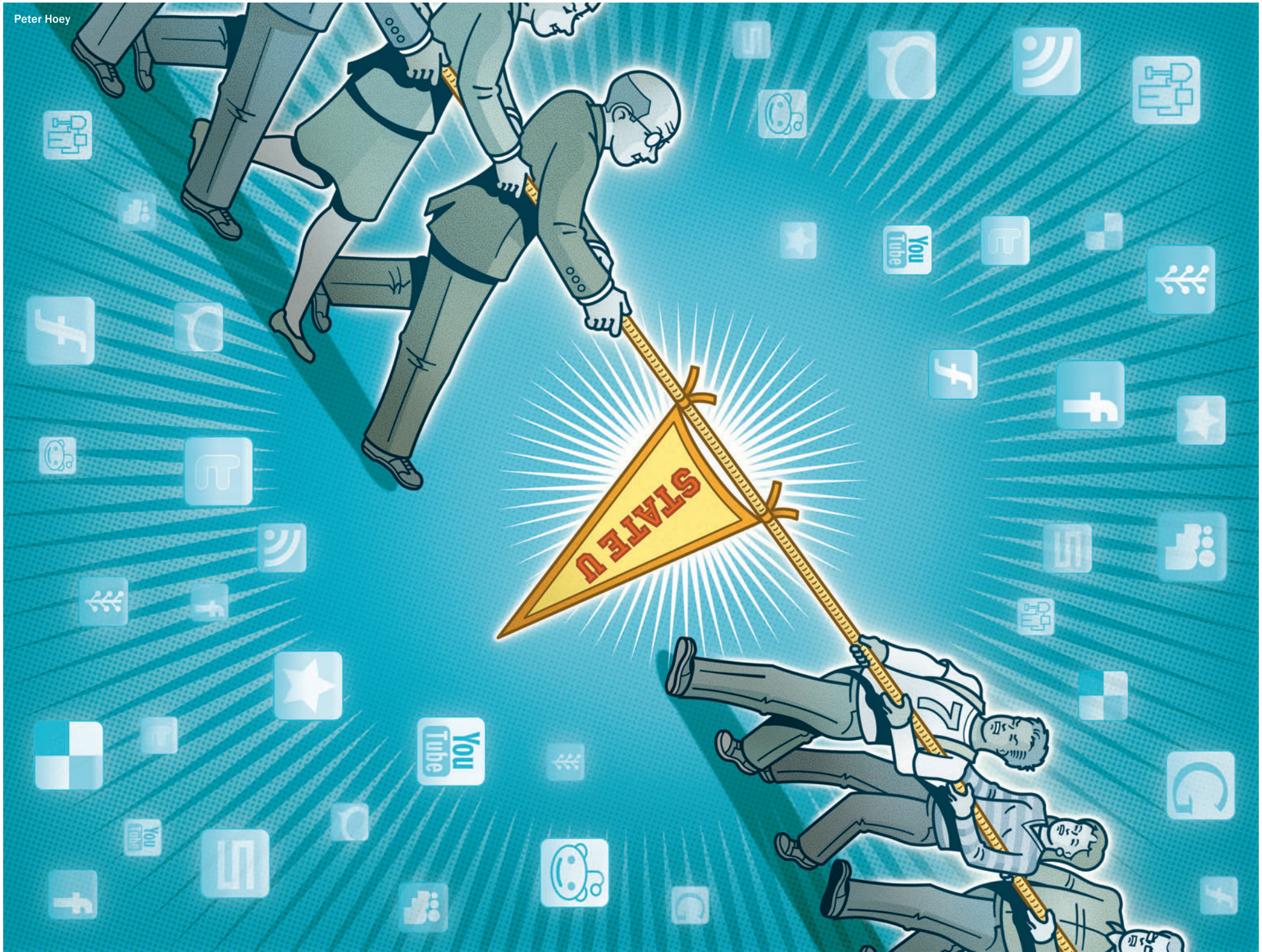
JOY HATCH / DR. RICHARD SEBASTIAN: Learning about the digital classroom environment is step one to providing a secure infrastructure for a college. With this background, the technology and security teams will be able to work collaboratively with faculty and staff to define sensitive data and understand where that data resides—both digitally and in paper form. This working group will also be able to create reasonable security controls that will enable the college to operate efficiently and effectively.

With this structure in place the final step would be awareness, and ensuring that all constituents are aware of the issues, the risks, the controls, and how their actions will make the learning environment a more secure place.

SONICWALL: Security consolidation is the emerging approach to address multiple threat types and the attendant costs of defending against them. Intelligent security appliances have become platforms for multiple security applications running simultaneously like intrusion detection and prevention, anti-virus, anti-malware, content filtering, and more. Single pass security—provided it is robust enough—addresses several challenges: It minimizes or eliminates the latency that multiple devices can introduce into network flows; it eliminates the costs of multiple devices; and it simplifies network management. It also simplifies the forensics necessary for understanding network utilization, which is essential for informed provisioning of the network moving forward.

SONICWALL®

For more information and to download the full report, please visit SonicWALL's Resource Center at *campustechnology.com/SonicWall.*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LETTING GO

For marketers hoping to promote their schools via social media, the first lesson involves taking their hands off the controls.

BY ALICIA BRAZINGTON

THESE DAYS, branding is everything. Marketers go all out to position their product, control its image, and spin the message. For marketers at the nation's colleges and universities, the stakes are especially high. After all, they are entrusted with the image of institutions that have, in some cases, spent centuries building up their brand equity—images that ultimately affect everything from alumni donations to the quality and quantity of applying students. It's enough to make any marketer uptight.

It's not surprising, then, that social media have thrown many college marketers for a complete loop. As many experienced professionals are discovering, the usual strategies simply don't work.

Traditionally, marketing has been a one-way conversation: Marketers carefully package the image of their institutions for consumption by students, parents, alumni, and others. With social media, however, this unidirectional flow of information is almost unnatural. On sites such as WordPress, Facebook, Google+, LinkedIn, YouTube, Instagram and Twitter, users expect to give as well as receive. They're looking for a conversation, not a lecture.

This is probably truer for higher education than it is for corporations. In most people's eyes, colleges and universities are not businesses, but communities. Not surprisingly, their members—and those thinking of becoming members—want to take part.

Unfortunately, too many schools still approach social media with a traditional marketing mindset, trying to push information at users while rigidly controlling every facet of the brand message. It's not working.

In fact, using old-school marketing strategies may do more damage to a school's brand than good. Christopher Rice, associate director for teaching and technology in the Center for the Enhancement of Learning and Teaching at the **University of Kentucky**, contends that too many schools treat social media like broadcast media, transforming them into glorified RSS feeds and marring them with scheduled tweets.

"Public relations departments have sucked the life out of social media," he laments, adding that such an approach is likely to backfire. Recent statistics may bear him out. A 2011 study performed by Applum, developer of EdgeRank Checker (a tool that tracks a Facebook page's performance), found that auto-posting to Facebook decreased "likes" and comments by an average of 70 percent.

"Censorship is the easiest way to kill a community." *—Kam Stocks, University of Oklahoma*

Not only do traditional marketing strategies underperform in social media, but they also overlook what makes social media such a powerful tool in the first place. Never before, for example, has it been easier to find out what customers want or think. "Social media can serve many purposes, but the primary one is to listen and learn about audiences," explains Kevin Tynan, executive director for marketing and communications at the **University of Illinois at Chicago**. "Listening is the basis of effective marketing. Social media are a gift that can help educational institutions remain relevant. Our job is to use them wisely."

Used correctly, social media can also become a perpetual marketing machine. Even after the PR department has quit for the day, a school's fans will keep up the work. "People advocate for their schools on their personal networks at all hours, every day," notes Kam Stocks, senior new media specialist for web communications at the **University of Oklahoma**, which has racked up 235,000 Facebook fans.

And when you consider that the average Facebook user has 130 friends who might also be exposed to a school's message, typical print metrics such as pass-on readership look rather anemic in comparison. "Facebook has more than 800 million active users, Twitter has 100 million," says Stocks. "The potential to reach people quickly and easily is there."

Roadmap for Success

But allowing a school's supporters to promote an institution 24/7 requires

WHAT'S NOT TO "LIKE"?

GAUGING SUCCESS in social media is not always easy. Sites like Klout can help measure an institution's level of influence, but administrators should be wary of putting too much emphasis on how many followers their school has.

For starters, not all followers are created equal, notes Trace Purvis, **Louisiana State University**'s new media coordinator, whose school has 100,000 online fans. "If no one's communicating with you, then what's the point?" he asks. In other words, one engaged follower is worth a truckload of users who simply clicked the "like" button once.

It's a viewpoint shared by Perry Hewitt, chief digital officer of Public Affairs & Communications at **Harvard University** (MA). "Social media is fundamentally about people and not just a numbers game," he explains. "We think a lot about reach and engagement. Are you posting content that resonates? Are you answering the urgent questions?"

Different content appeals to different audiences. Nostalgic photos, such as images of the cafeteria or famous landmarks on campus, tend to grab the attention of alumni. Purvis ups the use of such images if the school is trying to attract alumni to a specific event.

Football posts are social media gold, too. "Football typically gets you rah-rah responses, but it can be hard to tell if someone is a fan, alumnus, current student, or prospective student," notes Purvis. Interestingly, prospective students are most likely to comment on school spirit postings, especially between 6 a.m. and 7 a.m.

Still, as any administrator who's looked at his school's rankings in *US News & World Report* will tell you, sheer numbers do have value, even if that value is misplaced. Students and alumni like to brag about their school, whether the subject is football, Nobel prizes, or social media. "When a school's great in every other area, you expect them to rank among the top for social media, too," notes Sean Taylor, a proud alumnus of the **University of Michigan**.

Building a proud following comes with its own benefits, Purvis admits. Whether someone jumps on board as an alumnus or a football fan, exposing him to university content is always a good thing. And the more vocal the better.

some compromise: The marketing department no longer has complete control over the message—a reality that some members of the old guard may find hard to accept. "This new culture doesn't jibe with the existing culture," explains Rice, who believes that change needs to come from the top. "If you have an executive team that gets it, they are okay with losing control."

But enlightened leadership is by no means a given. "Most administrators are of a different generation from students," notes UIC's Tynan. "For them, social media is like marketing in a foreign language. But they need to get comfortable not being able to control the message."

Although marketers definitely relinquish some control when they embrace social media, in no way are they abandoning their institution's brand identity. As part of an overall marketing strategy, brand identity is as important as ever. Within the social media world, however, the rigidity of the message needs to be somewhat relaxed. "The approach needs to be balanced," explains Rice.

To achieve that balance, web communications teams at many schools, including OU and **Louisiana State University**, are joining forces with their PR and marketing departments to bring a consistent brand message to a diverse audience—without the formality often associated with a traditional marketing campaign.

"We have quite of bit of freedom to explore—to try new things," says Stocks of OU's web communications team. "It's a unique situation, for sure."

At OU's Norman campus, for example, when Public Affairs wants to push information to users on social media sites, web communications handles it for them as the top priority. For everything else involving social media, though, Public Affairs trust Stocks and his team to manage OU's brand identity themselves. This approach gives Stocks the freedom to bridge the gap that he sees between broader university messaging and the needs of specific departments.

By catering to the needs of individual departments, Stocks and his team are showing that it's possible to partly decentralize control of the messaging without eroding a brand's power.

This idea of decentralization lies at the heart of LSU's social media approach, too, with people and budgets divvied up among individual colleges and departments.

"There's more manpower in the smaller, specific colleges and programs to put out their own news," explains Trace Purvis, LSU's new media coordinator. He acknowledges that this approach does lead to mistakes, but accepts that learning is just part of the process. "Time and knowledge help us all make better communications decisions," he says.

To ensure that LSU's departments stay on message, as well as to share what they have learned, a group of 200 campus communicators—including staff from PR, ITS, technology infrastructure, and administration—meet each month to talk about new initiatives and techniques.

Harvard University (MA) also follows a quasi-decentralized approach, says Perry Hewitt, chief digital officer of Public Affairs & Communications and Alumni Affairs & Development. The 375-year-old university has established a coordinated network of departments that have leeway to tailor their own news. To assist them and keep them on message, Public Affairs makes the university's priorities known and publishes best practices for various social media tools. The system is working well. To date, Harvard ranks at the top of the Facebook rankings for higher ed, according to Klout, a site that measures the influence wielded by organizations on social networks.

RESOURCES

For links to the schools and products mentioned in this article, please visit *campustechnology.com/0412_social.*

Engaging the Audience

The best organizational structure in the world is useless, however, if your message falls flat. Simply put, don't try to squeeze your polished marketing campaign through the pipes of social media. It will get stuck. "It's all about that personal connection," Purvis believes. "A lot of folks are such heavy Facebook users that they forget they're conversing with a university. It's as if we're their friend. You leverage that: You respond in kind, forming messages in an informal, conversational way. People are much more comfortable with that."

Lending credence to Purvis' theory is an initiative underway at **Calvin College** (MI) that draws on students to act as goodwill ambassadors for the school on social networks. It's an approach that made a big impression on Val Vantland, a senior at Grand Rapids Christian High (MI) who is considering the local school. Current students reached out to her via e-mail and invited her to join their Facebook page, which she did.

"From a marketing standpoint, it works," Vantland says. "It welcomes you into the school even though you haven't made a decision yet. I can ask questions about anything. It makes me feel as if I'm getting to know them."

UIC boasts no fewer than six student bloggers working on its behalf. "Social media strategies should embrace student voices and use their authenticity as

"Public relations departments have sucked the life out of social media." *—Christopher Rice, University of Kentucky*

SOCIAL MEDIA DON'TS

1. Broadcast obvious ads.
2. Ignore your audience.
3. Assume colleagues know how to use social media.
4. Omit vital campus communicators from key decisions.
5. Try to control the message.
6. Take on an overly professional persona.
7. Focus solely on numbers and rankings.
8. Think you know what's coming next.

SOCIAL MEDIA DOS

1. Generate interactive content.
2. Listen to and learn about your audience.
3. Keep it casual.
4. Have a plan.
5. Measure success.
6. Be agile—try new things, adapt to change.
7. Address serious problems, let the small stuff go.
8. Own your mistakes.
9. Educate those around you, and then trust them.

a springboard for communicating the brand," explains Tynan.

Damage Control

Make no mistake, there are risks involved with loosening the reins of communications. Even within the relaxed world of social media, sometimes a follower will go too far or violate school policies. While an offensive post can be harmful, how an institution reacts is often what will be remembered long after the initial infraction is forgotten. "Usually, doing nothing is the best course of action because you don't want to lend weight to negative or unwanted attention," Stocks offers. "But that's always a tough decision to make."

All agree that "troll"—or inflammatory—behavior has to be monitored closely and taken care of quickly. Purvis tackles offenses like these directly in the threads where they occur, asking the posters involved to stop. He links to the posting policy and requests that they follow it or risk losing comment privileges, sometimes permanently.

Monitoring conversations online can be a daunting and time-consuming process. Since colleges and universities are communities, however, other users will often come to the rescue, notifying administrators of problem posts. "It's because our followers feel that connection that they jump in and help," notes Purvis. This is often the case during football season, which generates lots of banter—and lots of work.

Troll behavior aside, schools should be very careful before they try to police the online conversation. "Censorship is the easiest way to kill a community," says Stocks. "People may have positive or negative feelings toward your school at any given time. Their inclinations lead to interactions. These interactions, positive and negative, are invaluable because they ultimately help improve your brand and the marketing strategy behind it."

As an example, Stocks recalls when OU launched a student portal that received jeers, not cheers, for its usability. When newspaper articles, public forums, and other marketing efforts failed to address student concerns, students created their own Facebook page to let off steam. Thanks to Facebook, the two sides eventually sat down to work things out, earning the project credibility and providing a level of transparency that no other conventional method could duplicate.

Forgive and Forget

While it's not easy to catch every inappropriate post, it's important to realize that it's not necessarily the school that ends up with egg on its face. "It's so hard for schools to monitor the postings, especially really big schools," says Allison Grosky, a senior at Highland Park High School in Illinois, who thinks her generation understands the impact that ill-conceived posts can have on their academic and professional futures. So, when a prospective student posts inappropriate pictures or swears, it's a red flag about the person. "My judgment doesn't go to the school, but I do wonder if I'm going to be attending school with that person."

What students, prospective or otherwise, do want is their school's attention. Jenn Hermann, an OU student, believes that when people vent, they have certain expectations: They expect to be able to say what they want to say; they expect the school to care; and they expect to receive a quick response. It's when they don't that things go awry.

Take, as an example, the experience of **Penn State** (PA) during the February 2011 "Snowpocalypse." The decision not to call off classes drew angry posts on the university's Facebook page and spurred new student pages that ignited more than 2,000 backers.

In the view of many students, though, these kinds of online firestorms are just another day at the office. "I understood that people needed to vent," says Joe Jacobs, then a student at the school. "That's what Facebook is for." He headed off to class without thinking about the online melee again.

And therein lies an important lesson for university administrators who are still coming to grips with social media. While some gaffes will open the floodgates to a torrent of criticism, followers are—for the most part—willing to forgive and forget.

Leaders of campus social media, however, should not be so quick to move on. Paying attention to what students have to say is extremely important. "Students define the brand," asserts Tynan. "We can respond to misperceptions, promote strengths that are overlooked, or correct misstatements, but ultimately a university's brand is in the mind of the audience." CT

Alicia Brazington is a freelance writer based in Portland, OR.

SPECIAL ADVERTISING SECTION

CAMPUS TECHNOLOGY Focus

Real-world Ways to Manage Growth and Relationship with CRM

Today's institutions face a daunting challenge: how to efficiently manage their campuses and build lasting relationships with students and alumni without breaking the bank. They need tools that will enable them to analyze operational efficiency, inform routine decisions, and develop long-range strategies.

Read on to see how two institutions used Microsoft Dynamics CRM to solve the challenges that came with increased student growth and connecting with important constituents.

Liberty U Manages Growth, Increases Efficiency

For a number of years, Liberty University (LU), a Christian evangelical school in Lynchburg, Virginia, pursued a growth plan that successfully grew online enrollment from 12,000 to more than 50,000 students. While the school was pleased with the growth, it now faced a new problem: student information was housed in a number of disparate systems. "Critical pieces of student information were scattered across the entire University in silos that no one except the authors could access," says Chris Hara, director of IT Development at LU.

The lack of a centralized database created enormous issues for the institution. Students enrolling or making changes to class schedules were inefficiently passed from one department to the next. Customer service agents found it difficult to use multiple forms containing different student information, such as financial data, class schedule, or attendance records. LU's Chief Information Officer Matthew Zealand recognized LU needed to accommodate its growth by implementing a system that would centralize all the information. "Our resources were already spread thin. We were tasked with finding ways to support growth without having to increase the University's staff at the same rate as it added students."

LU turned to Microsoft Dynamics CRM as a platform for new business applications. The University deployed Microsoft Dynamics CRM by using a custom integration framework to synchronize and exchange data with the Oracle database that stored the University's student and enterprise resource planning data.

LU's first application of the customer relationship management solution targeted a residential call center, where customer service agents relied on data from multiple sources to confirm students' general information and look up course schedules and financial records. The solution integrated data from each of the respective systems in a single, browser-based form. Instead of navigating through a series of forms and switch between applications, agents viewed all necessary information on a single page in a browser. As a result, call centers reduced training time by more than 50 percent and increased productivity in making outbound calls by 17 percent, according to the company.

After receiving positive feedback from multiple business units, LU has recognized widespread improvements and efficiency gains in student, alumni, and donor experiences. "Demand for Microsoft Dynamics CRM spread like wildfire once our staff saw that they could pinpoint information they care about," explains Zealand.

Build Stronger Relationships, Improve Communication at Washington U

The George Warren Brown School of Social Work at Washington University in St. Louis, Missouri, specializes in social work and public-health education and relies on its community relationships with alumni, donors, volunteers, and public and private organizations to fund research and educational programs. Keeping track of 50,000 constituent relationships was a difficulty, however, because the school maintained their information in as many as 16 different systems. "We lacked insight into our constituents," says Ellen Rostand, Assistant Dean for Communications at the Brown School.

After trying a homegrown solution and then deploying a commercial software solution aimed at higher education, Brown turned to Microsoft Dynamics CRM. Says Ben Geers, director of IT for the Brown School, "We considered several competing options, but only Microsoft Dynamics CRM was flexible enough to meet our needs. In addition, with Microsoft Dynamics CRM, our employees can work through the Microsoft Outlook interface, which 100 percent of the staff already knew and used, helping us get the adoption we needed."

Now, with a single location for constituent information, the Brown School has gained improved insight into what allowed them to grow relationships. By analyzing data captured in the new CRM system, administrators can now precisely target select groups of individuals with communications, and achieve improved results. Says Rostand, "By being able to target the right people with the right communications, we're getting open rates between 20 and 25 percent, which is well above the national average of 16 percent." With better insight into constituent relationships, Brown has also expanded distribution of their magazine by 30 percent.

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Conference Tracks

TRACK 1

Learning Applications and Mobile Learning

T01	Can the iPad Provide a High-Quality Education Experience?
T06	Making Education Social: The FoxMIS Community Site
T11	Mobile Computing for Online Education
T15	B.Y.O. Device—Using Cloud Computing to Deliver Labs of the Future
W16	Developing a Successful Mobile Application in a Data-Driven World
W21	Anytime, Anywhere, Any Device
W26	Building a Mobile Strategy for Your Campus
TH31	A Student-Centered Approach to Mobile Learning at Saint Mary's University
TH36	Are Students Online Ready? Preparing Successful Students with DORM

TRACK 2

Digital Campus and Electronic Materials

T02	Leaving the LMS: Checking Out of the Hotel California
T07	Valuing eTextbooks: Business Students Report on Their Use of eTexts
T12	A Virtual Learning Commons for Student Engagement
W17	Developing and Implementing Digital Instructional Artifacts
W22	Flipping the Classroom—Succeeding with Reverse Instruction
W27	eTextbook Use by Faculty and Students in a Small Liberal Arts University
TH32	Shifting Sand: Serving Students on Course Materials in a Changing World
TH37	Integrating Student Response Systems, Note-Taking Tools and Assessment with eTextbooks

TRACK 3

Learning Environments and Technology Infrastructure

T03	Collaborative Learning Spaces that Promote Deeper Student Engagement
T08	What Do You Do When You Build It and They Don't Come?
T10	The Campus Building of the Future: High Tech and Sustainable
T13	Collaborative Learning Spaces in the Academic Library
W18	Delivering Synchronous Training to a Global Audience
W23	IT Consumerization: How Does Central Michigan U Stay Secure with 7,000-Plus Mobiles?
W28	Going Hybrid: Faculty Development for Teaching and Learning Success
TH33	Video Captioning for Accessibility: Penn State Demos Its Solution
TH38	Digital Screen Media: Merging Technologies, Unifying Content

TRACK 4

IT Leadership and Institutional Intelligence

T04	Raising the Bar for IT
T05	Your Enterprise Wiki: Managing Tribal Knowledge for Change
T09	If Data is King, Business Intelligence is the Most Trusted Advisor
T14	Reversing the Trend: Decentralize to Achieve Operational Efficiencies
W19	Reengineering Virginia's Community Colleges
W20	Chief Information Officer Effectiveness in Higher Education
W24	Emerging Technologies for Program Assessment
W25	Technology in a Tight Budget Environment: Doing Different with Less
W29	The New Normal: Natural Disasters = IT Disaster Recovery Planning
W30	Harnessing the Power of Education Data
TH34	Remote Online Placement Assessment at Kent State
TH35	Restructuring Learning at ACU: Mobility and Innovation Across Campus
TH39	The New Helpdesk: Resolving Any Issue, Anywhere, at Anytime
TH40	The Legal Implications of Cloud Computing, Social Media and Mobility

Learning Applications and Mobile Learning | Digital Campus and Electronic Materials | Learning Environments and Technology Infrastructure | IT Leadership and Institutional Intelligence

PRE-CONFERENCE WORKSHOPS

MONDAY
JULY 16, 2012

8:30 AM - 11:30 AM	**M01** Moodle 2 and Google Apps Integration *Steve Pillow, MidAmerica Nazarene University*	**M02** Securing Financial Support for Campus Technology Initiatives *Meg Cantwell , American Association of State Colleges and Universities, Grants Resource Center*
11:30 AM - 1:00 PM	*Lunch*	
11:45 AM - 12:45 PM	*Luncheon Keynote*	
1:00 PM - 4:00 PM	**M06** Freeware and Open Source Software in Academe *James Corbly, Kansas Wesleyan University*	**M07** Collaborative Learning Tools and Techniques: Teach an Instructor to Digitally Fish and You Feed Students for Life *Jeff Borden, Pearson eCollege*

BREAKOUT SESSIONS

TUESDAY
JULY 17, 2012

EXHIBIT HALL SCHEDULE
12:15 - 3:30 PM
LUNCH
12:15 - 1:15 PM
TECHNOLOGY CLASSROOMS
1:00 - 3:25 PM
POSTER SESSIONS
2:00 - 3:00 PM
EXHIBIT HALL RECEPTION
4:45 - 6:30 PM
TECHNOLOGY CLASSROOM
5:00 - 5:25 PM

8:30 AM - 9:45 AM	*Opening Keynote* - *Mark Milliron, Chancellor, WGU Texas, Former Deputy Director for Postsecondary Improvement, The Bill & Melinda Gates Foundation*	
10:00 AM - 11:00 AM	**T01** Can the iPad Provide a High-Quality Education Experience? *Glenn Setliff, Duke University*	**T02** Leaving the LMS: Checking Out of the Hotel California *Scott Helf, Western University of Health Sciences, COMP*
11:15 AM - 12:15 PM	**T06** Making Education Social: The FoxMIS Community Site *David Schuff, Temple University*	**T07** Valuing eTextbooks: Business Students Report on Their Use of eTexts *Pat Maxwell, The College at Brockport (SUNY)*
3:45 PM - 4:45 PM	**T11** Mobile Computing for Online Education *Michelle Murphy, Georgia Piedmont Technical College*	**T12** A Virtual Learning Commons for Student Engagement *Susan Lieberthal, Suffolk County Community College*

WEDNESDAY
JULY 18, 2012

EXHIBIT HALL SCHEDULE
12:15 - 3:30 PM
LUNCH
12:15 - 1:15 PM
TECHNOLOGY CLASSROOMS
1:00 - 2:55 PM
POSTER SESSIONS
2:00 - 3:00 PM
PRIZE DRAWING
3:00 - 3:05 PM
DON'T MISS THE TECHNOLOGY SOLUTION SEMINARS - 5:00-5:45 PM IN BREAKOUT SESSION ROOMS.

8:30 AM - 9:45 AM	*CT12 Innovator Awards Presentation and General Keynote Session*	
10:00 AM - 11:00 AM	**W16** Developing a Successful Mobile Application in a Data-Driven World *Jared Johnson, The George Washington University*	**W17** Developing and Implementing Digital Instructional Artifacts *Kevin Forgrad, Bristol Community College*
11:15 AM - 12:15 PM	**W21** Anytime, Anywhere, Any Device *Link Alander, Lone Star College System*	**W22** Flipping the Classroom—Succeeding with Reverse Instruction *Kelly Walsh, The College of Westchester*
3:45 PM - 4:45 PM	**W26** Building a Mobile Strategy for Your Campus *Fairlight Lower, Bridgepoint Education*	**W27** eTextbook Use by Faculty and Students in a Small Liberal Arts University *Arlene Nicholas, Salve Regina University*

THURSDAY
JULY 19, 2012

8:30 AM - 9:30 AM	**TH31** A Student-Centered Approach to Mobile Learning at Saint Mary's University *Bob Anderson, Saint Mary's University at MN*	**TH32** Shifting Sand: Serving Students on Course Materials in a Changing World *Russel Weldon, Auburn University*
9:45 AM - 10:45 AM	**TH36** Are Students Online Ready? Preparing Successful Students with DORM *Rene Cintron, Delgado Community College*	**TH37** Integrating Student Response Systems, Note-Taking Tools, and Assessment with eTextbooks *Perry Samson, University of Michigan*
11:00 AM - 12:00 PM	*Closing Keynote*	

conference at a glance

M03 The Silver Lining: More Classroom Cloud and CollaborationTools *Mark Frydenberg, Bentley University*	**M04** A Mobile App with Zero Programming Knowledge and Zero Costs *Michael Koskinen, Caldwell College*	*BE SURE TO CHECK THE WEBSITE OFTEN AS MORE WORKSHOPS ARE BEING ADDED TO THE SCHEDULE.*
M08 iPad School *Scott Fisk, Samford University*	*BE SURE TO CHECK THE WEBSITE OFTEN AS MORE WORKSHOPS ARE BEING ADDED TO THE SCHEDULE.*	*BE SURE TO CHECK THE WEBSITE OFTEN AS MORE WORKSHOPS ARE BEING ADDED TO THE SCHEDULE.*
T03 Collaborative Learning Spaces that Promote Deeper Student Engagement *Anastasia Morrone, Indiana University*	**T04** Raising the Bar for IT *Thomas Hoover, University of Tennessee-Chattanooga*	**T05** Your Enterprise Wiki: Managing Tribal Knowledge for Change *Cullen Jones, Naval Postgraduate School, Monterey*
T08 What Do You Do When You Build It and They Don't Come? *Karen Fritch, St. Petersburg College*	**T09** If Data is King, Business Intelligence is the Most Trusted Advisor *Robert Thompson, Wayne State University*	**T10** The Campus Building of the Future: High Tech and Sustainable *David Neilsen, University of Nebraska at Omaha*
T13 Collaborative Learning Spaces in the Academic Library *Terri Muraski, University of Wisconsin-Stevens Point*	**T14** Reversing the Trend: Decentralize to Achieve Operational Efficiencies *Marwin Britto, Lone Star College*	**T15** B.Y.O. Device—Using Cloud Computing to Deliver Labs of the Future *Wesley Esser, Massachusetts Institute of Technology, Sloan School of Management*
W18 Delivering Synchronous Training to a Global Audience *Terrance O'Neil, Northeastern University*	**W19** Reengineering Virginia's Community Colleges *Joy Hatch, Virginia Community College System*	**W20** Chief Information Officer Effectiveness in Higher Education *Wayne Brown, Excelsior College*
W23 IT Consumerization: How Does Central Michigan U Stay Secure with 7,000-Plus Mobiles? *Ryan Laus, Central Michigan University*	**W24** Emerging Technologies for Program Assessment *Mukul Bhalla, Argosy University*	**W25** Technology in a Tight Budget Environment: Doing Different with Less *Joe Traino, Coconino Community College*
W28 Going Hybrid: Faculty Development for Teaching and Learning Success *Andreas Brockhaus, University of Washington-Bothell*	**W29** The New Normal: Natural Disasters = IT Disaster Recovery Planning *Angela Neria, Pittsburgh State University*	**W30** Harnessing the Power of Education Data *Jeff Borden, Pearson eCollege*
TH33 Video Captioning for Accessibility: Penn State Demos Its Solution *Keith Bailey, Penn State University*	**TH34** Remote Online Placement Assessment at Kent State *Rose Tran, Kent State University*	**TH35** Restructuring Learning at ACU: Mobility and Innovation Across Campus *Scott Perkins, Abilene Christian University*
TH38 Digital Screen Media: Merging Technologies, Unifying Content *May Chang, East Carolina University*	**TH39** The New Helpdesk: Resolving Any Issue, Anywhere, at Anytime *James Carlisle, Georgia College, Milledgeville*	**TH40** The Legal Implications of Cloud Computing, Social Media, and Mobility *Peter I. Sanborn, Foley & Lardner LLP, Boston*

pre-conference workshops

MORNING WORKSHOPS

M01 Moodle 2 and Google Apps Integration

Steve Pillow, Assistant Professor, MidAmerica Nazarene University

Google Apps for Education are becoming one of the most popular ways for students, faculty and campus staff to interact and share content. Thousands of Universities are using Google Apps because they are easy to deploy, free up IT staff, save money and include support and security for Gmail, Google Talk, Google Docs, Google Sites, Google Video and Calendar features. Moodle, on the other hand, is the world's most popular learning management system. The integration of these two systems is possible and produces effective results. Learn how these tools can be integrated and compliment each other during this workshop. Participants are encouraged to bring their own wireless devices to participate and interact with both Google Apps and Moodle. Equipped with this robust platform of tools, return to your campus ready to maximize collaboration and focus your time and budget on teaching and learning.

M02 Securing Financial Support for Campus Technology Initiatives

Meg Cantwell, Senior Consultant for Special Initiatives, American Association of State Colleges and Universities, Grants Resource Center

To secure funding for technology-based innovation, campuses must translate their good ideas into viable proposals. Participants will learn strategies to research funding opportunities, develop goal-oriented projects and package proposals in ways that convince reviewers that an investment in the proposed project will pay returns for both the campus and the sponsor. This workshop is suited to individuals with a basic or intermediate understanding of the grant-seeking enterprise.

M03 The Silver Lining: More Classroom Cloud and CollaborationTools

Mark Frydenberg, Senior Lecturer and Director of CIS Sandbox, Bentley University

Blogs and wikis are so 2006. You already know about Google Docs, Flickr and Wikipedia. In this half-day interactive, hands-on workshop you will play with the latest free cloud and web-based collaboration tools to create knowledge, analyze date, produce multimedia, organize information, share screens, publish online and more. Get ready for exciting demos and then try them yourself! Learn best practices for integrating these tools into a college classroom, and capture your students interest. Bring your laptop and/or tablet for the full experience.

M04 A Mobile App with Zero Programming Knowledge and Zero Costs

Michael Koskinen, Instructional Technology Support Specialist, Caldwell College

Are you interested in creating an app for your organization? Do you have a concern about the costs and programmers required to develop an Apple or Android app? Caldwell College did it without a programmer and without paying a third party vendor one penny. Come see how in this workshop detailing Caldwell College's new mobile applications. Participants are encouraged to bring their own wireless devices to participate.

AFTERNOON WORKSHOPS

M06 Freeware and Open Source Software in Academe

James Corbly, Director of Library Services, Kansas Wesleyan University

This program will identify the unique characteristics of freeware and open source software vis-à-vis commercial software. Attendees will acquire a solid understanding of licensing considerations related to freeware and open source software, including insights on the GNU General Public License, a widely used freeware license. Participants are encouraged to bring their own wireless devices to participate. These software packages will also be classified by function before concluding remarks are offered for their procurement and implementation into daily work routines.

M07 Collaborative Learning Tools and Techniques: Teach an Instructor to Digitally Fish and You Feed Students for Life

Jeff Borden, Sr. Director of Teaching & Learning, Pearson eCollege

This workshop will explore the benefits of teaching in open, social and diverse learning environments. Starting from a framework of collaborative learning, participants will discover effective tools and techniques where students truly become "learners" while engaging in group discussions, presentations, research and documentation. This hands- on workshop will showcase hundreds of free tools that foster these experiences, support collaborative interaction and personalize the learning experience. Participants are encouraged to bring their own wireless laptop and/or tablet for the full experience.

iPad School

M08 *Scott Fisk, Associate Professor, Samford University*

iPads are creative tools that can be used for a variety of instructional applications. Our team will talk about how you can use iPads to inspire an engaging, modern learning environment for students. Discussion will focus on how to establish an iPad program and effectively use iPads in the classroom. Useful iPad instructional apps will be demonstrated. Participants are encouraged to bring their own wireless devices and iPads to participate.

opening keynote

Tuesday, July 17

Deeper Learning Conversations on Technology, Education and the Road Ahead

Mark Milliron
Chancellor, WGU Texas

Mark David Milliron was recently named Chancellor of WGU Texas, a nonprofit university founded by the state of Texas to provide its citizens affordable, accredited, and high-quality online and blended degree programs in high-demand fields. Prior to taking this position, he served as the Deputy Director for Postsecondary Improvement with the Bill & Melinda Gates Foundation, leading efforts to increase student success in the US postsecondary education sector. He is an award-winning leader, author, speaker, and consultant well known for exploring leadership development, future trends, learning strategies and the human side of technology change.

TRACK 1: LEARNING APPLICATIONS AND MOBILE LEARNING

T01
Can the iPad Provide a High-Quality Education Experience?

Glenn Setliff, Director of Information Technology, Duke University

Duke University began challenging IT leaders and instructors with the idea that an iPad can be part of a high-quality educational experience. In accepting the challenge, IT staff developed a project plan that included key metrics from an instructor viewpoint and a student viewpoint, as well as a carefully controlled pilot program that made it possible to gauge the effectiveness of the device over a full semester.

T06
Making Education Social

David Schuff, Associate Professor, with Munir Mandviwalla, Associate Professor and Chair, Temple University

The notion of "social education" integrates teaching and learning, professional development, placement and administration where students, faculty and staff are content creators sharing information in short, frequent bursts using socially enabled Web 2.0 tools. This interactive presentation will take a look at best practices for developing a social education strategy and will include a live demonstration of Temple University's MIS Community Site as a case study.

T11
Mobile Computing for Online Education

Michelle Murphy, Director of the Center for eLearning Delivery, Georgia Piedmont Technical College

Mobile devices could be the next revolution in education. These devices allow students to carry around a computer, a camera, GPS and the internet everywhere they go. Mobile technologies have a way of extending education beyond the classroom to provide anytime, anywhere education.

T15
B.Y.O. Device—Using Cloud Computing to Deliver Labs of the Future

Wesley Esser, Director, IT Consulting and Support, Massachusetts Institute of Technology, Sloan School of Management, with Peter McKay, President & Chief Executive Officer, Desktone

Increased enrollment and proliferation of Mac and tablet usage presents challenges to IT departments. Wesley Esser, IT Director at MIT/Sloan, will discuss virtual labs that leverage the cloud to provide students with virtual desktops. Using desktops as a service in virtual labs, IT departments reduce TCO and eliminate the complexities of virtual desktop deployments, all while meeting students' demands to use their own endpoint devices to gain the same experience as physical PCs.

W16
Developing a Successful Mobile Application in a Data-Driven World

Jared Johnson, Assistant Director, Project Management, with Yordanos Baharu, Executive Director of Academic Enterprise Applications, and P.B. Garrett, Associate Provost and Chief Academic Technology Officer, The George Washington University

This session will examine the George Washington University's cost-effective strategy for planning, developing, implementing and supporting an in-house campus mobile app. A campus mobile app is an excellent tool for bringing together key university services into one portal that students can access on the go.

W21
Anytime, Anywhere, Any Device

Link Alander, Associate Vice Chancellor, Technology Services, with Oscar Ramos, Executive Director, Technology Services, Lone Star College System

What started as a simple application virtualization project blossomed into the integration of application and desktop virtualization to provide students, faculty and staff access to IT resources "anywhere, anytime and on any device." The presenter will provide a detailed summary of the pilot group (4,200 students) along with the plan to scale.

W26
Building a Mobile Strategy for Your Campus

Fairlight Lower, Associate Director of Learning Architecture, Bridgepoint Education

This session will demonstrate how to improve student and faculty access and learning engagement by leveraging a mobile strategy. The presenter will share an overview of outcomes and assessment data as well as the application development process, feature set, user experience and other project results.

TH31
A Student-Centered Approach to Mobile Learning

Bob Anderson, Director of Instructional Technology, Saint Mary's University at MN, with Shilpa Patwardhan, Program Development Manager, and Rob Schnieders, Chief Learning Officer, Deltak Innovation

Saint Mary's at MN and Deltak are planning to use the iPad extensively in online graduate programs in project management and organizational leadership starting in May 2012. Saint Mary's is integrating the iPad into the curriculum, and immersive, discipline-specific, learning activities will enable student-to-student, student-to-instructor and student-to-content interaction.

TH36
Are Students Online Ready?

Rene Cintron, Assistant Dean, with Jennifer Lang, Instructor, Delgado Community College

Participants explore Delgado's Online Readiness Module (DORM) and discover technical tools and study skills used. All assignments were developed to increase student success and retention. What started as a tool for online students is now a tool for the online component of any course.

conference tracks

TRACK 2: DIGITAL CAMPUS AND ELECTRONIC MATERIALS

T02
Leaving the LMS: Checking Out of the Hotel California

Scott Helf, Chief Technology Officer, with Gerald Thrush, Assistant Dean, Pre-clinical Education, Western University of Health Sciences, COMP

Have you ever dreamed of leaving your LMS? The College of Osteopathic Medicine of the Pacific at Western University did just that for its approximately 1,100 osteopathic medical students for the 2011-2012 academic year. In this interactive session, the presenter will relate COMP's story, the considerations behind the decision to leave the LMS and relevant challenges and triumphs, along with the processes and technologies now in use.

T07
Valuing eTextbooks

Pat Maxwell, Systems Librarian with Susan Stites-Doe, Professor, Business Economics, and Jennifer Little, Coordinator of Library Instruction, The College at Brockport (SUNY)

A series of longitudinal studies explored student attitudes towards eTextbooks and reported on experience reading a course textbook in digital format. Students in both online and traditional classes accessed the eTextbooks with their personal laptops, Kindles, iPads and smart phones. Findings show that 65% of students are likely to purchase another eTextbook.

T12
A Virtual Learning Commons for Student Engagement

Susan Lieberthal, Campus Head Librarian, with Min Su, Specialist, and Tatiana Tchoubar, Instructional Media Technologist, Suffolk County Community College

Using funding from a Title III grant, Suffolk County Community College has created a virtual learning commons (VLC) to increase student engagement. The faculty-driven VLC group designed the website, which was implemented by the grant IT specialist within a Luminis portal. Online learning areas of VLC contain interactive digital materials, created or chosen by the faculty, including social networking tools. Original scripts for analytics have enabled the Title III researcher to report students' progress.

W17
Developing and Implementing Digital Instructional Artifacts

Kevin Forgrad, Instructional Designer, Bristol Community College

If your college or university is in the process of developing a set of digital instructional artifacts based on a common set of learning outcomes, then this presentation is for you. The presenter will offer a sample of the "Course Design Toolkits" aimed at strengthening general education principles across the curriculum, comment on successes and best practices they may use for similar projects.

W22
Flipping the Classroom—Succeeding with Reverse Instruction

Kelly Walsh, CIO, College of Westchester

College of Westchester CIO and EmergingEdTech author Kelly Walsh shares examples of "flipping the classroom," encouraging the consumption of instructional content outside of the classroom, leaving valuable classroom time for reinforcement, review and other work.

W27
eTextbook Use by Faculty and Students in a Small Liberal Arts University

Arlene Nicholas, Assistant Professor, with John Lewis, Digital Services Librarian, Salve Regina University

The high cost of education includes the rising costs of college textbooks. The presenters will examine the benefits and limitations of eTextbooks as well as the attitudes of faculty and students toward using this less expensive technological alternative. This session will also discuss current trends and how textbooks are utilized and whether any problems outweigh the benefits of an eTextbook.

TH32
Shifting Sand: Serving Students on Course Materials in a Changing World

Russel Weldon, Director of Course Materials, with Mike Robinson, Director of IT, Auburn University, and Chad Stith, Platform Advocate, Bookrenter

Realizing that the students of today value choice and service above all else, Auburn has developed a program that features traditional new and used textbook options along side one of the most successful textbook rental and digital offerings. Auburn's approach draws more students back to campus for materials and supports a cutting-edge course materials program for all students.

TH37
Integrating Student Response Systems, Note-Taking Tools and Assessment with eTextbooks

Perry Samson, Professor, University of Michigan, with Jason Aubrey, Director of Sales, LectureTools Inc.

This presentation reports improvements in student engagement and acceptance of online textbooks afforded with integration of in-class student response, note taking, inquiry and assessment tools with eTextbooks. The linkage between classroom activities and eTextbooks drives student purchases of eTextbooks to around 60%, far higher than in courses without integration.

TRACK 3: LEARNING ENVIRONMENTS AND TECHNOLOGY INFRASTRUCTURE

T03

Collaborative Learning Spaces that Promote Deeper Student Engagement

Anastasia Morrone, Associate Dean, Learning Technologies, with Jacqueline Blackwell, Associate Professor, IUPUI, and Mark Russell, Manager, Student Technology Centers and Learning Space Planning and Design, Indiana University

We will share findings from three experimental classroom projects at IUPUI and Indiana University-Bloomington. These classrooms include a "Collaboration Café Classroom" that provides informal seating in a café-like environment; a technology-rich collaborative classroom that encourages critical and reflective thinking; and an immersive videoconference classroom that provides a telepresence-like experience while enabling freedom of movement and increased student engagement within and across sites.

T08

What Do You Do When You Build It and They Don't Come?

Karen Fitch, Instructional Design Technologist, St. Petersburg College

This session covers how St. Petersburg College identified an issue of faculty not adequately receiving the professional development they needed for teaching online. The presenters will explain how data was gathered to identify the weaknesses. They will detail the ways all stakeholders had input to a solution and the process that was created for a systemic approach to professional development for faculty.

T10

The Campus Building of the Future: High Tech and Sustainable

David Neilsen, Director of Technology & Budget & Building Manager, University of Nebraska at Omaha

The College of Business Administration at the University of Nebraska at Omaha is a model of sustainability. In addition to obtaining gold LEED status on new construction, the building is a high-tech showcase built without compromising on sustainability, reliability or security. This session will demonstrate how universities can have a sustainable building and sustainable computing infrastructure using virtualization and thin clients.

T13

Collaborative Learning Spaces in the Academic Library

Terri Muraski, Systems Librarian, University of Wisconsin-Stevens Point

The University of Wisconsin-Stevens Point library has teamed up with campus Information Technology to redesign the library into a Learning Commons environment, providing a variety of open collaborative learning spaces ranging from small group specialized preview or presentation rooms to larger, open spaces.

W18

Delivering Synchronous Training to a Global Audience

Terrance O'Neil, Instructional Designer, with Hillary Dostal, Manager, Corporate Programs, Northeastern University

Learn how NEU delivers a 4-day (3 hours/day) synchronous training globally to employees of a large multinational corporation. Log into a virtual room to see the environment first hand. The presenters will provide tips to managing complex synchronous sessions and they will distribute a toolkit that includes their checklist for what's needed to launch a program like this.

W23

IT Consumerization: How Does Central Michigan U Stay Secure with 7,000-Plus Mobiles?

Ryan Laus, Network Manager, Central Michigan University with Adam Powers, Chief Technology Officer, Lancope

This session will examine the effects of IT consumerization on higher education institution networks. This session will reveal how CMU supports and secures roughly 7,000 mobile devices—including smart phones and tablets. They'll also explain how to identify anomalies and share real-world examples of how they prevented infected mobile devices from taking down CMU's network.

W28

Going Hybrid: Faculty Development for Teaching and Learning Success

Andreas Brockhaus, Director of Learning Technologies, University of Washington-Bothell

Current research suggests that hybrid (or blended) courses (defined as 30-70% online) can produce better learning outcomes than traditional face-to-face classrooms or fully online courses. The University of Washington-Bothell used a Community of Inquiry framework to design and deliver a 10-week Hybrid Course Development Institute (HCDI) for faculty. This session will look at hybrid learning research and provide an overview of the HCDI structure and assessed effectiveness.

TH33

Video Captioning for Accessibility:

Director of the eLearning Institute, with Bryan Ollendyke, Instructional Web Technology Specialist , Penn State University; and Tole Khesin, VP of Marketing, and Josh Miller, VP of Business Development, 3Play Media

Although online video is becoming the dominant medium in education, closed captioning is rare—even though it is a necessity for deaf users and an essential aid for ESL students. Captioning is often perceived as obtrusive and expensive, but in this session, Penn State University will demonstrate a cost-effective, streamlined captioning workflow that provides push-button simplicity for instructors, administrators and students campus-wide.

conference tracks

TH38

Digital Screen Media: Merging Technologies, Unifying Content

May Chang, Assistant Director, Library Technology, East Carolina University

The presenter will showcase locally developed self-service interactive public information systems that provide "pushed" information as well as user-selectable options and content search capabilities. Developers at East Carolina University were able to merge the capabilities of interactive kiosks and digital signage. An object-oriented framework allows for scalable options and features as well as ongoing support and development.

TRACK 4: IT LEADERSHIP AND INSTITUTIONAL INTELLIGENCE

T04

Raising the Bar for IT

Thomas Hoover, Associate Vice Chancellor and CIO, University of Tennessee-Chattanooga

How do you move IT from a good department to a great department—one that creates and communicates real value and is focused on business outcomes and values? The presenter will share successes and challenges in making this transition.

T05

Your Enterprise Wiki: Managing Tribal Knowledge for Change

Cullen Jones, Educational Technologies Manager, with Thomas Blood, Director, Naval Postgraduate School, Monterey

The Naval Postgraduate School wiki has evolved from a side project to the de-facto website for the IT department and beyond. In this presentation two technology managers from NPS will present directly from the NPS wiki and outline best practices for turning your wiki into a self-service tool that allows ad-hoc creation of collaborative workspaces.

T09

If Data is King, Business Intelligence is the Most Trusted Advisor

Robert Thompson, IT Director, with Kathleen Lueckeman, Assistant Vice President, Enrollment Management, Wayne State University

Learn how Wayne State University leveraged common, open source web development languages such as PHP and JQuery to create a new dynamic admissions system that provides transparent access to data, business intelligence analytics and tools that have increased the speed of graduate admissions processing by 92%.

T14

Reversing the Trend: Decentralize to Achieve Operational Efficiencies

Marwin Britto, Executive Director, Lone Star College Online, Lone Star College

Depersonalization and degradation of services often accompany centralization of support services at higher education institutions. With the implementation of innovative technological strategies, it is possible to decentralize and still gain operational efficiencies and greater customer satisfaction. This presentation details our transition process, communication plan, innovative technological strategies and our continual evaluation to ensure that this model is sustainable.

W19

Reengineering Virginia's Community Colleges

Joy Hatch, Vice Chancellor, Information Technology Services, Virginia Community College System

Virginia's Community Colleges face the same issues affecting higher education across our nation—unprecedented enrollment, state support declining at an equally unprecedented rate and ambitious goals. To weather these issues required becoming smarter in the investments of people, talent and technology; along with leveraging the combined size and resources to break down barriers to change and improvement. Take a journey through the process and walk away with a new outlook on community colleges.

W20

Chief Information Officer Higher Education

Wayne Brown, Vice President, Excelsior College

The higher education chief information officer is an important role. Unfortunately, a large proportion (45%) of them will retire in the next 10 years. This presentation will report on the results of a longitudinal higher education CIO study (www.checs.org) and a new study that surveyed the people of the next organizational layer.

W24

Emerging Technologies for Program Assessment

Mukul Bhalla, Associate Dean, College of Undergraduate Studies, with Collen Miron, Associate Dean, College of Undergraduate Studies, Argosy University

The presenters will offer initial data on an assessment system that uses standardized assignments to directly measure course objectives mapped to program outcomes. A detailed grading rubric is used to compute scores on the program outcomes, which are entered into an automated Learning Outcomes Management database. The development process, the benefits and challenges of instituting the program and initial data on faculty satisfaction, student learning and programmatic assessment will be presented.

W25

Technology in a Tight Budget Environment: Doing Different with Less

Joe Traino, Chief Technology Officer, Coconino Community College

In today's tough budget climate, IT departments find it difficult to provide new services and they struggle in supporting existing services. Most IT budgets are being reduced or remain flat. This session provides valuable insight into how technology leaders can do things differently in providing new services or supporting existing services without impacting service levels.

W29

The New Normal: Natural Disasters = IT Disaster Recovery Planning

Angela Neria, CIO, Pittsburgh State University

Scientists have said that the extreme weather patterns that we see on our planet are the new normal. IT disaster recovery planning is important right now. Find out what Pittsburg State University learned from Joplin, MO, when it was devastated by one of the deadliest tornadoes ever recorded. Join this session to learn about writing a strategic plan that will help your institution deal with the many unknowns of a natural disaster.

W30

Harnessing the Power of Education Data

Jeff Borden, Sr. Director of Teaching & Learning, Pearson eCollege, with Rob Kadel, Lecturer, University of Colorado Denver

Every administration is currently scrambling to find meaningful ways to find and use data. This session will provide the questions and the categories that schools could begin using immediately to achieve better retention, completion, grade and outcomes assessment for a much more holistic view of the learner and a much more actionable view of their setting.

TH34

Remote Online Placement Assessment

Rose Tran, Lead IT User Support Analyst, with Michael Nicholas, IT User Support Analyst, Kent State University

In 2011 KSU made the decision to change placement assessment procedures for incoming students from monitored, scheduled, onsite placement assessments to assessments taken remotely by students prior to scheduling their courses with an advisor. Presenters will share information from the related research, planning and budget analyses that took place at their institution.

TH35

Restructuring Learning at ACU: Mobility and Innovation Across Campus

Scott Perkins, Mobile Learning Researcher in Residence, with George Saltsman, Executive Director, Adams Center for Teaching and Learning, Abilene Christian University

Mobility has transformed learning at ACU. A survey of classroom innovation and research projects documents restructuring of learning in the areas of formal learning, informal learning, authority, community and literacy. Multiple examples will be presented within each of these areas.

TH39

The New Helpdesk: Resolving Any Issue, Anywhere, at Anytime

James Carlisle, Director of Technology Support Services and Interim Assistant CIO, Georgia College, Milledgeville

In this session, the presenter will detail the success of delivering IT support services 24/7 to thousands of users in distributed locations, as well as the qualitative benefits of leveraging remote support technology.

TH40

The Legal Implications of Cloud Computing, Social Media and Mobility

Peter I. Sanborn, Associate, with Matthew A. Karlyn, Partner, Foley & Lardner LLP, Boston

The number of colleges and universities exploring cloud-based solutions is growing. As institutions explore their options for entering the cloud, campus technology leaders must understand and assess the potential risks and liabilities of the cloud. In this highly practical presentation, attorneys Matt Karlyn and Pete Sanborn will cover the latest legal implications of cloud computing and offer actionable ideas and examples of language that should be in higher education cloud contracts today.

Be sure to check the website often as more workshops and program highlights are being added to the Campus Technology 2012 conference schedule:

campustechnology.com/summer12

exhibit hall and technology marketplace

The Campus Technology 2012 Exhibit Hall is where attendees gather to see the latest products and services from leading education technology vendors. Attendees at past Campus Technology conferences have appreciated this dynamic, interactive environment that encourages lively discussions of new technologies and provides networking opportunities, detailed product demonstrations and specific solutions to campus challenges.

SCHEDULE AND SPECIAL EVENTS

Tuesday, July 17, 2012

12:15 pm	—	3:30 pm	Exhibit Hall Open
12:15 pm	—	1:15 pm	Lunch
1:00 pm	—	3:25 pm	Technology Classrooms in the Exhibit Hall
2:00 pm	—	3:00 pm	Poster Sessions in Exhibit Hall
4:45 pm	—	6:30 pm	Exhibit Hall Reception
5:00 pm	—	5:25 pm	Technology Classroom in the Exhibit Hall

Wednesday, July 18, 2012

12:15 pm	—	3:30 pm	Exhibit Hall Open
12:15 pm	—	1:15 pm	Lunch
1:00 pm	—	2:55 pm	Technology Classrooms in the Exhibit Hall
2:00 pm	—	3:00 pm	Poster Sessions in Exhibit Hall
3:00 pm	—	3:05 pm	Grand Prize Drawing in the Exhibit Hall

For a complete listing of Technology Classrooms and Poster Sessions, visit our website at campustechnology.com/summer12.

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At the conference, join other professionals in your field at the Birds of a Feather Luncheons on Tuesday and Wednesday. You can also engage in social media with other attendees by following Campus Technology on Twitter @Campus_Tech and @CT_Events to backchannel and share links throughout the conference at hashtag #CT12. And don't forget to add Campus Technology to your Google Plus, Facebook and Linkedin groups.

registration information

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Are Warranties Warranted?

Boilerplate equipment warranties are giving way to negotiated agreements that give institutions the ability to manage their IT operations more efficiently and strategically.

WHETHER YOU'RE PURCHASING hardware for a major institution or springing for a flat-screen TV at Best Buy, it's a question we've all wrestled with: Do you buy the peace of mind that comes with an extended warranty? And is it worth the bite that it takes out of your wallet?

Increasingly, the decision for colleges and universities has become significantly more complicated than that. These days, IT directors are looking at warranties not as insurance against equipment failure, but as one more tool in a broad strategy for managing inventory, cutting costs, and streamlining in-house IT processes.

The warranty landscape is changing, too, with boilerplate warranties becoming less and less compelling. "We're seeing fewer warranties come into play than ever before," says Brian Young, vice president for IT and CIO at **Creighton University** (NE). "A lot of vendors offer limited services. Warranties and turnaround times are a lot more restrictive these days, especially if you want quick turnaround."

Other factors are playing a role, too. There was a time, for example, when some institutions would be paid by vendors to handle in-house repairs for student devices that were under warranty. "The days of campuses having a repair facility for student machines are waning," explains Grant Crawford, CIO of the **Midwestern Higher Education Compact** (MHEC), a regional interstate organization that promotes cooperation and resource sharing in higher education. "There's so much gear out there and so many different devices that students bring to campus. Campuses have enough to worry about keeping their network up and secure" that they're unlikely to want to repair student machines, too.

As IT infrastructure becomes increasingly complex, many colleges and universities are analyzing their warranty needs according to a variety of factors that include equipment lifecycles, reliability statistics, and uptime criticality. And, more and more, they are eschewing standard agreements in favor of negotiated warranties that address their strategic needs.

The ability to negotiate specific warranty terms is more common—and easier—than most people think, especially in these lean economic times. "When you do bulk buys, there are lots of options for negotiating with vendors," says Crawford. "It's not too hard to get vendors to go for a two- or three-year warranty instead of one."

He also recommends buying some spare parts. "You can then swap them in and do the replacement yourself," he notes. "It's far cheaper than buying any type of warranty. And the vendors know that. You can talk tur-

key with them and make sure you can store some spares on-site."

It's an approach that works well for **Coppin State University** (MD). "We keep some critical components on the shelf, worth about $5,000 to $6,000 per year," notes Ahmed El-Haggan, vice president for IT and CIO. "But if anything requires on-site programming, the vendor comes in and does it."

Deciding how many spare parts to keep in house is a balancing act, though. Invest too much and you may end up losing money. "A warranty can be a way to keep up with technology as opposed to keeping obsolete items on the shelf," explains Young. "In the case of a hardware-based telephone switch, for example, you'd buy the warranty because it doesn't make financial sense to buy the part and keep it on the shelf gathering dust. Technology changes so fast that it won't be useful four years later."

"Vendors will tell you their equipment lasts forever and will never break, so ask for a warranty extension."

—Grant Crawford, MHEC

Reliability Comes First

The goal of most IT shops is to achieve five nines uptime or better. No matter how good a warranty, it cannot make up for a shoddy product that breaks. In purchasing equipment, it's important not to put the cart before the horse. Identify the most reliable products first, and worry about the warranty afterward.

If it's a quality product, moreover, the vendor is usually prepared to stand behind it. Take advantage of that. "Vendors will tell you their equipment lasts forever and will never break, so ask for a warranty extension," advises Crawford. "It's a fairly low-cost thing for them to negotiate in a contract."

No matter how good the equipment, though, its useful life is probably limited due to the sheer speed of technological innovation. Maintaining out-of-date equipment isn't smart, nor is buying long-term warranties for equipment that won't stay the course. At the same time, budgets don't always permit quick replacement, which means the costs of maintenance and replacement have to be monitored and balanced on an ongoing basis.

"We buy hardware with one to three years of maintenance usually included," says Terri-Lynn Thayer, assistant vice president and deputy CIO at **Brown University** (RI). "We haven't ever tried to get additional years through negotiation. Sometimes the vendor will jack up the price in the fourth year, and then you might as well replace the equipment."

Brown is very focused on its refresh cycle for certain types of equipment. For example, the university will downgrade the type of maintenance contract on older equipment with few years left in its lifecycle. "We're trying to be much more formulaic and deliberate about those decisions, and our capital planning is now based on lifecycle considerations," says Thayer.

The school also utilizes different levels of maintenance agreement based on equipment's relative importance. "For disaster-recovery purposes, we have assigned everything a priority rating of 1 through 4," says Thayer of the hardware on Brown's IT data floor. "If something is priority 1, it is a high-priority service for which we have provisioned differently. In those cases, it makes us more resilient to a hardware problem."

Disaster-recovery time is a critical component of Brown's maintenance contracts. "Our recovery-time objectives are all specified," notes Thayer. "We specify a maximum allowable downtime for each service. That affects the maintenance service we get."

Identifying your school's mission-critical operations—and the equipment that supports those operations—is key to putting together the maintenance contracts you need at a price that makes sense. And those priorities will differ from institution to institution.

Young, for example, cites the patient-care applications and systems at Creighton University Medical Center. "We need very quick turnaround in terms of our warranties, just because of the nature of healthcare," he explains. "For critical patient-care systems, the turnaround time can't be two days—it has to be hours, or minutes in some cases."

Even for noncritical applications, evaluating the need for equipment warranties can be a useful exercise, allowing IT staffers to "really take a look at some key questions," Young adds. "If it breaks, can you afford to replace it? Is the technology going to be handled roughly versus just sitting in a controlled environment? If things have been running well without issues, do you really need an extended warranty?"

It's also essential to hold vendors accountable for warranties. "You have to make sure they meet the language of the warranties," emphasizes Young. "If they say four hours, it should be four, not four and a half. You have to hold their feet to the fire. That's a failure I see in a lot of IT shops." **CT**

***Rama Ramaswami** is a business and technology writer based in New York City.*

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jennifer skelly

Rereading the Green

A year after being rocked by scandal, LACCD aims to turn its tarnished reputation green again.

A YEAR AGO, the **Los Angeles Community College District** (LACCD) was the golden child of the green movement in education. Its award-winning Sustainable Building Program, with $5.7 billion in capital funds, was one of the largest environmentally friendly building projects in the country. And then the wheels fell off.

In a series of articles published by the *Los Angeles Times* in February and March 2011, reporters revealed that the modernization project was not delivering on its promises, and that mismanagement had resulted in wasted funds, shoddy construction, and unnecessary delays.

The fallout from the articles led to the ousting of Larry Eisenberg, executive director of facilities planning and development. Over the past several months, the LACCD Board of Trustees has taken measures to reform the building program, including terminating several building contracts, placing a moratorium on new projects, and appointing an independent review panel to evaluate the program and provide recommendations.

So what went wrong? And what can the district—and institutions around the country—learn from a green dream that turned into a nightmare?

Too Big to Succeed?

One of the criticisms leveled against the project is that it was simply too big to be managed effectively. Certainly, it was very ambitious. LACCD is the largest community college district in the country, with nine campuses serving 150,000 students. Maintenance and improvements had been deferred for so long that facilities required urgent repair, and there was a desperate need for new buildings. All that deferred work was rolled into a giant plan with a head-spinning budget of $6 billion (including interest).

Part of a $5.7 billion sustainable building program, solar arrays double as parking lots at LACCD.

These funds were raised from three bond measures, approved by voters in 2001, 2003, and 2008. After the first bond measures were passed, the Board of Trustees adopted a policy of sustainable building, including a goal of having nearly 90 buildings gain LEED certification from the US Green Building Council.

Any project this large is bound to encounter problems, and the LACCD initiative proved no different. Quality control and basic planning suffered from the sheer number and scope of projects undertaken. The result does not make for happy reading: a new science complex with faulty plumbing, wiring, and heating; a performing arts center that was renovated only to be torn down; and projects that were

scrapped after the design work was complete—and, in some instances, even after construction had begun. In a 2009 memo, Eisenberg wrote, "We are opening buildings that do not work at the most fundamental level."

The problem may have been exacerbated by the fact that the district is decentralized. "Our students and programs are very diverse," explains Jorge Mata, CIO for LACCD. "The priorities at one college might not be the top priorities in another. Decentralization allows for tailoring." For example, individual colleges are accredited, not the district.

While this approach makes sense from an academic viewpoint, it made it impossible to create a standardized districtwide set of requirements for building projects. It also meant that there was insufficient top-level oversight: Individual colleges were responsible for their own funds and projects, sometimes with lamentable results.

While all these factors probably contributed to the district's woes, the true lesson may be much simpler: Nothing good comes from deferring maintenance and improvements.

Idealism Trumped Reality

It also appears that LACCD followed its heart, not its head. While most colleges and universities are committed to preserving the environment, it's the job of administrators to ensure that green efforts are both technologically and economically feasible. Unfortunately, it seems that LACCD became blinded by idealism. From the get-go, the Sustainable Building Program was aggressively green, but key aspects proved impossible to implement—in some cases the technology doesn't yet exist.

Eisenberg wanted to use geothermal, solar, and wind power to make the district energy-independent—and even to sell electricity back to the grid. But this vision was seriously flawed. At present, the cost of taking the district off the grid would far outweigh the financial savings. Geothermal energy is inefficient at best in a temperate climate like that of Los Angeles. And, too often, implementation of projects that did get off the ground was severely flawed: Solar arrays had to be taken down because they were built above seismic faults, while a prototype wind turbine turned too slowly to generate enough power for a lightbulb.

Among other institutions getting green initiatives underway, there is some concern that LACCD's missteps might infect their own efforts. So it's important to note that LACCD has actually made some important green advances. As of last year, nine completed buildings had received LEED certification; 18 more were in the certification process; 22 were under construction; and 42 in design.

These are significant steps. When a major project hits turbulence, though, it's easy to lose sight of the big picture while focusing on damage control. Unfortunately, future benefits can fall victim to such a short-term focus. Putting Eisenberg's more fanciful projects aside, LACCD's goal of planning for its energy future still makes tremendous sense.

"We know that the cost of energy will keep increasing," says Mata. "Eventually, our resources will all go toward powering the schools." Creating a long-term plan for gaining energy independence is not only a sustainable building practice, it makes good sense economically.

Although critics of LACCD's energy-independence plan argue that the cost of becoming self-sufficient is much greater than the district's current energy bills, it is difficult to accurately predict the potential savings over decades.

"Some investments are for the distant future," says Mata. "Some won't manifest for 10 years, but the money and the opportunities might not be there in 10 years, so we need to plan for them now."

It's a conclusion that also seems to have been reached by an independent review panel charged with investigating the building program. The panel's review, published on Jan. 4, stated that 64 percent of major projects have been completed, and only a "handful" have run into significant problems. The panel concluded that the majority of the program's work "will have a huge positive impact on the communities served for decades to come."

Certainly, Mata believes LACCD's building program is still on the right path. "Fundamentally, what we're trying to do is correct," he notes. "It's hard to get inspired about your own future when you walk into a building that's old and uncared for." He says it's more than just new buildings and upgraded technology, though. The architecture of the buildings themselves can be a source of inspiration.

"Build the infrastructure," he encourages. "Create areas where learning can happen for more people and in better ways for existing people." **CT**

Jennifer Skelly *is a freelance writer and screenwriter based in Los Angeles.*

LACCD Tech Initiatives

IMPLEMENTATION OF technology initiatives has lagged behind other portions of the **Los Angeles Community College District**'s Sustainable Building Program, with only 10 percent of the allocated $126 million awarded thus far. Roughly one-third of the tech department's focus is on the installation of a fiber-optic ring connecting the colleges, another third on the creation and implementation of software and programs to bind the campuses together, and one-third toward staff support.

Infrastructure, such as cabling, power, and cooling—components that are difficult to add later—is a priority. "Infrastructure is the most important thing, because all the technologies will ride on it," says Jorge Mata, the district's CIO. "We don't know what those technologies will be, but we know there'll be more. The infrastructure will be there for 30 years—you just have to set it up correctly from the beginning."

the PRiCE is Right?

Logically, e-textbooks should be much cheaper than the print options available to students—but they're not. *CT* looks at the rationale behind their pricing, and the market factors at play. **By Dian Schaffhauser**

Fyan Etter

"Doing the required reading will hurt more than ever this year. Textbook prices...have been rising at an alarming rate." *–The Harvard Crimson*

"The cost of textbooks ranks at the top of the list of undergraduate 'gripes.'"*—The Cornell Daily Sun*

SUCH SENTIMENTS SURFACE in student newspapers and on social networking sites regularly. And, apparently, they're nothing new. The **Cornell University** (NY) quote, for instance, was published in 1934; the **Harvard University** (MA) quote came out 20 years ago.

There's something about textbook prices that generates outrage in ways that other college expenses, such as housing and technology fees, don't. Maybe it's the shock felt by new students when faced with a $900 bill after getting their textbooks for free in K-12. Maybe it's the awful realization that $40,000 in tuition and board doesn't even cover learning materials.

Many educators—as well as the feds and plenty of state governments—believe that the solution to high textbook costs lies with a shift to digital content. After all, if you eliminate the printing, the trucking, the warehousing, and all the other hassles related to physical inventory, you're left with only the writing, production, development, and marketing. Surely that will bring down the prices students have to pay for curriculum?

But if that were true, why hasn't the digital-content pilot at Florida's **Daytona State College** shown far greater savings? According to a report by the pilot's researchers, "during three of the project's four semesters, students enrolled in some of the e-text pilot sections paid only $1 less for rental of their e-texts than students who bought a printed book, due to publisher pricing decisions." Worse, these students couldn't sell their e-texts back to the campus bookstore like the owners of print books could, "which increased their disappointment."

Given these conflicting claims and beliefs, *CT* set out to discover the true cost of e-textbooks, what's driving the pricing, and how these costs compare to those of traditional print products.

Crunching the Numbers

At first glance, e-texts do offer a significant discount over traditional print textbooks. An unscientific review of pricing on CourseSmart, an e-textbook clearinghouse, indicates that e-texts on average sell for 50 to 60 percent of the cost of equivalent new print textbooks. But discounts are dependent on the individual title and the area of study. Architecture e-texts, for example, are often as much as 70 percent of the cost of the new print textbook, while many law e-texts cost 40 percent of the print edition.

In considering these numbers, though, it's important to understand that a digital textbook is essentially a rental—students cannot sell their copies once they're finished with them. Instead, students pay to license the text for a certain amount of time, usually 180 or 360 days.

So what happens to the cost calculation when you factor in buyback of print textbooks? While a host of variables determines the ultimate resale value, students can probably expect to recoup 25 to 50 percent of the cost of the original new textbook. It's still cheaper to buy the digital edition, but the pricing difference is not nearly as extreme. And what of those students who buy secondhand textbooks from the get-go and then resell them at the end of the course? In many cases, their out-of-pocket costs might be *less* than for the digital version.

To be fair, there are a lot of hassles and uncertainty associated with reselling textbooks. Securing a premium buyback rate of 50 percent, for example, is dependent on the school reusing that specific title and edition in its courses and the book being unmarked by notes and highlighting.

"Students who mark up their books may not get anything back," notes Jill Ambrose, CourseSmart's chief marketing officer. "You don't know until the end of the semester if you're going to get a buyback. We always say there are a few lucky students who might be able to get that [50 percent], but, for the most part, the majority of students aren't going to. We know we can guarantee savings with digital."

But some universities, including the **University of California, Riverside**, are eliminating the buyback guesswork by instituting their own textbook-rental programs. According to UCR, its rental program can save students as much as 54 percent off the purchase price of a new book.

Furthermore, print textbooks don't carry any peripheral costs, unlike e-texts. To purchase a suitable e-reader, such as an iPad or a 9.7-inch Kindle, students must part ways with another $380 to $500. Given that the average student spends about $900 per year on textbooks, this extra outlay, even amortized over several years, is nonetheless significant—and further erodes whatever savings students may garner by leasing e-texts.

Ultimately, whether a student can do better by leasing an e-text, renting a print copy, or buying a secondhand version depends on many factors, not least the specific title. Overall, though, e-texts cannot be considered a slam-dunk pricing winner.

Can E-Text Prices Be Justified?

What makes the high cost of e-texts even more surprising is that students currently *prefer* the print product. Anecdotal stories about the difficulty of using e-readers for textbooks are common (see "Can Tech Transcend the Textbook?" at c*ampustechnology.com/0311_textbook*), but pilot projects are now reporting similar results.

Starting this academic year, for example, **Chattanooga State Community College** (TN) began an e-text pilot program in conjunction with CourseSmart. Initially, students were given the choice of an e-textbook or a paper-based book for $15 more. Despite the extra cost, students chose the printed textbook, according to Kathy Long, who has been teaching history at the school for 24 years.

In an effort to make the pilot relevant, students were eventually required to use e-texts. When that happened, students complained about two issues, recalls Long. Students with visual disabilities had a hard time because the e-text could be magnified only so much, "before they had to go to the adaptive computer labs." But the biggest gripe was that most students didn't own portable computing devices.

Problems with e-texts don't just stem from student resistance, however. There is a growing recognition that many schools are simply not ready for the transition.

Daytona State's pilot started in 2009 with the intent of testing e-texts and then scaling campuswide. In the ensuing two years, obstacles surfaced, including cases where instructors had customized their courses so much that the original e-texts were no longer relevant. In another situation, generic netbooks had to be substituted for e-readers because the course textbooks weren't available in the Kindle format. Technical snafus included wireless-access problems due to classroom overload; programming bugs on publisher websites; and sorting out just who—instructors, IT, or the publishing company—was responsible for teaching students how to use the various tools and resources.

In evaluating student adoption of e-texts, it's also important to remember that e-texts are, for the most part, souped-up PDFs. While CourseSmart's Bookshelf platform allows students to annotate and highlight text, and digital publisher Kno's platform provides some basic multimedia, e-texts are essentially the same as the print product. There is no significant step up in functionality.

All of these factors may help explain the anemic growth in the e-textbook market. According to research firm Next is Now, digital texts represented only 3 percent of textbook sales in 2011. Considering sales of consumer e-titles on Amazon last Christmas actually outstripped those of print books, the e-text market appears to be seriously lagging.

Prisoners of Print

Given such lukewarm performance, what is keeping e-text pricing so high? In a situation like this, shouldn't publishers drop their prices to make the platform more appealing? Unfortunately, e-textbooks are caught in a kind of industry limbo, and prices are unlikely to change until a variety of market factors shake out. In a nutshell, the pricing of e-textbooks is being held hostage to the print business model.

Indeed, the biggest factor affecting e-text pricing has nothing to do with digital media at all. Instead, it revolves around the resale market for print textbooks. David Straus, vice president of products for Kno, believes university 100- to 200-level survey textbooks (for subjects such as biology, chemistry, and calculus) offer an excellent example of how the resale market is warping the industry.

"These books have to be priced by publishers with the knowledge that they will sell the book once," he explains, "and then the book will be resold anywhere from four to six more times through the used and rental market," with the publisher netting nothing from the resale activity. As a result, publishers front-load the cost of new books in an attempt to offset the lack of income from pass-on usage.

It's also one reason why publishers release revised editions of their textbooks so frequently. By coming out with new-and-improved versions, publishers hope to undercut the resale value of previous editions, even as they raise prices for the new edition.

According to "Exposing the Textbook Industry," a report by Student PIRGs, seven out of 10 professors surveyed said that new editions of textbooks in their field are justified only sometimes or rarely. As the report pointed out, "since new editions are on average 12 percent more expensive than the previous edition, students are spending a lot of money for little educational gain."

You would think that this inherent flaw in the print model would have textbook publishers flocking to digital in droves. After all, the advantage of the digital model for publishers is that it treats a book like software. "Each time

What makes the high cost of e-texts even more surprising is that students currently *prefer* the print product.

that digital book is sold, the publisher will generate income," Straus points out. "In that model, the publisher no longer needs to price the first sale of that book higher." As a result, Straus predicts that at some point the price for digital versions of these survey-type texts will drop from their current levels.

But don't hold your breath waiting for it to happen. According to Straus, even if publishers decided that a $100 printed book could be sold for $30 in digital form, they won't take the plunge. The fear is that people will look at the new paper textbook and say, "Why are you charging $100 for the physical book and $30 for digital?"

"Until the market begins to balance more with a digital model, they can't just drop the prices so dramatically," explains Straus. "They're still producing a lot of physical books, and those physical books are still impacted by the used and rental market."

Even so, Straus believes that this year and next will be pivotal for the transition to digital textbooks. "Across the board—publishers, technology companies, the institutions—there's more energy on this than there was two or three years ago," he says. "I think everything is set up for success."

But is that optimism really justified? As long as e-texts are essentially digital copies of print products, the same economic factors remain in play. It seems more likely that the pricing link between e-texts and print will be broken only when e-texts actually evolve into a completely different product—dynamic, multimedia learning tools that take full advantage of the technical features of the devices on which they operate. At that point, prices for traditional textbooks—whether print or digital—will probably collapse

Paradigm Shift

Inkling is a new breed of publisher that is creating multimedia e-titles that represent a true departure from the old print model. With fewer than 150 e-titles, however, it is not large enough yet to move the market, especially when you consider that Kno claims 150,000 e-titles in its catalog and CourseSmart offers 20,000 digital titles from 30 publishers.

The transition to feature-rich e-titles is inevitable, though, and publishers are positioning themselves accordingly. Inkling's list of investors includes many of the same publishers that are covering their bets short-term with digital replicas of textbooks.

When the bottom does eventually drop out of the market for print textbooks and their digital equivalents, what can educators and students expect price-wise from the new style of dynamic e-learning materials? A review of Inkling's current catalog suggests that students shouldn't expect a windfall there, either: Strikingly, the price of Inkling's e-titles is very similar to that of the digitized textbooks on CourseSmart.

Like any e-text publisher, Inkling does not have to contend with costs such as warehousing, shipping, printing, and paper. However, it does have to absorb higher development costs, including programming, video, and other multimedia. Creating such resource-rich materials is not cheap. Furthermore, it's likely that users will develop higher expectations for the freshness of e-content, leading to constant updating costs. In an economics e-title, for example, users may expect to see the latest data from the Bureau of Labor Statistics, rather than a snapshot from a year ago.

Even so, it's probably too early to gauge future pricing based on current levels. Inkling is a small player, so it's impossible to know what effect economies of scale might have on the business model.

Even if prices don't fall from their current levels, faculty do have one reason to be optimistic. Under the Inkling model at least, students can buy a single chapter of a title (usually $5 to $10), rather than having to shell out for the entire product. For faculty who like to jump from one source to another, this pricing approach makes it possible to assemble a list of study materials that doesn't break the bank.

Regardless of the format, however, publishers are unlikely to lower their prices out of the goodness of their hearts. They're businesses, not nonprofits.

FOLDING E-TEXTS INTO TUITION

AFTER A DECADE of dabbling with e-textbooks, **Chattanooga State Community College** (TN) decided to pursue a more coordinated program of using e-texts on campus. Central to the program's goals was finding a way to reduce costs for students. "Faculty are aware of the rising cost for education, especially for our students, who are traditionally from a lower socioeconomic background," says Judy Lowe, assistant vice president of distributed education and multimedia.

This academic year, working with CourseSmart, the college started a pilot program for some of its online courses in which e-textbooks aren't an option—they are the only way that course materials are delivered. By structuring the program this way, the school benefits students on financial aid, since the fee for the curriculum can come out of their tuition. "They don't have to wait until their check arrives to buy their book," Lowe explains.

While reviewing the course catalog, students simply look for those courses tagged with "e-book fee" to know which ones are using the new system. One problem that surfaced early in these courses is that students sometimes "just want to hold a textbook," Lowe says. "Making the printing [of the digital text] easier was something that has helped in quite a few places."

Some programs, especially in the health fields, also expect their students to keep books for reference on the job later. In Lowe's mind, a possible solution would be for students to be able to purchase a cheap "quick and dirty printed copy, in black and white on loose-leaf paper."

Ultimately, Lowe would prefer to see the traditional format of the textbook go away, so that e-textbooks aren't books at all. "We know now that students learn better in small bites and in a just-in-time learning object format," she explains. She advocates putting together "a collection of e-resources in such a way that they're more approachable by the student. Students shouldn't just be reading a text but interacting with it."

Indeed, the biggest brake on the high cost of learning materials might come from outside the publishing world—competition offered by open education resources (OERs).

The OER approach certainly appeals to Long at Chattanooga State. For the last five or six years, she has used no textbooks in her American history courses, preferring to use materials freely available on the web. In fact, she was irked when she was required to use an e-textbook in her geography class as part of the CourseSmart pilot. Although she enhanced the course with her own notes, she would have preferred to teach it without a core text. "There is so much in geography already out there on the web, why would I need a book?" she asks. "And yet I'm required to have it."

At its core, higher education is powered by faculty and administrators who, like Long, are motivated by teaching and learning, not the money. The internet has now made it possible for these educators to share their work outside the framework of conventional publishers. And the availability of easy-to-use publishing tools makes it possible for them to create educational materials that are as compelling as anything put out by major publishers.

Are there enough talented and motivated do-it-yourself faculty like Long to actually upend the economics of the textbook market? Not likely. The time and money that publishers invest in quality control alone—fact-checking, content-bias vetting, securing permissions, editing, and proofreading—are beyond the resources of the average college faculty member.

So what does the futures market for course materials look like? Unfortunately, students probably won't pay significantly less. Over time, however, they may well get a bigger bang for their buck. Think of the Macintosh computer—the cost per unit has not come down over the years relative to the actual cost of producing it, but the consumer gets a much more powerful and productive tool.

Students themselves may push publishers toward this outcome. After all, they have shown quite conclusively they will not spend their money on glorified replicas of their existing textbooks. If publishers want to stop printing, storing, and shipping expensive print books, they are going to have to build digital products that today's students find truly worth the cost. **CT**

RESOURCES

For links to the schools and products mentioned in this article, please visit *campustechnology.com/0412_textbooks.*

Dian Schaffhauser *is a senior contributing editor of* Campus Technology.

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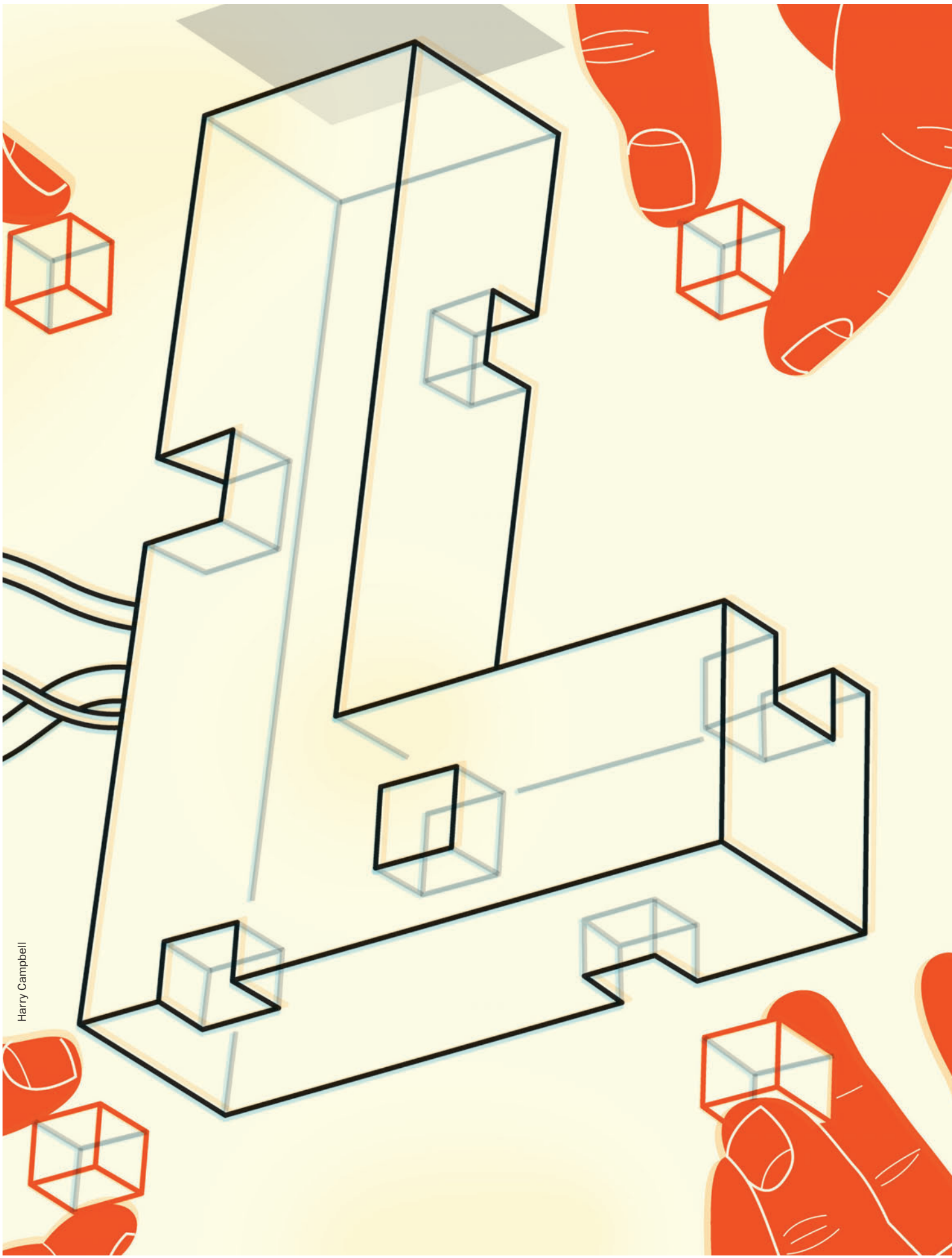
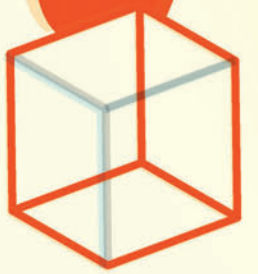


Harry Campbell

Can the goals of 21st century learning be met by retooled legacy LMSs, or does the future belong to open learning platforms that utilize the latest technology? **By Jennifer Demski**



REBUILDING THE LMS FOR THE 21st CENTURY

"THERE IS A COMET heading toward planet education," warns Gary Brown, director of the Center for Online Learning at **Portland State University** (OR). "The last time we looked it was out past Pluto. Now, all of a sudden, it seems to be rounding Mars. It's coming very, very fast."

This metaphorical comet is 21st century learning, a broad concept built around student-centered learning, collaboration across courses and campuses, and project-based coursework that leads to competency-based assessments. And web 2.0 and cloud-based technologies are the fuel that is now powering this comet toward its educational rendezvous.

Finally—12 years into the 21st century—higher ed classrooms are turning into incubators for the kind of learning environment that curriculum and instructional technology experts have advocated for years. Yet a key question remains: Can legacy learning management systems be dragged into the 21st century as part of this new educational vision, or are they destined to be replaced by newer, more flexible learning platforms?

"We need to recognize that it isn't really the LMS that's heading toward obsolescence," remarks Brown. "It's the course that the LMS represents." Although a majority of professors at PSU still espouse a lecture-and-test style that works well with the school's traditional LMS, progressive professors are making end runs around its limitations by utilizing free web 2.0 and cloud-based tools—tools that sit outside the walls of the LMS.

"We're faced with a challenge of harnessing these cutting-edge technologies and shaping them into a sustainable component of instructional technology that melds with the institutional brand," explains Brown. "We find ourselves exploring ways to crack into the traditional LMS system to integrate something as simple as a blog or a wiki."

While progressive faculty chip away at the LMS from the outside, LMS vendors are busy with their own work crews trying to create a more open floor plan. Blackboard, for example, rolled out CourseSites, a web-based tool that emphasizes collaboration, interaction, and openness. And, last fall, Desire2Learn released an update to its flagship platform that incorporates social networking tools such as Google+ and Facebook.

For some faculty, however, these upgrades will be unable to remedy the fundamental flaw of legacy LMSs. "It's the walls inherent in the design of an LMS," complains Brown. "It's not enough just to have a blogging tool in the LMS. We need to have blogs and wikis and other tools that punch through the wall of the LMS, across courses, and expand collaboration into the larger community."

Brown is interested in competency-based course design. "As director of a center of online learning, I have an obligation to provide a measurable quality to our students' work," he explains. "The closed environment of an LMS does not afford me, in easily implementable ways, the opportunity to do that."

Aggregating Web 2.0 Tools

The solution? Many institutions are leaning toward a flexible framework of aggregated web 2.0 and cloud-based tools, such as WordPress and Google Apps.

"Folks are beginning to realize that the development of academically relevant tools on the internet is going to outpace the ability of any traditional LMS provider, commercial or open source," remarks Patrick Masson, chief technology officer of UMassOnline at the **University of Massachusetts**. "There are more people doing more things collectively on the internet than any one company can do."

Masson and his team set out to learn exactly which internet tools are most useful to faculty and students. Using business intelligence software, they went into UMass' Blackboard Vista application and identified every external hyperlink embedded in faculty and student posts from 40,000 courses. They then followed these links to explore the tools that users were integrating into their coursework.

"This is a completely bottom-up way to assess technology: Faculty and students have identified these tools as being useful," explains Masson. "From there, perhaps we can formally adopt integrations with these third-party tools through the standard integration interfaces that the LMS offers."

Masson's research at UMass is inspired by work he began in 2005 while working for the **State University of New York**'s Learning Network. "The team that I worked with proposed a more flexible framework for bolting on best-in-class tools, because of the inherent complexities of supporting a 64-campus environment where every user has different needs," he recalls. Neither UMass nor SUNY has fully embraced this flexible framework, but a scaled-down model is in place at the **Macaulay Honors College at the City University of New York**.

Macaulay students have a dual identity: They are enrolled both at their home campus—one of seven in the CUNY network—and they take interdisciplinary seminars and advanced courses through Macaulay. "On their home campuses our students have access to Blackboard," explains Joseph Ugoretz, associate dean of teaching, learning, and technology at Macaulay. "But because Blackboard doesn't allow a unified system across campuses, our seminars cannot utilize that system."

A Custom-Built LMS

Ugoretz and the team at Macaulay saw this as more of an opportunity than a problem, and set out to develop a solution that met their needs. Beyond allowing students to collaborate in their honors seminars with students across the CUNY network, Ugoretz wanted to create a system that provides students with a history of their work. "The importance of students being able to access their work longitudinally across their career is invaluable," explains Ugoretz.

"It isn't really the LMS that's heading toward obsolescence. It's the course that the LMS represents."

—Gary Brown, Portland State University

The goal was to create a system that allows a student in seminar four in the spring of their sophomore year to be able to look back at the work he completed during seminar one in the fall of freshman year. "The typical walled silo of the typical LMS wouldn't allow for that," Ugoretz notes. "Students typically lose access to their work as soon as the course is completed. There's no access outside the domain of the course."

Taking the idea one step further, faculty at the college wanted the ability to build projects over many years, allowing students to add to the work of those who've taken the seminar before them.

While brainstorming for a solution to fit these needs, Ugoretz and his team implemented an e-portfolio platform based on the WordPress blogging tool. "Almost immediately," Ugoretz recalls, "faculty began to see the potential for building these incredibly functional and highly flexible course sites."

As of 2012, all of the Macaulay seminars (each with 40 sections) and 10 upper-level courses are managed via WordPress course sites. Each section can have its own course site, but frequently a group of sections that are working on a common theme across campuses will share a site and build a mini-learning community.

Each course site is tailored to the needs of the faculty member who runs the course. "It's been really exciting to see these sites develop from the classroom up," remarks Ugoretz. "We're able to provide the functionality that's needed, rather than imposing this huge dinosaur that's a nuisance to administer and use."

Some faculty members design their course sites as a place to post announcements and assignments. Other faculty members have created feature-heavy pages where students interact via chat plug-ins, wiki plug-ins, or interactive timelines. "Whatever is necessary for that particular course, we can do it," notes Ugoretz.

This level of flexibility is possible, in part, thanks to the efforts of a group of doctoral students who are taking part in an instructional technology fellowship. Fellows are assigned to each course to work with faculty and students on implementing ideas for using technology within the curriculum. "A faculty member just needs to say what he'd like his course site to do, and the instructional technology fellow makes it happen," explains Ugoretz.

Also helping in the development of these course sites is a robust community of WordPress users that already exists on the web. When Ugoretz was designing the page for one of his online courses, for example, he discovered an existing WordPress plug-in that provided all the functionality he wanted, including functions normally associated with a traditional LMS, such as a gradebook, a tool for submitting assignments, and a discussion board.

"Between these really fantastic plug-ins and the built-in flexibility in terms of posts, pages, and themes, it's really easy to put together a nice-looking and highly functional system," says Ugoretz. The robust web community, including the wp-edu listserv, is also key in providing support for any issues that arise.

"We've found that if a question or an issue comes up, somebody within the larger user community has already found an answer," explains Ugoretz. "And because the code is open, we can look at any issues that arise with our own resources and then share our solutions with the other members of the community."

But Ugoretz believes the true benefit of the system lies in its educational value. In conjunction with Macaulay students' personal e-portfolio WordPress pages, the system emphasizes personalized, project-based collaborative learning, tied to competency-based assessments.

Interestingly, Ugoretz considers it a key part of students' instruction for them to learn the ins and outs of WordPress. "Too often, students in college courses get really experienced using a proprietary LMS that is not used beyond the walls of higher education," he explains. "If you're using tools that are publicly available, then students come out of their higher ed experience with a skill beyond their own academic learning—a skill that's useful in whatever career they plan to pursue."

"The development of academically relevant tools on the internet is going to outpace the ability of any traditional LMS provider." *—Patrick Masson, UMassOnline*

Issues of Scalability

But can this type of system be scaled to meet the needs of a larger campus? While Ugoretz has received a lot of interest from special programs on other CUNY campuses, he has found that most schools are not interested in adopting this WordPress model campuswide. "I think that the idea that you can do something like this without the guidance and support of a vendor is scary," says Ugoretz. "It takes a leap of faith."

For schools that are hesitant to take that leap, but want an open and flexible LMS that supports 21st century pedagogies, Pearson's OpenClass is touting itself as a solution that provides the best of both worlds. When a colleague at **Arizona State University** approached Kevin Roberts, chief planning and information officer at **Abilene Christian University** (TX), about taking part in the design and

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development of OpenClass, Roberts was intrigued by the vision behind the product.

"I liked the fact that it was open source, obviously," recalls Roberts, "More important, they were building this tool from scratch on a 21st century platform. They're assuming the existence of Google and collaborative web 2.0 tools from the very start, rather than building on top of a legacy platform. From the very beginning, we get to leverage the way these tools work best."

Pearson's OpenClass is essentially a flexible framework that houses existing web 2.0 tools such as Google Apps and WordPress. By providing this framework, Pearson hopes to give universities an increased level of stability beyond what most universities can achieve when they put together a similar platform on their own.

"A model built without this framework can function really well, but the school is tasked with making sure that all of the components continue to work well together," explains Roberts. "If you've merged WordPress with Google Docs, for example, and WordPress issues an update that changes a component of their system, you're left with a brittle connection. It's still a connection, but it's a place of risk." By using these tools within the OpenClass framework, universities transfer the responsibility for maintenance and integration support to Pearson.

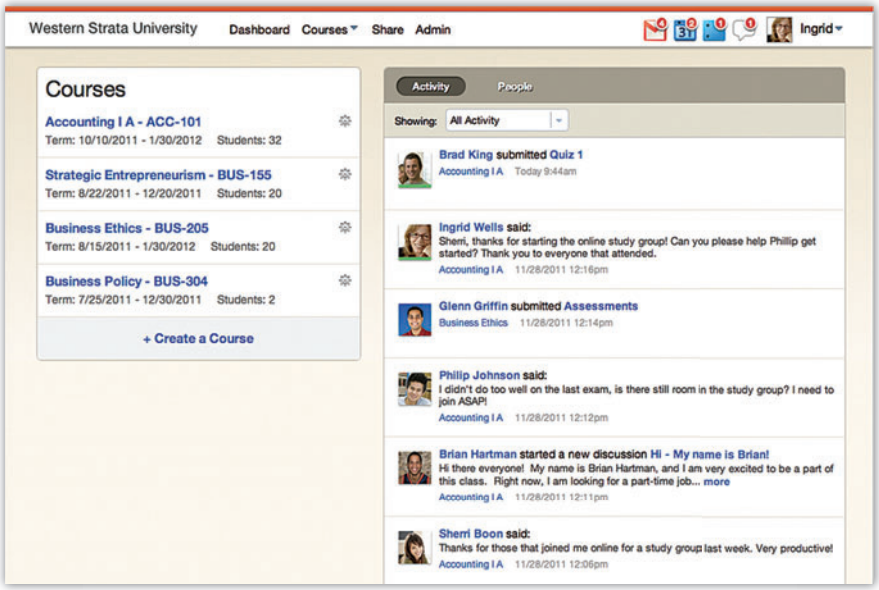
Pearson's involvement also makes it possible to scale this type of LMS up to a campuswide implementation. "There's definitely some comfort in having somebody as big as Pearson, whose reputation is at stake, behind this system," remarks Roberts. "Their involvement, combined with the fact that they've integrated OpenClass so tightly with Google, means that scalability has not been a concern for us at all."

OpenClass is brand new: Pilots in several schools began only in the 2011-2012 academic year. At this point, ACU is piloting OpenClass with 23 professors who are using the tool in 25 different courses. "What we're seeing is very intriguing," remarks Roberts. He says it's been an initial success, something he attributes to the fact that OpenClass has been designed to harness web 2.0 tools within a framework that is just familiar enough to ease the worries of less tech-savvy administrators.

"Pearson is building the product on a metaphor that we all understand," he says. "It has a gradebook. It has discussion boards. Because it's built on this 21st century technology, though, the runway that Pearson has ahead of it is so much longer than for somebody who is bound into a platform that was developed in the late '80s or early '90s."

RESOURCES

For links to the products and vendors mentioned in this article, please visit *campustechnology.com/0412_LMS.*



Built on a flexible framework, Pearson's OpenClass LMS can easily integrate web 2.0 functionality.

The Future of the LMS

As the battle for LMS dominance continues to unfold on campuses nationwide, Pearson is not the only player that sees an opportunity to leapfrog ahead of legacy systems that predate the world of Google, Facebook, and web 2.0. LoudCloud and Instructure's Canvas, for example, are among several products that share many of the same attributes as OpenClass.

In examining the state of the LMS market today, it's difficult not to draw a comparison to what has happened in the mobile phone industry. BlackBerry dominated for years, but it's now saddled with a legacy operating system that struggles to compete with iPhones and Androids built on more up-to-date tech backbones. The question for the legacy systems today is whether they can avoid a similar fate, by retooling their products to accommodate consumers whose tastes and styles have changed.

One thing is for sure: The 20th century LMS is so last century. "We've already crossed the point of realizing that the walled garden of the traditional LMS just doesn't meet our needs," notes Roberts. "We're doing a disservice to our students by pretending that the traditional LMS reflects the way that the world works. A phrase we use a lot on our campus is that we feel it is our responsibility to train our students for the world they're going to inherit, not the world they live in now, and certainly not the world we grew up in." CT

Jennifer Demski is a freelance writer based in Brooklyn, NY.

Index

>> Sales Contact Information

Wendy LaDuke
President and Group Publisher
P 949-265-1596
C 714-743-4011
wladuke@1105media.com

Mark D. Buchholz
West Coast Sales Director
P 949-265-1540
C 714-504-4015
mbuchholz@1105media.com

M.F. Harmon
Eastern Region Sales Manager
P 207-883-2477
C 207-650-6981
mfharmon@1105media.com

Tom Creevy
Central Region Sales Manager
P 847-358-7272
C 847-971-5621
tcreevy@1105media.com

Jean Dellarobba
Sales Account Executive
P 949-265-1568
C 949-357-7564
jdellarobba@1105media.com

Patrick Gallagher
Event Sales Director
C 617-512-6656
pgallagher@1105media.com

Stephanie Chiavaras
National Accounts Manager, Events
P 508-532-1424
C 617-784-3577
schiavaras@1105media.com

Deborah Carroll
Event Sales Representative
C 203-814-7408
dcarroll@1105media.com

Corporate Headquarters:
1105 Media
9201 Oakdale Avenue, Ste. 101
Chatsworth, CA 91311
1105media.com

Media Kits: Direct your media kit requests to Michele Werner, 949-265-1558 (phone), 949-265-1528 (fax), mwerner@1105media.com.

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C-Level View

Moving Beyond Technology

The NMC Horizon Project has released a new list of metatrends that will impact education over the next 10 years. **By Mary Grush**

Under the auspices of the New Media Consortium's Horizon Project, a hundred thought leaders from 20 countries gathered last January to list the most important metatrends and global challenges facing education in the next 10 years. Their collective insight will help inform a special metatrends edition of the *NMC Horizon Report* being released this spring.

The January discussion referenced 28 metatrends, but NMC identified the 10 most compelling in a communiqué issued about the meeting (see box). "What's interesting is that the list is not really about technology, per se," CEO Larry Johnson tells *CT*. "It's about how people expect the world to work—such as how they collaborate, or openness as a value."

The implications of this for higher education are significant and encouraging. "We are moving away from a model of universities as the providers of technology," Johnson explains. "If I want to get on the internet, I'm not going to go to a lab at a university to do that—I'm going to do it on my mobile device. We are moving to more of a utility model. It makes me very optimistic because, in the next 10 years, the conversations are going to be less about devices and software, and more about learning and the real mission of an education institution. And the metatrends suggest that this mission is changing now in ways that have very little to do with technology—and everything to do with the ways people work and learn today." **CT**

Editor's note: Larry Johnson will give the opening keynote at the CT Forum 2012 conference in Long Beach, CA, on April 30. For information, visit events.campustechnology.com/events/CT-Forum-Conference/Home.aspx.

MOST SIGNIFICANT METATRENDS FOR THE NEXT 10 YEARS

1. The world of work is increasingly global and increasingly collaborative.
2. People expect to work, learn, socialize, and play whenever and wherever they want to.
3. The internet is becoming a global mobile network—and already is at its edges.
4. The technologies we use are increasingly cloud-based and delivered over utility networks, facilitating the rapid growth of online videos and rich media.
5. Openness—concepts like open content, open data, and open resources, along with notions of transparency and easy access to data and information—is moving from a trend to a value for much of the world.
6. Legal notions of ownership and privacy lag behind the practices common in society.
7. Real challenges of access, efficiency, and scale are redefining what we mean by quality and success.
8. The internet is constantly challenging us to rethink learning and education, while refining our notion of literacy.
9. There is a rise in informal learning as individual needs are redefining schools, universities, and training.
10. Business models across the education ecosystem are changing.

[Excerpts of the 10 top metatrends identified in *A Communiqué from the Horizon Project Retreat*, January 2012, an NMC Horizon Project publication under Creative Commons attribution license. *nmc.org*]

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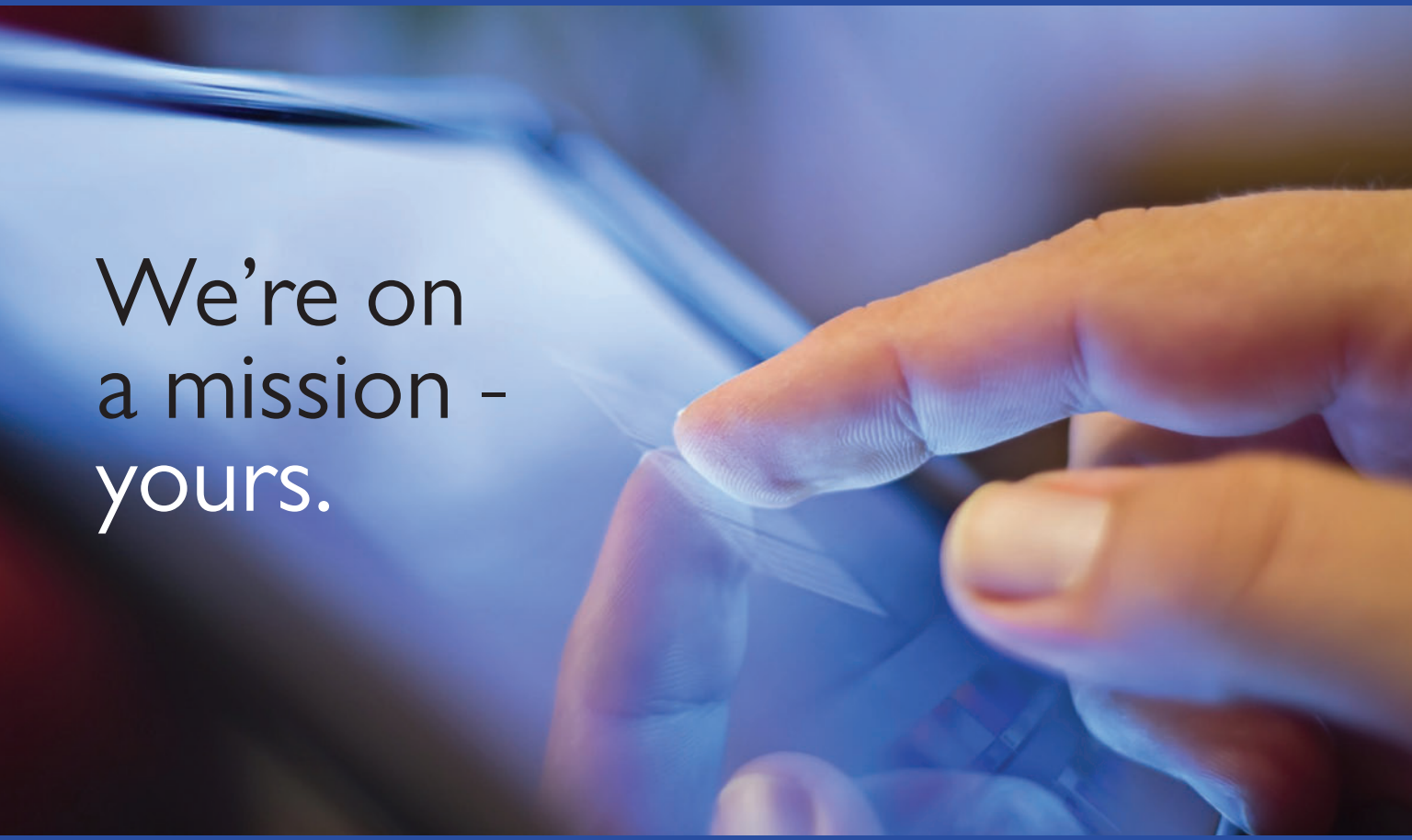

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