TECH SOLUTIONS TO STATE BUDGET CUTS p. 20

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Cover image by Ryan Etter

Features

Making Decisions in a Sea of Change

CIOs need information to do their jobs, but it's not always easy to get the right kind of information to lead proactively.

I was speaking recently to a colleague, a former CIO, who said to me, "IT people are basically very conservative."

My friend wasn't talking politics. "They don't want to make a mistake," he explained. "They have responsibility for huge, complex infrastructures upon which their entire institution depends. So they're pretty conservative when they have to make a decision."

That was an eye-opening insight for me. I associate technology with change; so IT leaders, it stands to reason, embrace change, don't they? But there's a difference, I realized, between being open to change and making decisions in the midst of change. Being a CIO must be like captaining a ship in a constant storm—you have to be aware of every swell and gust, but if you change direction every time the ship rolls you'd capsize pretty quickly.

(If I didn't get the sailing technicalities quite right, forgive me. I'm not a boating person, but was inspired by this month's leadership column, written by our friend and contributor from Harvard Business School [MA], Stephen Laster, a lifelong sailor—see page 14.)

So what does an open-to-change, yet conservative CIO need to do his job? Drumroll, please.... *Information!* But not just any kind of information. IT leaders need to know what's happening a couple of years out, so that they can plan in a proactive, not reactive, way. This kind of grounded intelligence is not always easy to obtain.

Which is why I am so excited about three sessions that we have planned for Campus Technology 2011, our 18th annual conference to be held in Boston, July 25-28. We approached three companies whose work has enormous impact on higher education—Google, Microsoft, and Apple—and asked them to give our attendees access to someone within each organization who can share information about future technologies the company is developing, to better help you do your jobs.

The companies responded. Alfred Spector, vice president of research and special initiatives at Google; Cameron Evans, national and chief technology officer for Microsoft; and Bob Trikakis, the education development executive at Apple, will each hold his own "Conversation With the Future" with CT 2011 attendees.

These will be real conversations: no PowerPoints, just a frank, 90-minute give-and-take with the audience about where each company believes technology is heading in higher education. You ask your questions; they answer them. They might even ask you a question or two. To keep these conversations as intimate as possible, each is being limited to the first 100 people who sign up when they register online at *campustechnology.com/summer11*. (The conversations will also be recorded for future viewing.)

Check out the entire conference agenda. Everything—keynotes, workshops, breakout sessions—is designed to give you solid information and insight to guide your institutions through the storms ahead. Please join us. **CT**

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

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REACHING THE STAFF
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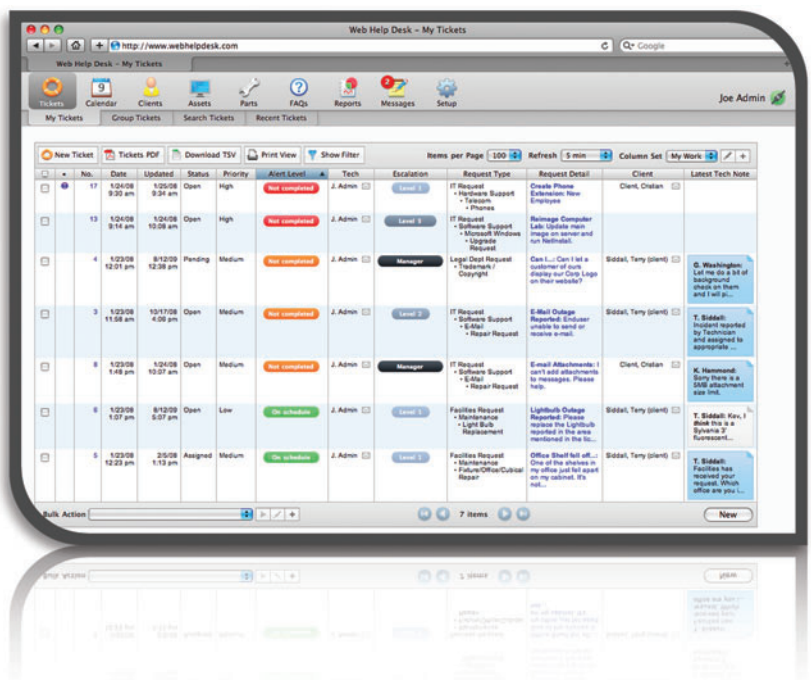

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WEBINARS *campustechnology.com/webinars*

Flexible Lecture Capture at University of Central Florida: From Media Room to Classroom to Living Room
UCF is using lecture capture to record class sessions and supplementary materials, provide instructors with anytime, anywhere recording capability, and expand campus and online course offerings.

University of Wisconsin-Stout Takes Efficiency Campuswide
A more efficient document process has saved the university time and money in admissions, accounting, registration and records, human resources, financial aid, and more.

Identity Fraud and Abuse in Distance Education
Discover ways to maintain integrity in online assessments—both on the web and on campus—and how you can detect and deter student aid fraud in your online learning program.

Strategies for Successful Clicker Implementation and Growth
Two educators share their top tips for communicating the value of clickers to faculty and implementing the technology in the classroom.

Trending Articles on *CT*

- **Google Enters the E-Book Fray. What Does It Mean?** *campustechnology.com/0511_google*
- **Can Tech Transcend the Textbook?** *campustechnology.com/0511_textbook*
- **When Textbooks and Social Media Collide** *campustechnology.com/0511_social*

Viewpoint

The Old Revolution

Is the ed tech environment ripe for a true revolution, with the push toward "21st century skills" and new media? **Kansas State University**'s Michael Wesch examines trends over several decades to offer some perspective.

campustechnology.com/viewpoint

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Events Calendar

May 12
Campus Technology Virtual Conference
campustechnology.com/virtual
Online

May 22 - 24
Software & Information Industry Association
Ed Tech Industry Summit
siia.net/etis/2011
San Francisco

Jun 11 - 17
InfoComm 2011
infocommshow.org
Orlando, FL

Jul 25 - 28
Campus Technology 2011
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"Until publishers give digital copyright permission for 100 percent of their materials, hard copy course packs are here to stay."

Reading Ruckus

Responses to "Reading in the Dark Ages," *CT* March (*campustechnology.com/articles/2011/03/01/reading-in-the-dark-ages.aspx*):

Don't be so sure that the student you were "eavesreading" on would have preferred to have the content on her cell phone screen. On a cell phone, she could not mark or annotate the content, and she would not be able to view more than 12 lines of text at a time. She would get no value from the powerful human ability to remember places: To find a particular phrase in her photocopied stack, she can probably remember the location of the phrase on the page as well as in the stack of pages; this is completely lost when the article becomes a continuous, placeless stream of text on her tiny screen. Her photocopied stack never has a low-battery icon blinking, and it is inexpensively replaced if damaged, lost, or stolen.

Part of the reason we could put men on the moon was that we agreed what the problems were: gravity, airless space, long distance, navigational accuracy. I'm not sure we agree what the problem is with photocopies.

William R. Kennedy
Director of Web Operations
Fairleigh Dickinson University (NJ)

Many publishers do not give permission to allow their materials to be reproduced digitally, and if we do get digital permission, we have to scan the materials. Scanned materials are not compatible with any e-reader software and therefore are not interactive (i.e., no highlighting, no notes, no sharing, etc.). Only material created as a Word document and then converted to a PDF can be made interactive. While we would love to offer more items digitally, professors' selections are severely limited. Until publishers give digital copyright permission for 100 percent of their materials, hard copy course packs are here to stay.

Theveep
Comment posted on *campustechnology.com*

With all the free materials out there on the internet, I long ago quit requiring my speech students to buy a textbook. I tell them to search for the info themselves, and I provide short pieces that I write myself. I also recommend a QuickStudy reference that costs about $5. Some subjects may still need extensive texts, but my students seem to have little trouble learning this way. I've never had a student ask me to please assign a textbook.

Angie
Comment posted on *campustechnology.com*

What is holding us up? The mind-sets and worldviews of people who are tied to traditional ways of doing things—even if they don't admit it to themselves. Current business models are holding us up. Archaic copyright rules/laws are holding us up. But imagine all these issues are overcome during the next decade or two, assuming that technology continues to develop better readability tools and the textbook-publishing model continues to transition to electronic platforms. What would e-textbooks look like then? What would e-readers look like, and how would we want students to use them in a learning context? How do we start planning for that?

Maree Conway
Comment posted on *campustechnology.com*

Rethinking Textbooks

Responses to "Can Tech Transcend the Textbook?" *CT* March (*campustechnology.com/articles/2011/03/01/can-tech-transcend-the-textbook.aspx*):

When you leave the book metaphor behind, then learning does not need to start with the written word.

For example, the web 2.0 presentation tool Prezi intrigues me. I think of it as a giant dinner napkin upon which great ideas can be incubated, developed, and presented in both overview and detail. By running a presentation in autoplay mode, you can present key points in a loop, turning the presentation into a high-tech set of flash cards. But the viewer also has the option, at any time, to step out of the autoplay mode to read, listen to, or view additional resources (such as multiple PDF pages, MP3 audio, or YouTube videos). If you were able to embed other web 2.0 tools, such as VoiceThread or a chat function, then you could add a level of interaction, discussion, and collaboration.

I have also played with the idea of publishing open source textbooks via the WordPress blogging interface. A working version of WordPress can be installed onto a USB flash drive, allowing an entire semester's texts to be hung via a lanyard around a student's neck. The WordPress interface (or some proprietary alternative) would allow the student to easily add comments, pages, or posts (including audio notes) onto the flash drive. Text, images, and audio clips could be stored locally on the drive; pop the drive into a laptop or PC that is hooked to the internet, and large multimedia video clips would be accessible.

Bill Gibson II
Web Developer/Blackboard Admin
Fayetteville State University (NC)

Thank you for the most comprehensive, sensible, and "leverageable" piece of informational material yet available on the subject of e-readers in education. It was my "defense against the dark arts" in a morning think tank discussion about the future of providing resources to our students while maintaining equitable access and parity. We recently purchased 50 Nook Colors for our media center to encourage students to

engage in more pleasure reading. The process of making that decision was long and calculated, but now it will be repeated for replacing textbooks and novels next year.

The problem lies with the format of the material and its ability to reach a student on an individual basis when reading for learning, not pleasure. Nonetheless, we require ourselves to provide students with the best tools available for flexible learning. Texts are just a resource, not an expansion of learning. The least we can do is lighten an 80-pound sixth grader's 30-pound backpack! We are poised, ready, and purchasing...and the textbook companies are already behind. If our textbook company isn't on board, our ship will leave the harbor with a different vendor.

Meichelle Long
Florida

Quality Teaching

Response to "The New Transparency," *CT* February (*campustechnology.com/articles/2011/02/01/the-new-transparency.aspx*):

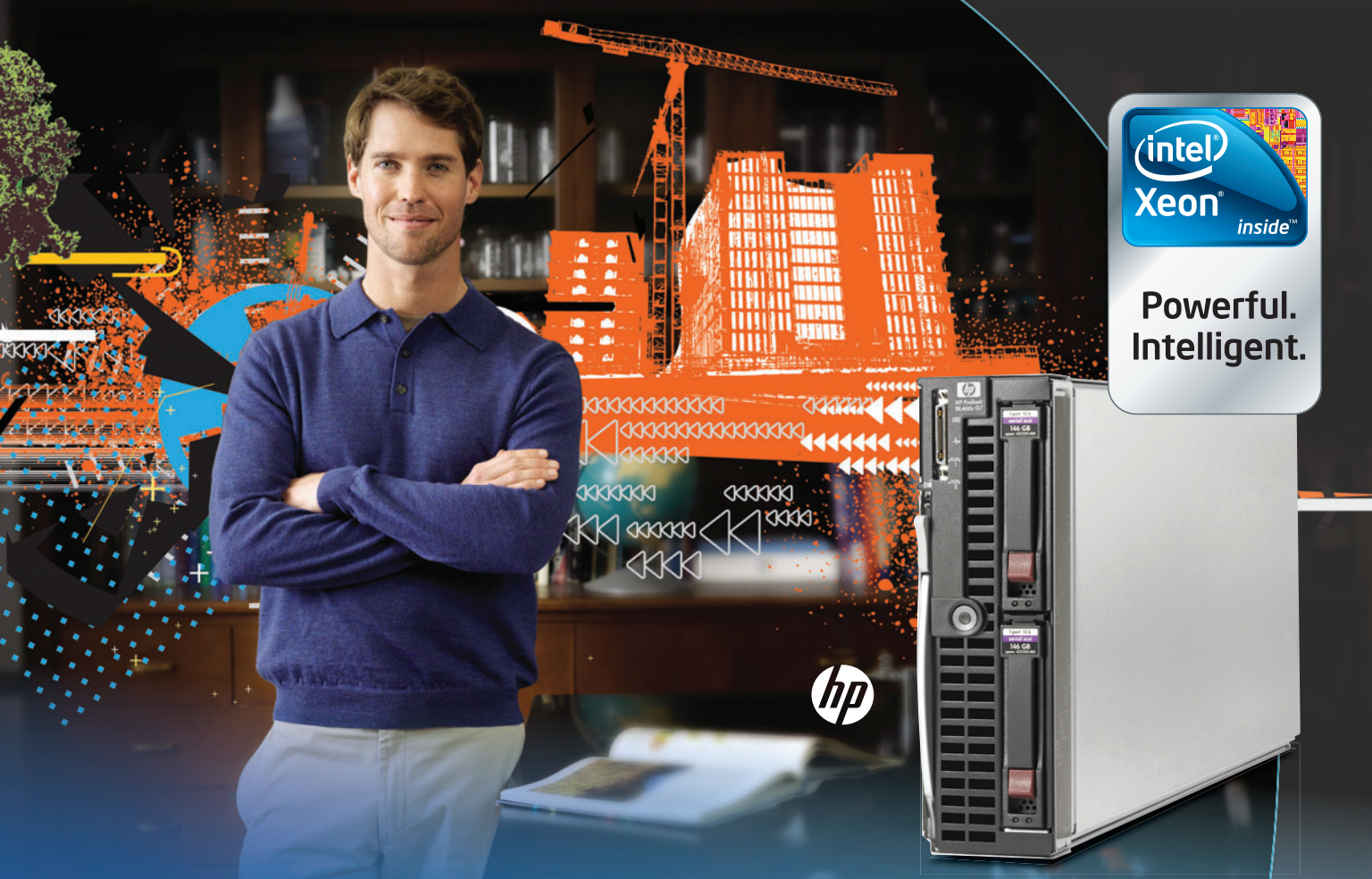
There are many institutions where teaching—quality teaching—is first and foremost in our mission, vision, and, yes, in our daily work. **Paul Smith's College** is like many small schools—those I call the "left behind" after the "rapture" of research engulfed higher education post-Sputnik. We stayed committed to the classroom, lab, and field, and made sure that students were actively engaged in their learning experience, directly interacting with our faculty—not graduate assistants, TAs, or, as is prevalent now, adjunct faculty. Our top two criteria for contract renewal and promotion are teaching quality and service to the students. Research dollars raised, publications, etc. can be part of the review process, but that is not sufficient if the evaluations in teaching and advising are not above average.

Has technology exposed an underbelly of bad teaching? No, but it has allowed us to identify those faculty who need assistance to bring more of the effective teaching and learning technologies into their curricula. And I can personally attest that those who have been approached and questioned about the issue have responded almost universally positively with regard to adapting their courses to the 21st century student and classroom. On the other hand, some of our faculty have, independently and with great personal commitment, learned and applied new technologies to the classroom and have become icons for how technology can help you and your students improve.

We are not perfect but I can tell you that "bad college teaching" is very infrequently encountered at Paul Smith's College. And when it is, neither the faculty peers nor the students are very tolerant; forgiving maybe, but tolerant no.

John W. Mills
President
Paul Smith's College (NY)

We want to hear from you! E-mail us at *editors@campustechnology.com*, or join the conversation on the web at *campustechnology.com*. Letters are edited for length and clarity.



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NEWS

SHARING CODE. SunGard Higher Education has introduced the Shared Code Repository, where customers can share functional enhancements, scripts, tools, and other contributions. Part of the company's Community Source Initiative, the repository is intended to cross-institutionalize efficiencies and innovations and to help participants perform development more quickly and at lower cost. Current posts in the repository include a geolocation app and a feedback app; contributions from SunGard are also included. The repository supports multiple code variants and provides components for making feature requests and tracking assignments. Contributed code is made available to institutions "as is," so that contributors aren't expected to provide technical support.

SOCIAL LEARNING PLATFORM. An instructional-design team from **Columbia University**'s (NY) School of Continuing Education will use the Pearson LearningStudio engine as the basis for a new, more socially oriented platform for delivering online programs. The school will pilot the new platform this summer in classes for an existing business-certificate program as well as a new 16-month master of science in information and knowledge strategy, which will be delivered in hybrid form. Read more at *campustechnology.com/articles/2011/04/04/columbia-u-pilots-lms-design-partnership-with-pearson.aspx*.

PURDUE U LIBRARIES is using BI to justify budget expenditures.

BI FOR LIBRARIES. **Purdue University** (IN) Libraries has adopted LogiXML's Logi Insight, business intelligence software designed specifically for libraries, to track and analyze how library resources are used. Logi Insight provides a web-based tool that pulls together data from multiple library sources and displays them via configurable dashboards and reports. The purpose is to make it possible for administrators to measure patron use of library resources, circulation data, e-resources, and other information as part of their budget analysis. "We've seen demand for e-resources skyrocket in recent years, and we're at a point where e-resources represent more than 80 percent of our budget," notes Paul Bracke, the associate dean for digital programs and information access. "Getting insight into library-utilization data is one of our top priorities."

WHAT'S THAT SOUND? A team of instructors and students at **Towson University** (MD), funded by a $50,000 grant from the Maryland Technology Development Corp., is trying to build a better CAPTCHA mousetrap. CAPTCHA, or "Completely Automated Public Turing test to tell Computers and Humans Apart," traditionally asks a website visitor to spell out the letters shown in a distorted image to prove he is human and not a bot or virus performing some automated activity. Multiple versions of CAPTCHA are in use, but they tend to share one flaw: They rely on the ability of the visitor to read the characters, which prevents blind users from using the program. The Towson team is taking an audio-based approach with SoundsRight, a test that requires users to recognize common sounds—bells, a dog barking, or water running. The library of sounds is designed to be recognizable by people of different cultures and backgrounds in order to make the technology viable for the greatest number of potential users.

PEOPLE

NEW CUSTOMER-FOCUSED ROLE. TopSchool, a SaaS provider of student lifecycle management solutions, has named cofounder and senior vice president Justin McMorrow to the new position of chief customer officer. McMorrow will oversee sales, marketing, account management, and implementation, to help provide an engaging, productive, and supportive customer experience.

M&A, Etc.

POLYCOM ACQUIRES ACCORDENT. Unified communications vendor Polycom has announced the acquisition of Accordent Technologies, a provider of video content management and delivery solutions. CT

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Project Rescue: So Close and Yet So Far

Our CIO thought he had prepared his team well. Now, halfway up the mountain, are they on course to summit? Or did they lose their way?

THIS IS THE THIRD INSTALLMENT *in a four-part series that follows the exploits of Gene, a well-established CIO of a sizable IT organization at a top-100 university. Gene has been working with his team to regain the trust of the campus through Project Rescue, a 30-day turnaround plan focused on demonstrating IT's value. Project Rescue has two primary objectives: Implement a more transparent planning and governance process, and deliver a series of quick wins around some visible projects with high customer value. Let's see how far Gene and his team have progressed.*

Dan Page

On a Monday morning, two weeks into Project Rescue, Gene sat down to review the weekly status reports on the initiatives that his team had agreed to implement within 30 days. As he read, he felt his heart beat faster, and it wasn't the second cup of coffee causing his blood pressure to rise.

One project—help desk support for tablet users to access university applications—had a green light for on-time delivery.

The rest were in condition yellow (the project would finish late, with a slight chance of bringing it in on time) or red (the project would definitely finish late and over budget). Each project was suffering for different reasons:

- **Mobile** (help desk support for mobile phone configuration to connect to the university e-mail system): The support team was struggling to document the configuration steps for the 20 most popular phones.
- **Wireless** (100 percent wireless coverage in the student center and library): Network engineers were having problems tuning the access points so that they would not interfere with each other in the library.
- **Collaboration** (selection of a cloud provider for collaboration spaces): The project team was at a stalemate over which of the three hosted-services finalists to select.
- **Desktop videoconferencing:** The favored solution presented a security and firewall challenge. The support, networking, and security teams disagreed on how to move forward.

Gene reached for his aspirin. He felt as if he were looking at the work of Dilbert. Could this really be his team? How could they be so close, yet so far off track?

Fear of Failure

Back when Project Rescue was launched (which now seemed like ages ago), Gene had introduced a new concept

to his team: Think like owners of a business. People who own a business are willing to take risks. Equally important, they are willing to ask for the help they need to manage those risks.

Employees, on the other hand, can be risk averse. This may be particularly true for IT people, who can wrap themselves in the safety of their code, afraid of making a "wrong" decision. Asking for help can be tantamount to admitting that you've failed. Gene suspected that his team was suffering from this fear-of-failure affliction, which—ironically—was only setting his group up for failure.

As Gene entered the staff meeting later that morning, he could feel the fear and defensiveness in the room. One of his chief goals was to lead people to understand that it was not a weakness to ask for help. But he had to be careful how he got his team there—making them feel that they had made a mistake by not asking for help was only going to work against his intentions.

"IT is too large a discipline for any one person to have all the answers," he began. "Speaking personally, if I had to be the answer man for every question that comes up in IT, I would have found myself another job long ago." He smiled. "I would have stuck to sailboat racing."

The people in the room laughed. They knew all about their boss's off-work passion. Sailboat races are won, Gene said, when specialists (skipper, tactician, mainsail trimmer) work together—sharing knowledge, putting the good of the boat first, taking smart risks, and asking for help when they need it. "The old adage, 'we sink or swim together,' doesn't just apply to boating."

Project Rescue is built on the ability of people working together, he continued, "but its success depends on more than teamwork. It depends on each member of the team thinking and acting like an owner of a business." Gene reminded them that, at the outset of the project, they had all made a commitment to think as such.

"Thinking as business owners, what would you do differently with regard to the problems you are trying to solve?" Gene asked. "What risks are we willing to take in pursuit of success? With the future of our firm at stake, what risks feel reasonable? And what do you need help with in order to succeed?"

Gene felt the room relax; he knew that they could productively problem solve now. One by one, team leaders shared the problems they had encountered. The group, working together and empowered as business owners, was easily able to identify potential solutions:

- **Mobile:** It turned out that the support team was attempting to document the configurations without having access to three of the phones they had committed to support. Gene's head of support agreed to go out that evening and buy the three phones. Problem solved!
- **Wireless:** With the senior networking engineer no longer under pressure to solve the problem on his own, the team agreed to call in the vendor and buy a couple of days of consulting. Who better than the vendor to tune the access points?
- **Collaboration spaces:** The team was stumped. Each person favored a different hosted solution and nobody was willing to budge. But when they switched their mind-set to become business owners, they realized that they had forgotten about the voice of the customer. Their preferences were not nearly as important as those of the students. They agreed to do a quick student survey and let the result direct their decision.
- **Desktop videoconferencing:** How could it be that the team's preferred solution, which was used by many other institutions, was a security risk? Did they really have a better understanding of security than these other schools? They agreed to swallow their pride and call colleagues at other schools to ask how they handled the risk. As one of the team members put it, "There is no E-G-O in I-T."

Think like owners of a business. People who own a business are willing to take risks—and ask for help to manage those risks.

As Gene drove home that evening, he reflected on the dramatic arc of the day. His senior team members started out as victims of circumstance destined to disappoint the campus. How could it be that, with a little bit of coaching and paradigm shifting, he was now the leader of people who acted like winners?

Gene thought back to the lesson he learned from his first boss: Hire and *mentor* a great team. He had mistakenly believed that, by having his team members pledge to think like owners at the kickoff meeting, he had fulfilled his mentorship role. He had assumed they'd kick into ownership gear and get things done.

But, of course, that's not how mentorship works: It is an ongoing, hands-on, check-in process. Today he got back into his mentor groove and coached his team into a good place. Still, Gene wondered, was it enough? **CT**

Stephen Laster *is the CIO of* ***Harvard Business School*** *(MA). At the Campus Technology 2011 conference in Boston, July 25-28, he will conduct a special 90-minute case study session on a struggling university CIO (not unlike Gene), helping participants apply lessons learned to their own institutional situations. For more information, go to* campustechnology.com/summer11.

Ready for Their Close-up

Short-throw projectors eliminate many of the drawbacks of traditional projectors, at an affordable price. *CT* profiles models under $1,500.

WE'VE ALL SEEN IT HAPPEN at A/V presentations. Caught in the beam of the projector, the lecturer winces like a vampire, even as students make shadow puppets on the screen behind him. There *is* another way. Unlike traditional projectors, short-throw models can be positioned next to the screen, so the lecturer doesn't have to worry about where he stands. And he can actually see his audience.

CT identified more than 60 short-throw and ultra-short-throw projectors on the market that can display full-size images on a screen just a few feet away. They are great for small- and medium-sized classrooms, and eliminate many of the issues of having a traditional projector at the rear of the room. With so many models available, though, the key is to find one that suits your needs.

BenQ MW811ST

For this survey, we focus on projectors under $1,500. Among those models priced *above* $1,500 are some with remarkable features, including 20-watt stereo speakers on the 3M SCP716 Interactive Multimedia Projector (with wall mount) and a projection distance of just four inches for the Dukane 8104HW Ultra-short-throw Projector.

Note: All prices are the manufacturer's suggested retail price; the reseller price may be up to 50 percent lower. The lists are based on manufacturers' specifications compiled from GovConnection.com and from the manufacturers themselves; *CT* has not done any product testing to verify manufacturers' claims. For a complete listing of all the short-throw and ultra-short-throw projectors priced under $1,500 included in our survey, visit *campustechnology.com/0511_shortthrow*.

Interactivity

Interactive whiteboards have become an essential tool in the classroom, but they aren't exactly known for their flexibility or affordability. Imagine an interactive whiteboard that appears and disappears as needed, can be moved from wall to wall or from room to room with minimal effort, and costs no more than, well, a projector. With these four short-throw and ultra-short-throw projectors, any surface becomes an interactive learning space. Using a wand or special pen, users can interact directly with the projected image. Combine this interactivity with 3D capabilities and a class field trip through an Amazonian rain forest becomes a virtual reality.

NAME	NATIVE RESOLUTION	BRIGHTNESS	PRICE
ViewSonic PJD7383i Interactive 3D-ready Short-throw Projector	XGA (1,024 x 768)	3,000 lumens	$1,049
InFocus IN3914 Interactive 3D-ready Short-throw Projector	XGA (1,024 x 768)	2,700 lumens	$1,225
ViewSonic PJD7583wi Interactive 3D-ready Short-throw Projector	WXGA (1,280 x 800)	3,000 lumens	$1,249
InFocus IN3916 Interactive 3D-ready Short-throw Projector	WXGA (1,280 x 800)	2,700 lumens	$1,425

Photos courtesy of BenQ, InFocus, Panasonic, NEC, Mitsubishi

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*White and color light output will vary depending on mode selected. White light output measured using the ISO 211118 standard.

**This projector does not meet the DICOM standard Part 14 and should not be used as a medical diagnostic device.

Brightness

In classrooms with large windows, natural light energizes students and stimulates learning. It also makes it nearly impossible to project a clear, bright image without installing expensive blackout shades. These four projectors feature a brightness of 3,000 lumens or more and a WXGA widescreen native resolution, so you don't need a pitch-black classroom to project an image that the whole class can see.

NAME	NATIVE RESOLUTION	BRIGHTNESS	CONTRAST RATIO	PRICE
Dell S500 3D-ready Ultra-short-throw Projector	WXGA (1,280 x 800)	3,200 lumens	2,300:1	$1,299
NEC NP-U310W 3D-ready Ultra-short-throw Projector	WXGA (1,280 x 800)	3,100 lumens	2,000:1	$1,327
ViewSonic PJD7583w 3D-ready Ultra-short-throw Projector	WXGA (1,280 x 800)	3,000 lumens	3,000:1	$1,048
Sharp PGD2870W 3D-ready Short-throw Projector	WXGA (1,280 x 800)	3,000 lumens	2,000:1	$1,109

Image Size and Throw Distance

You don't have to sacrifice image size for a short throw distance. With less than two feet between the lens and the wall, these five short-throw models will project an image that measures at least 60 inches diagonally, making them a good choice for small classrooms.

NAME	NATIVE RESOLUTION	IMAGE SIZE (DIAGONAL)	MINIMUM PROJECTION DISTANCE	PRICE
Panasonic PT-ST10U Short-throw Projector 	XGA (1,024 x 768)	60"-110"	1.97'	$1,150
Hitachi CP-A220N Ultra-short-throw Projector	XGA (1,024 x 768)	60"-100"	1.15'	$1,306
Dell S500 3D-ready Ultra-short-throw Projector	WXGA (1,280 x 800)	77"-100"	1.6'	$1,299
NEC NP-U310W 3D-ready Ultra-short-throw Projector	WXGA (1,280 x 800)	77"-100"	1.63'	$1,327
NEC NP-U300X 3D-ready Ultra-short-throw Projector	XGA (1,024 x 768)	63"-85"	1.58' 	$1,225

Content, Connectivity & Control

These six models all feature a USB media reader for PC-free presentations, LAN networking for streaming content from the campus network, and an RS-232C serial port for device control from a PC or central A/V hub. Add an optional wireless adapter (sold separately, available for all six models) and you can stream content from any laptop or mobile device connected to the campus WLAN—great for seamless transitions into student presentations.

NAME	NATIVE RESOLUTION	BRIGHTNESS	PRICE
ViewSonic PJD7383 3D-ready Ultra-short-throw Projector	XGA (1,024 x 768)	3,000 lumens	$833
BenQ MW811ST 3D-ready Short-throw Projector	WXGA (1,280 x 800)	2,500 lumens	$1,025
ViewSonic PJD7583w 3D-ready Short-throw Projector	WXGA (1,280 x 800)	3,000 lumens	$1,048
ViewSonic PJD7383i Interactive 3D-ready Ultra-short-throw Projector	XGA (1,024 x 768)	3,000 lumens	$1,049
ViewSonic PJD7583wi Interactive 3D-ready Short-throw Projector	WXGA (1,280 x 800)	3,000 lumens	$1,249
Dell S500 3D-ready Ultra-short-throw Projector	WXGA (1,280 x 800)	3,200 lumens	$1,299

Quietest Fan and Loudest Speaker

The placement of a short-throw projector—at the front of the classroom—means that you need a model whose fan noise won't drown out the presenter and whose speakers are loud enough to reach the back of the classroom. These eight projectors all feature 10-watt speakers and noise levels that measure at or below 32 decibels in normal mode and 27 decibels in eco mode.

Mitsubishi XD221U-ST(D)

NAME	NATIVE RESOLUTION	AUDIBLE NOISE	PRICE
BenQ MS612ST 3D-ready Short-throw Projector	SVGA (800 x 600)	29dB (normal mode) 26dB (eco mode)	$659
Mitsubishi XD221U-ST(D) 3D-ready Short-throw Projector	XGA (1,024 x 768)	29dB (normal mode) 26dB (eco mode)	$1,044
BenQ MX613ST 3D-ready Short-throw Projector	XGA (1,024 x 768)	30dB (normal mode) 26dB (eco mode)	$716
ViewSonic PJD7383 3D-ready Ultra-short-throw Projector	XGA (1,024 x 768)	32dB (normal mode) 27dB (eco mode)	$833
BenQ MW811ST 3D-ready Short-throw Projector	WXGA (1,280 x 800)	32dB (normal mode) 27dB (eco mode)	$1,025
ViewSonic PJD7583w 3D-ready Ultra-short-throw Projector	WXGA (1,280 x 800)	32dB (normal mode) 27dB (eco mode)	$1,048
ViewSonic PJD7383i Interactive 3D-ready Ultra-short-throw Projector	XGA (1,024 x 768)	32dB (normal mode) 27dB (eco mode)	$1,049
ViewSonic PJD7583wi Interactive 3D-ready Ultra-short-throw Projector	WXGA (1,280 x 800)	32dB (normal mode) 27dB (eco mode)	$1,249

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

Testing Times, Tested Tools

By Dian Schaffhauser

State budget cuts are hammering higher ed. *CT* looks at three schools that are using proven IT tools to help keep their operations running.

WHILE SOME REPORTS SUGGEST that IT budgets are stabilizing after their two-year free fall, you just have to pick up a newspaper to know that tough times still lie ahead for higher education. As state governors grapple with their budgets for 2012, public universities and colleges are facing some of the deepest funding cuts in memory. To make matters worse, most of the federal stimulus funds, which have helped dull the pain so far, will have been spent by June. ▸

La Fleur Studio

It seems almost inevitable that IT departments are going to be asked to tighten their belts again. But just how many notches are left in those belts? Virtualization? Check. Server consolidation? Done that. IT teams have hacked, sliced, and squeezed the tech budget six ways to Sunday. While there is no silver bullet for the current budget travails, some of IT's most trusted weapons may be worth another look. Here, *CT* highlights three public institutions that are using tried and tested IT tools to deliver big returns, for almost no money down.

CALIFORNIA

Gov. Jerry Brown has proposed cutting state support to both state university systems by $500 million each, and reducing funding to community colleges by $400 million.

Building BI Into Decision-Making

The Cuts: In the past decade, **Miami University** (OH) has seen funding from state appropriations drop 5 percent. Under Gov. John Kasich's proposed biennial budget for 2011-2013, overall spending on higher education in Ohio would drop a further 10.5 percent, although these cuts would be ameliorated by slight rises in spending for instruction.

None of these reductions has come out of the blue, so Miami U has had time to position the school for leaner times. Since 2009, the three-campus operation has reduced its annual budget by $32 million, a cut of 7 percent in its core spending. In the view of university administrators, though, it's not enough.

According to Beverly Thomas, associate VP of finance and associate treasurer, last year the university president set up a task force to "think about the university's strategic priorities going forward and to recommend long-range budget solutions." The goal, she says, was a "general realignment of the university's priorities." Working through the summer, the task force developed a 55-page report with 35 separate recommendations intended to generate savings of $41 million over a five-year period.

One Solution: Turning those recommendations into a reality—and actually reducing costs—is a more difficult proposition. The task becomes easier, though, when administrators have access to quality information and effective analysis. And thanks to a campus pilot project, the university is now looking to the proven benefits of business intelligence to generate that analysis.

The pilot kicked off in 2009, when Thomas recruited the IT organization to participate in a project to evaluate the financial viability of the school's summer academic programs. "It was a nice confluence of priorities," she explains. "We were searching for a way to make the summer session more successful financially. At the same time we were looking for a pilot project that would give us a real-life learning experience for business intelligence."

The university had plenty of data about its summer courses. "We could go to the accounting system to get revenue and expense; we could go to the registration system to track enrollment; and we could go to the financial aid system for the costs of student aid," explains Thomas. "But we couldn't get a holistic view that pulled all those data points together so we could analyze the underlying business model."

Miami U didn't have the budget to buy a BI tool, so the IT group decided to build one. A team of about 15 people from across multiple areas met weekly to work on the project.

Armed with an Oracle enterprise license for its database, the institution tapped Oracle Warehouse Builder, which provides basic extract-transform-load features. IT also found an unused license for Microsoft SQL Server. "We extracted data from Banner, built dimensional models using Oracle Warehouse Builder, ported the Oracle model to SQL Server, and built cubes in there," explains Phyllis Wykoff, assistant director of the Business Intelligence Center.

Four months later, a preliminary BI tool was available, and the BI team began refreshing the summer session data daily to provide information to academic deans about registration, waivers, and enrollment.

"What we've been encouraging the academic deans to do is not necessarily focus course by course, but to look at their overall curriculum for the summer," notes Wykoff. By the second summer, the deans understood enough to be able to adjust their mix of courses to satisfy academic needs while still being financially viable.

The BI initiative exposed another aspect of the summer program that hadn't been apparent before: just how many fee waivers were being offered to graduate students over the summer. "Having that information has really facilitated broader conversations about our graduate fee waivers," Thomas says. "We have used the BI data to put the summer fee waivers in the overall context of the university's budget."

The success of the pilot helped sell Miami U on the value of BI to its strategic decision-making. Despite tight finances, the 2011 university budget allocated funding for data intelligence software, which the institution has decided will be Oracle Business Intelligence Suite Enterprise Edition. It also led to the creation of the Business Intelligence Center, for which Wykoff

TEXAS

In the proposed biennial budget before the Texas House of Representatives, nearly $772 million would be slashed from higher education; four community colleges would be closed; and $100 million would be cut from the University of Texas at Austin and from Texas A&M at College Station.

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WISCONSIN

Gov. Scott Walker's proposed biennial budget would cut state aid to the University of Wisconsin system by $250 million, with $125 million of those cuts coming at the flagship campus in Madison. In addition, technical colleges would face a reduction of $71.6 million in state aid.

now works. "Having a real-life example of how we could use data to support decision-making helped the general university community understand the value of business intelligence," says Thomas. "It made it less theoretical."

Streamlining Portfolio Management

The Cuts: Johnson County Community College in Overland Park, KS, is projecting spending cuts of up to $13 million over the next three years. For the next fiscal year alone, the 21,000-student school is looking at a $6.2 million reduction ($1.2 million of which will be allocated toward new investments) even as student enrollment is on the rise—about 2.3 percent more students attended the college in fall 2010 than the year before.

One Solution: The IT department has turned to project and portfolio management (PPM) to streamline work, utilize its people most effectively, and do intelligent forecasting. Although the seeds for PPM were planted long ago, it was in 2009 that Johnson County adopted TeamDynamix, a project management tool designed specifically for higher ed.

For over a decade, the institution had been using a paper form for IT requests. In the beginning, people provided detailed information about the help they needed from the IT organization. As online communication became the norm, though, the level of detail dropped. "We started seeing seven-word sentences to describe what would be a two-year effort," recalls Sandra Warner, director of administrative computing services and deputy CIO. "What was lost in translation was how many resources would be required, not only in IT, but also from the functional area that made the request."

In an effort to formalize its processes, the college adopted the Project Management Institute's "body of knowledge" (PMBOK) and adapted it to its own culture. The college began sending employees for project management training. By the mid-2000s, Johnson County was starting to see a difference in outcomes between large projects that had project management and those that didn't. "The projects with project management had a higher success rate, so it created a demand for that," Warner says.

Projects come in four flavors, ranked from "A" to "D." The largest are "A" projects, which tend to encompass communication across the entire organization and last at least a year. A current implementation of voice over IP, a three-year initiative, falls into this category. "B" projects are cross-departmental, such as the implementation of a new document-imaging solution, and typically take six to 12 months to accomplish. Type "C" projects fall within a single department and may take up to six months. The smallest efforts, type "D," are four- to six-week projects that affect one person or a team within a department, such as a report modification. Currently, IT has about 500 projects in the pipeline.

Until recently, however, the details about these projects were maintained in a multitude of systems—help desk applications, SharePoint, FileMaker Pro, other databases, and spreadsheets. With the adoption of TeamDynamix, the system became the lone source of project data. "It's our one-stop shop," says Suzanne Henkle, project manager and senior systems specialist. "We can keep our documents in a briefcase. I can create issues. I can send out notifications. It keeps a log of all those things. I can go to that tool to see my project status very quickly. Then people in the project team can do the same thing. They don't have to know where I'm storing documents. They go to TeamDynamix and get a quick update on where we're at."

In December 2010, IT officially dropped the use of the paper forms. "Nobody has ever looked back," declares Henkle. "This has created a much nicer environment for people trying to do the work. With central reporting, we're able to see different perspectives, to see how projects are working or not moving forward. It helps us better analyze how we're spending our time."

Furthermore, adds Warner, the IT group is now better prepared to take on the challenge of working with reduced resources. For example, the team was able to adjust when budget cuts recently resulted in the loss of one staff position. "I don't know if we could have handled it as gracefully without these tools," Warner observes.

WASHINGTON

University officials say that Gov. Christine Gregoire's proposed cuts of $447 million to higher education would result in tuition increases of 9 to 11 percent; the loss of 1,000 jobs; and 3,000 fewer in-state students accepted.

Virtual Recruiting

The Cuts: Gov. Tom Corbett has proposed slashing Pennsylvania appropriations for higher education by about 50 percent. According to the American Association of State Colleges and Universities, it would be the largest one-time reduction in state funding in history. The cuts would amount to about $2,200 per student, says John Cavanaugh, chancellor of the Pennsylvania State System of Higher Education. For **Penn State**, the budget plan for 2011-2012 includes $17.3 million in cuts through a 1 percent across-the-board reduction in departmental operating funds.

NEW YORK

As part of the proposed 2011-2012 executive budget, appropriations for higher education, including the State and City University of New York systems, would fall 10 percent.

One Solution: Faced with ongoing budget cuts over several years, the College of Education at Penn State has attempted to eke out efficiencies wherever it can. On the recruiting front, those efforts are starting to pay off. The college, which enrolls about 8,300 undergraduates, has spent nearly two years figuring out how to use virtual meetings with a simple goal in mind: Convince more students to attend Penn State—and spend less doing it. In September 2009, a "SWAT team" started to evaluate every aspect of how new students are recruited, including examining survey results, assessing the admissions process and timeline, and analyzing data related to paid-accept rates and yield rates.

The review also studied on-campus events that were intended to woo new students. These events consume large amounts of staff and faculty time, yet the survey results showed that a third of all first-year students never actually visit Penn State before enrolling.

"That was an eye-opener for us," says Kimberly Baran, coordinator of Global Engineering Education at the college. "We spend a lot of time putting together the events on campus and assume that people will be able to come. We realized from the survey that a lot of students just looked at what information was available to them and made the decision that way."

The team also discovered that prospective students were swayed in their opinions by what they heard from the college's own students. "Hearing from other students made a big difference in helping them feel as if they could relate to what was going on here," notes Baran.

So the college began to experiment with virtual events, which allow student prospects who live far away to participate in recruitment events. In one of its first events, in 2010, the college staged a virtual event for students who had been accepted but who hadn't decided yet whether to attend. The college wanted to use the virtual meeting to close the deal.

"We used a web form for users to register, view the webcast, and submit questions," remembers Syed Karimushan, a database analyst and programmer for the college. "All of this happened in real time." The video was embedded on the college's Virtual Visit website using the Microsoft Silverlight plug-in. After the event, the college converted the video to MP4 (H.264) format and produced a closed-captioned version per Penn State requirements.

When recruiting events are held on campus, they generally involve around 20 faculty and staff. Each prospect picks a department and goes to meet with faculty and students there. The first virtual event required only six people. An academic adviser gave a short presentation and a couple of students talked about their experiences. After a break, two student ambassadors talked about each type of major and shared information about career opportunities. Students could send in questions to be answered during online sessions.

"That first one went pretty well," Baran recalls. "We didn't have any technical issues. But there weren't as many people attending as we'd hoped." About 80 accepted students participated. A post-event evaluation indicated that the setting looked too much like a sterile classroom. "This year we dressed up the room a little bit to make it look like a studio," notes Baran. The college also publicized the virtual event earlier and increased the number of student invitations. A year later, the virtual recruiting event drew more than 200 attendees.

At the same time, the college began updating its website to show some of the events taking place on campus, such as the Mr. Engineer pageant (run by its Society of Women Engineers) and the Rube Goldberg Machine Contest. It also encouraged student "ambassadors" to blog about their experiences. Much of that content is posted on the school's Facebook page, which the college promotes as a way for prospective students to see what's happening on campus.

The virtual outreach is paying off. From 2009 to 2010, applications were up nearly 9 percent; offers were up 5 percent; and enrollment was up 3 percent. **CT**

NEVADA

Gov. Brian Sandoval has proposed cuts of $162 million for higher education over the next two years. According to officials with the Nevada System of Higher Education, the cuts will result in layoffs, large tuition increases, and the elimination of some programs. The University of Nevada, Las Vegas is planning to cut several majors, including philosophy, economics, and arts.

Dian Schaffhauser *is a senior contributing editor of this magazine and writes regularly for* CampusTechnology.com.

Editor's Note: State budget figures were accurate as of press time but are likely to change.

Resources

Microsoft: microsoft.com

Oracle Business Intelligence Suite Enterprise Edition: www.oracle.com/technetwork/middleware/bi-enterprise-edition/overview/index.html

Project Management Institute: pmi.org

SunGard Banner: sungardhe.com

TeamDynamix: teamdynamix.com

STEPPING TO THE GE

As digital learning materials make inroads, campus bookstores take inspiration from the Apple Store. By John K. Waters

Genius Bar is a registered trademark of Apple Inc.
Illustration by Ryan Etter

UP NIUS BAR®

While no one agrees exactly when it will happen, expectations are high that the digital textbook market will eventually elbow print textbooks off the shelves. When that day finally comes, what happens to the campus bookstore? It's hard to imagine a college or university without one, but in a world where most students are downloading their textbooks, why maintain a bricks-and-mortar repository of dead-tree tech?

"The advent of this technology isn't going to eliminate the need for college bookstores," insists Isabella Hinds, director of digital strategies and products for Follett Higher Education Group. "It's disruptive—or it will be, eventually—but the role of the bookstore is already evolving. The college bookstore of the future is likely to be a very different environment. The digital textbook is going to be one of a range of course-material offerings...delivered on a variety of devices. As these options proliferate, the expertise of the bookstore personnel will be much more important. They will become trusted advisers who can talk knowledgeably about the strengths and weaknesses of increasingly sophisticated and complex products."

"WE WON'T BE CALLED A BOOKSTORE in the future," says Varney's Bookstores co-owner Jeff Levine. "We'll be called a chunk store. We'll be selling chunks of information."

In other words, the college bookstore of the future is going to look a lot like an Apple Store.

"As a matter of fact, that's an analogy we often use," Hinds says. "We talk about the importance of creating something that parallels the Apple Genius Bar. That model of expertise is one that really works. Students know that if they're in a bind they can walk across the campus and talk with somebody. It's another way that a physical location adds value for the end user."

Follett has a lot riding on this evolution. With 850 locations, the company is one of the country's largest operators of college bookstores, and one of the biggest wholesalers of used books for higher ed, with more than 100,000 titles in stock. Follett has also staked a big claim on the digital future of academic publishing with its own electronic textbook store, called CaféScribe.

A recently published report, *Defining the College Store of 2015*, from the National Association of College Stores (NACS) echoes Hinds' conclusions. According to the report, "College stores must earn students' 'love' by being relevant to their specific, evolving needs and expectations. Growing share of campus life must be a top priority for campus stores—followed by communicating this valuable role to key stakeholders."

Kelly Gallagher, vice president of publishing services at Bowker, a provider of global book information to publishers, booksellers, and libraries, also likes the Apple Store analogy.

"The stores that are becoming the resident experts on these educational technologies are gaining tremendous favor points with professors, administration, and students," Gallagher notes. "It's about maintaining a relationship with the customer and adding value in the form of expertise."

The Future of Print

At the same time, as *CT* discovered in our review of the e-textbook market, bookstores shouldn't plan to hurl their print products into the bin anytime soon.

In fact, says Gallagher, because today's students used primarily print-based materials during their K-12 years, print is still their preferred learning format. Recent surveys of college students by NACS and the Student Public Interest Research Groups confirm that argument: Three-

CATCH THE PREQUEL

IN "CAN TECH TRANSCEND THE TEXTBOOK?" the prequel to this article that appeared in the March issue of *CT*, John K. Waters explained why e-textbooks lag behind the consumer e-book market, and explored the debate over what these digital products should even look like. For the full article—plus reader comments about the piece—go to *campustechnology.com/0311_textbook*. Here's a sampling of what readers are saying:

"It is all about economics and how our brain works, and not about the presentation of the content. It is better for students to buy the textbook as they can sell it back via Amazon, Craig's List, or eBay, and hence the net cost is much less. If the students want to keep the book, they can keep it as long as they wish. E-textbooks fail in both aspects." *—Autar Kaw, University of South Florida*

"The CaféScribe e-books, sold at *efollett.com* or Follett-operated college bookstores, are yours to keep forever. You are also able to print up to one-third of the book...which would come in handy for that open book test: You can annotate, highlight, and share notes with every person who owns that e-book." *—G. Jolly, Mississippi*

"Coming from personal experience, I am going to guess that the arrival of new portable devices will begin the e-textbook revolution." *—Phydroxide, Rexburg, ID*

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quarters of the students surveyed said they'd rather use a paper-based textbook.

But even print is evolving technologically. "The economics of print-on-demand have yet to prove themselves," explains Gallagher, "but I think we're going to see manifestations of aggregated content—digital and paper content mash-ups. So, the bookstore of the future could be part Kinko's [now FedEx Office], part Apple Store, part textbook store."

That expanded analogy works for Jeff Levine, co-owner of Varney's Bookstores, which operates the campus bookstore for **Kansas State University** in Manhattan, KS. Founded in 1890, Varney's has been in the Levine family since the 1950s. Levine says he and his family have been watching the evolution of the college bookstore for a long time.

SOUTH DAKOTA STATE is revamping its bookstore to move more aggressively into retail sales: everything from computers, MP3 players, and software, to sweatshirts, T-shirts, and jackets.

"There's absolutely no doubt that the long-term survival of the college bookstore will require some strategic adaptations," he says. "And you really just have to embrace the technology. We decided our best bet would be to invest in multiple approaches, to jump right into the deep end with both feet."

Varney's sells both print and digital textbooks, provides textbook-rental services, and even offers print-on-demand (POD). "We took a risk with the print-on-demand," Levine admits. "But we believe that we've woven together a strong enough fabric to last us through a lot of changes."

In 2009, Varney's partnered with Able Publishing, a 20-year-old printing operation, to form its POD business, Able Printing Co. The risk comes from the investment necessary to buy the commercial Xerox digital presses and supporting technologies and material. To mitigate the costs of that technology, Able Printing offers a range of printing services not related to the bookstore, including brochures, letterheads, menus, posters, and business cards.

"We keep our beast fed with other business when there's not a need to print a book," says Levine.

By providing all three alternatives, Levine says, Varney's has the ability to mix and match copyrighted material with custom products, and to print just what the customer needs.

"We feel that a lot of students, even when they do go digital, will want something printed," he ventures. "They've already got the licensed component, though there may be other permissions to secure, and we can help them with that. And if they want to put chapters from different books together, we can do that, too."

All of which fits with his family's vision of the college bookstore as an information provider. "We won't be called a bookstore in the future," Levine says. "We'll be called a 'chunk' store. We'll be selling chunks of information, and part of our role will be to deliver content in different forms and formats—some will be electronic; some will be print; some will be integrated combinations of the two."

Derek Peterson, director of the **South Dakota State University** Bookstore, is also firmly convinced that college bookstores will have to assume a new role as tech-support and content experts. "When you sell a textbook, you're basically done with that student until you see him again at the end of the semester," he says. "I think the college bookstore of the future is going to be an organization that's better at communicating, better at staying in contact with customers, better at building long-term relationships."

To help meet this goal, the SDSU Bookstore is undergoing an extensive renovation that will include space for regular tech-support events. "Maybe every Monday afternoon we offer an opportunity for students to come in for an hour and a half to discuss—and even try out—some new apps we've found," explains Peterson. "Believe me, the students are a lot more excited to come into my store and talk technology than they are textbooks."

An Emphasis on Retail

But the makeover at SDSU is also designed to allow the bookstore to move more aggressively into retail sales. A new

WEB EXTRAS

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500-square-foot technology center will sell computers, MP3 players, headphones, and software, and there will be an increasing focus on "soft goods," such as sweatshirts, T-shirts, and jackets.

Sue Riedman, VP of corporate communications at the Nebraska Book Co. (NBC), another large operator of college bookstores, completely understands why the SDSU bookstore would shift to more of a retail focus.

"If textbooks do go mostly digital, then the campus bookstore simply has to become more of a retail center," Riedman says, pointing out that the college bookstore is no longer the place "where you have to go to get everything. Students have more choices now. There's local competition, as well as the internet. But we're convinced that there's still a lot of value to the college bookstore. Students aren't paying for shipping charges, returns are easier, and they get help to make sure they're buying the correct book. In the end, it's about adding value."

NBC operates and manages more than 280 college bookstores nationwide. The company also sells used textbooks, and about three years ago began providing its stores with the ability to sell electronic textbooks via a service it established with CourseSmart called Jumpbooks. Students actually purchase Jumpbooks titles at a local bookstore, where they receive a code for the download. To read the purchased textbooks, students also have to download either the CourseSmart Reader or the VitalSource Bookshelf. Only time will tell whether such a multistep process can work in this era of instant downloads.

Growth of Textbook Rentals

The good news for college bookstores grappling with all these changes is that the transition to digital has been slowed by the warp-speed growth of an intervening trend: textbook rentals.

"According to our research," says Riedman, "an average new textbook sells for about $75. You can rent that textbook new for about $44. A digital book on average costs $45. It's not necessarily more cost-effective to use an e-textbook."

SDSU's Peterson agrees: "We offer e-books—a few hundred titles—but the demand isn't there yet. I think it's pretty clear that the growth of textbook rentals is part of the reason for that. Everyone in the industry knows that it's just a detour on the road to digital, but it's a significant one. Right now, our kids have transferred heavily to textbook rental, but the next step is going to be from rental to e-book."

Riedman confirms that textbook rentals represent an enormous change in the way NBC stores do business. "In more than half of our NBC stores, we're now renting every textbook that's available in the store," she says. "This is one of the more dramatic ways the college bookstore is morphing to accommodate changes in the market."

The Role of Open Content

And then there's open source—or in this case, open source educational content—which college bookstores have only just begun to deal with. Richard Baraniuk, professor of engineering at **Rice University** (TX) and founder of Connexions, a popular open education site, sees the college bookstore of tomorrow as essentially a manager of processes and an aggregator of textbook and course materials from open-licensed content.

"Think of it as content-curation services," he says. "There's an opportunity for the campus bookstore to understand the issues, to help guide the instructor through building a legal, open textbook and providing services around that, and curating it over time, making sure things are up to date, and taking student feedback."

Josh Baron, director of academic technology and e-learning at **Marist College** in New York, believes open content will prove to be an even more disruptive technology than digital textbooks, and that college bookstores are uniquely positioned to play a key role in its evolution.

"I think the campus bookstore is going to continue in its role as distributor of instructional content, but the way that content is delivered is going to be varied," Baron says. "The days of making all of your money from content are going away. The future is going to be about organizing that content, adding value to that content, and potentially wrapping services around that content. I think the campus bookstore would be pretty well positioned to provide those types of services. It's a known entity on campus—it already has relationships with students, faculty, and administrators."

While the future of the campus bookstore may be far from clear, it will undoubtedly be complicated. The bookstore of tomorrow must be prepared to juggle open source content, e-textbooks, tech support, and on-demand printing, even as it sells mascot-emblazoned mugs and sweaters. Nevertheless, such a future is infinitely preferable to that of consumer giants like Borders.

"My words of wisdom to my colleagues are pretty simple," sums up Levine from Varney's Bookstores. "You can't do all this in a tepid fashion—you have to commit all the way. You have to invest in multiple approaches to hedge your bets on the shifting winds of the technology. And monitor your results. The evolution of this thing we call a bookstore isn't over." **CT**

__John K. Waters__ is a freelance writer based in Palo Alto, CA.

Resources

Bowker: bowker.com

CaféScribe: cafescribe.com

Connexions: cnx.org

Follett Higher Education Group: www.fheg.follett.com

Jumpbooks: jumpbooks.com

National Association of College Stores: nacs.org

Nebraska Book Co.: nebook.com

South Dakota State University Bookstore: sdstatebookstore.com

Varney's Bookstores: varneys.com/textbooks/textbooks.html

Jason Schneider

University ASPs can benefit both the host institution and smaller client colleges, but there's a cloud on the horizon.

THE HOST WITH THE MOST

By David Raths

IN THIS ERA OF POLITICAL RANCOR when everything's a zero-sum game, it's refreshing to think that two parties could actually come together to create a win-win situation. That's exactly what's happening, though, as a number of universities take on the role of application service provider (ASP) for smaller schools.

It's not all confetti and roses, of course, but—done right—larger schools can gain valuable revenue and expertise acting as an ASP, while smaller institutions receive more bang for their computing buck.

30% of Drexel's IT budget now comes from outside sources.

Drexel University (PA) has been one of the pioneers in the field. For more than 10 years, the Philadelphia-based school has provided IT services, including hosting SunGard Banner, to schools such as **Cabrini College** (PA), **Neumann University** (PA), **Medaille College** (NY), and **Cumberland University** (TN).

The benefits for Drexel have been tremendous. According to John Bielec, Drexel's CIO, 30 percent of the university's IT budget now comes from outside sources.

While Drexel's income as an ASP probably stands at the high end, other university ASPs have also managed to reduce their own costs significantly.

For **UMassOnline**, which hosts Blackboard for five **University of Massachusetts** campuses, five public state universities and community colleges, and five small private schools in Boston, the primary goal is cost sharing. "From our perspective, it is beneficial because we can spread the cost across 15 campuses instead of just five UMass campuses," says Ken Udas, CEO of UMassOnline.

Fees collected for hosting both Blackboard and Oracle database software for other schools have also allowed UMassOnline to hire an additional support staff member.

The **University of Cincinnati**, a public research university with more than 41,000 students, started out with three schools as clients for its hosted Blackboard service back in 2004, but has since ramped up to 10. The prices it charges are based on school size. For a school like **Ohio Wesleyan**, the annual fee is $35,000.

Client Benefits

From the perspective of smaller, client schools, cost is obviously a significant factor when considering a contract with a university ASP. "There is no way they could get the staffing, software licensing, and training to support Blackboard at that cost on their own," says Paul Foster, assistant director of instructional and research computing at UC, of his university's clients.

But Drexel's Bielec cautions that small schools should not look at any such arrangement simply on a cost basis. Instead, he says, they should focus on what they get for their money.

"A school with a couple of thousand students might have an IT staff of eight, 15 servers, and a budget of $1 million. They get limited capacity for that $1 million," he says. "In the ASP arrangement, their capacity increases exponentially. They have access to the same applications and support that every student at Drexel has, and they are paying the same as they were before in more of a mom-and-pop IT operation."

Certainly, for **Owens Community College** (OH), the decision to partner with UC in May 2010 went beyond the purely financial. Initially a Blackboard ASP client, Owens had brought hosting in house in 2004. But with online courses growing 30 percent each year, Owens' overburdened IT staff encountered a number of technical issues, and began to look at other options. The school, which has locations in Findlay and Toledo, eventually selected UC as its Blackboard ASP. UC's bid was substantially lower than that of Blackboard ASP Services.

"It was a cost decision, but we also needed the most stable environment possible," says Mark Karamol, division director of e-learning at Owens. "We did reference checking with other schools and got outstanding feedback about UC, and 13 out of 14 members of a faculty task force voted to choose UC."

The issue of system reliability definitely resonates with smaller schools, particularly when it comes to applications that are considered mission critical. For Patricia Ainsworth, CIO at **Salem State University** (MA), the school's Blackboard LMS meets that definition. "If we ever have a physical disaster, the LMS has to survive so we can continue teaching courses online," she says of her school's decision to contract for hosting with UMassOnline. "I have just one data center. Hosting the LMS there with no redundancy would be risky. We have decided that we are not going to host our own LMS."

Redundancy concerns aside, the reality of straitened budgets also made Salem State's decision to outsource the LMS hosting understandable. Last year, the 15,000-student school was forced to lay off five of its 47 IT employees.

Outsourcing its LMS has not spared Salem State from platform churn, however. UMassOnline, which has acted as an ASP for 10 colleges outside the University of Massachusetts system, recently announced that Blackboard will not support its current LMS platform beyond February 2013.

Salem State will soon have to decide whether to stay with UMassOnline, which is going through its own LMS selection process, or go a different route. "Migrating courses to a new system can

ONLINE EXCLUSIVE:
For schools that don't want to host mission-critical applications in house, there are options beyond the host-client approach. In "Beyond ASP: Shared Services," *CT* profiles an innovative partnership between two Ohio schools.
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For an in-depth look at Drexel's experience hosting software, go to *campustechnology.com/0511_drexel*.

be painful," says Ainsworth. "The big horror story is if you outsource your data center and then try to move to a different hosting service or bring it in house. That is the most painful."

Finding the Right Partner

Salem State's hosting options have definitely expanded since it first contracted with UMassOnline. Cloud-based offerings from vendors now offer schools a viable alternative (see "A Cloud on the Horizon," page 36).

For its part, UMassOnline plans to continue offering hosting services to other colleges. "We have had a number of new schools interested in the hosting arrangement and we have told them to wait until we are further along in the procurement process to see if they are still interested," says UMassOnline's Udas.

UMassOnline is anticipating bids from a number of vendors, and the system could be open source, but multitenancy is part of the deal, no matter what, "Whether five or 15 schools, the architecture would be similar," he says in reference to the five UMass campuses that he must support.

For any small school considering a hosting relationship with a university ASP, it's imperative to identify precisely what it expects from the relationship.

At Salem State, Ainsworth takes the approach that her relationship with UMassOnline is no different from the ones she has with commercial vendors of software services. "We have to treat UMass just like any other hosting vendor in formal negotiations," she says. "They must compete on the same footing. It is not a different type of relationship."

The relationship between Drexel and its client colleges, on the other hand, tends to be more collegial and casual. According to Bielec, Drexel's 80-person IT staff treats other schools the same way it does its own internal colleges. "We have a business college, an engineering college and we have Cabrini College," he says.

While a legal contract is still advisable (see "A Contract Job," below), this kind of collegiality is what makes a partnership with another university appealing to many smaller schools. Certainly, Owens feels that its partnership with UC carries benefits that a commercial hosting service would be unable to duplicate.

For example, UC customer schools meet regularly to talk about changes they would like to explore. "I think there is strength in numbers and we have a better voice in working with Blackboard," says Karamol.

He also points out that UC finds workarounds for issues facing Owens that Blackboard itself might not have found. "For example, we have numerous start dates at the beginning of a semester," says Karamol. "This required modifications that UC was willing to help us make."

That's not to say there haven't been

"I think there is strength in numbers and we have a better voice in working with Blackboard."

—Mark Karamol, Owens Community College

A CONTRACT JOB

THE DECISION TO hand over a mission-critical application to be hosted by another university inevitably comes with its share of angst. Surprisingly, **Drexel University** (PA), which pioneered the concept of the university ASP, doesn't have detailed service-level agreements (SLAs) with its partner schools. "It's more of a handshake," says John Bielec, Drexel's CIO. "The schools get the same level of service as Drexel colleges. So if there is a problem, it [usually involves everyone] and gets resolved quickly."

But some CIOs from smaller schools believe that a contract is essential—and that it pays to pore over it closely.

"I have learned that, in working on any type of agreement like this, you have to bring with you a lawyer who is very well versed in technology contracts," says Patricia Ainsworth, CIO of **Salem State University** (MA). "You can't just take what they hand you and sign on the dotted line. You have to write it yourself to protect yourself."

Mikael Blaisdell, a California-based consultant on software as a service, agrees with Ainsworth. He suggests that SLAs must cover not only operational uptime guarantees and what happens if they aren't met, but also security and backup resources. Customers should also ask what kind of access the host will provide to its customer support team and about response-time guarantees.

But the biggest issue, says Blaisdell, is access to the customer's own data if the client decides to go somewhere else. "While many SaaS vendors are happy to provide a lot of assistance in creating an on-ramp to migrate data into their system," he explains, "the customer must plan on an eventual exit and make certain that the off-ramp is going to be as easy to use. Nothing lasts forever."

Drexel recognizes that partnerships can end and gives schools a 30-day out. Furthermore, Bielec believes schools can change hosts quite easily, at least when it comes to learning management systems. "We don't want to play a blame game or keep them using a system if the arrangement is not working for them," he states.

A CLOUD ON THE HORIZON

THE PROLIFERATION OF cloud-based solutions from vendors represents the biggest threat to university ASPs. Certainly, the number of schools with which **Drexel University** (PA) works has leveled off, according to John Bielec, Drexel's CIO. "People have an increasing range of options in terms of hosting and running software," he explains.

The competition appears to be centered primarily on the LMS market, since university ASPs have difficulty competing in other arenas. For instance, Drexel gets two or three calls a year from schools interested in its offerings involving finance, human resources, and student portals, but partnering on back-office applications is a more difficult decision because it involves trusting another school with your data and giving up a certain measure of control. As a result, Drexel hasn't seen much expansion there.

Administrators at the **University of Cincinnati**, which started as a Blackboard-based ASP in 2004 for three schools and now serves 10, also have doubts about whether they can continue to develop their LMS model. "That is the $10,000 question," says Michael Lieberman, UC's interim vice president and CIO. "We have only lost one school customer. What we hope is that it will stay stable and we can keep all the small schools we have now. But we don't have any others on the horizon."

The increased competition could work to the advantage of smaller colleges looking to lock up an affordable, reliable hosting solution. It certainly paid off for **Owens Community College** (OH), a two-campus institution that had been hosting Blackboard in house but was struggling with technical issues. In 2009, a planning team analyzed the costs of keeping operations in house or outsourcing them—either to Blackboard ASP Services or the University of Cincinnati. The team recommended UC's hosted solution.

Among its findings:

- UC had a proven track record of hosting Blackboard for a number of Ohio colleges and could allocate more staff to back-end operations than Owens could.
- UC agreed to conduct three training sessions per year on the Owens campus.
- The quote from Blackboard ASP Services was substantially higher than that of UC.
- The cost of keeping Blackboard in house was only 1.5 percent lower over three years than of outsourcing it to UC.
- In an outsourced environment, the Owens Blackboard administrator would be able to give his undivided attention to customized scripts and the Blackboard snapshot, improving that aspect of the operation.
- Freed of having to resolve back-end technical issues, the college might be able to save money in technical support costs.

some rocky moments, especially in the beginning. A fire in the UC data center knocked Owens out for the better part of a day. "We also had a single sign-on system that required some changes," recalls Karamol. "But once we smoothed out those early glitches, my department has been very pleased with the service."

A Matter of Perspective

UC has also benefited from the relationship in ways that go beyond simply financial. "The revenue we receive has helped fund some internal positions to support Blackboard," notes Foster, "but I think the quality of the experience of users on the UC campus has been improved. In terms of Blackboard adoption, we now get 10 perspectives, not just one. We share perspectives and it really is a consortium."

UC's path to becoming an ASP was not part of a grand strategic plan. Indeed, IT executives had never even considered hosting applications for other schools until 2003, when they were contacted by the Archdiocese of Cincinnati's K-12 schools for information about their experience adopting Blackboard.

"After those discussions, we thought perhaps we could offer a hosted solution, and it evolved from there," remembers Foster. A survey found that many regional higher education institutions were interested, but it took several months to get established.

A state-level organization called the Ohio Learning Network served as a catalyst by subsidizing the software licenses for the smaller schools. But with budget cuts looming, those subsidies may disappear, says Michael Lieberman, UC's interim vice president and CIO. A group of public university CIOs in Ohio is exploring other shared software services, as they plan for the budget cuts coming next biennium, he adds.

Despite the uncertainty surrounding her own school's relationship with host UMassOnline, Salem's Ainsworth believes hosting arrangements between large and small schools will proliferate, simply because small schools can't afford to do as much on their own. She thinks Massachusetts should follow the model of states such as Connecticut and New York by creating a statewide infrastructure for an LMS and then requiring all schools to use it or buy their own. "That is a political battle because it gets into turf wars and talk of unfunded mandates," she admits. "But I think it makes sense for all state schools to be in on one centrally funded project." **CT**

David Raths is a freelance writer based in Philadelphia.

Resources

Blackboard: blackboard.com

Ohio Learning Network: oln.org

Oracle: oracle.com

SunGard Banner: sungardhe.com

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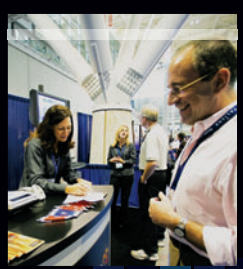

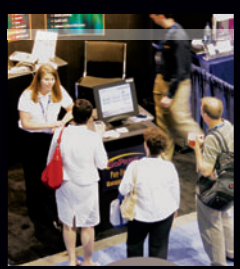
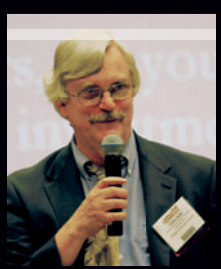

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Source: Campus Technology 2010 Attendee Survey

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OPENING KEYNOTE

TUESDAY, JULY 26, 8:30 – 9:45 AM

From Knowledgeable to Knowledge-able: New Learning Environments for New Media Environments

Michael Wesch
Cultural Anthropologist, Researcher in Digital Ethnography and Associate Professor, Kansas State University

It took tens of thousands of years for writing to emerge after humans spoke their first words, thousands more before the printing press and a few hundred again before the telegraph appeared. Today a new medium of communication emerges every time someone creates a new Web application. Michael Wesch will demonstrate the profound yet often unnoticed ways in which our culture is being remixed by new media. He will explain why we need to move from being simply knowledgeable to being knowledge-able and propose ways we can organize our education systems to foster the forms of learning we need.

GENERAL SESSION KEYNOTE AND INNOVATOR AWARDS

WEDNESDAY, JULY 27, 8:30 – 9:45 AM

Making It Real: The Adoption of IT Innovation in Higher Education

Ellen D. Wagner
Executive Director, WCET

Human beings are, by nature, attracted to the bright, shiny, and new. This phenomenon is particularly notable when it comes to our fascination with the notion of "innovation." Ellen Wagner posits that the best part of innovation—an essential part—comes from making our sparkling new ideas real by applying them in and to our work. She suggests that the "secret sauce" of true innovation is its effective implementation as a solution to problems and as a strategy for responding to new opportunities.

CLOSING KEYNOTE

THURSDAY, JULY 28, 11:00 AM – 12:00 PM

The Fourth Decade of the 'IT Revolution': Continuing Challenges and Opportunities

Kenneth C. Green
Founding Director, The Campus Computing Project

This year marks the official beginning of the fourth decade of the "IT revolution in higher education" that began with the slow migration of IBM-PCs and Macintosh computers onto campus in the mid-1980s. Technologies have changed and improved dramatically over time, but what are the issues that consume the time and attention of today's faculty, IT leaders and senior campus administrators? Drawing on data from The Campus Computing Project and other sources, Green's presentation will address the great aspirations for IT that pose continuing challenges for the higher education community.

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MONDAY, JULY 25

8:30 AM – 11:30 AM	M01	21st Century Education in the Cloud
	M02	Principles and Practices for Online Courses that Engage Learners
	M03	Buzzwords Come to Life: The Latest Web 2.0 Tools for the College Classroom
	M04	iPads: Applications and Uses in Education
	M05	User-Centered Learning Space Design
1:30 PM – 4:30 AM	M06	Online Research Tools for Educators: Collaborate without Jet Lag!
	M07	M-Learning on Speed Dial: How to Develop a Nimble Academic Mobile Learning Strategy for Your Campus
	M08	Buzzwords Come to Life: The Latest Web 2.0 Tools for the College Classroom
	M09	iPads: Applications and Uses in Education
	M10	Skype and Google Docs: A Perfect Alliance to Support Communities of Inquiry

TUESDAY, JULY 26

8:30 AM – 9:45 AM	**Opening Keynote: From Knowledgeable to Knowledge-Able: New Learning Environments for New Media Environments:** Michael Wesch, Cultural Anthropologist, Researcher in Digital Ethnography, and Associate Professor, Kansas State University	
10:00 AM – 11:00 AM	T01	Digital Media Campuses: The Transition from Word Processing to Digital Media
	T02	Pod Rooms: Faculty Friendly Classroom Technology
	T03	Navigating the Elusive World of Virtual Collaboration in the Classroom
	T04	ePortfolios Integrating People Life and Learning
	T05	The Four Pillars for Technology Decision Making
11:15 AM – 12:15 PM	T06	IT as a Service: Leveraging Private, Public, and Hybrid Clouds
	T07	Community of Practice in Online Education—Collaborative Curriculum
	T09	The 21st-Century Campus: Students Tell It Like it Is
	T10	Keeping Administration and Faculty Informed: Reports and Dashboards
3:45 PM – 4:45 PM	T11	Academic Video Management: Done the Open Way with OpenCast Matterhorn
	T12	Academic Progress Portal: Catching Students Before They Fail
	T13	Walking Ulysses: Collaborative and Mobile Mapping in the Humanities
	T14	We All Have iPads...Now What?
	T15	Leading Change: Course Redesign

WEDNESDAY, JULY 27

8:45 AM – 9:45 AM	**General Session Keynote and Innovators Awards: Making It Real: The Adoption of Innovation:** Ellen D. Wagner, Executive Director, WCET	
10:00 AM – 11:00 AM	W16	CHANGE Migrating from Legacy LMS to an Open-Source Moodle Platform
	W17	Engaging Faculty: Observations from ACU's Mobile Learning Initiative
	W18	Teaching and Learning with Low Cost and Low Barrier Technologies
	W19	CT 2011 Innovator at Work Award
	W20	Finding Funding: Alternative Revenue Streams
10:15 AM – 11:45 AM	WSE	A Conversation with the Future
	W21	One Stream to Rule Them All: Unifying Online Campus Video
	W22	Beyond Web 2.0: How Virtual Learning Environments Should Help Learners
	W24	CT 2011 Innovator at Work Award
	W25	Value of Portfolio and Project Management in Tight Economic Times
	W26	Head in the Cloud, Feet on the Ground: Modernizing Computer Lab Support
3:45 PM – 4:45 PM	W27	eAssessment: Using Electronic Portfolios for Curriculum Improvement
	W28	Using iPads to Produce and Publish Content in an Education Reporting Class
	W29	CT 2011 Innovator at Work Award
	W30	Trust, Verify, and Communicate: Presidential Perspectives on the Campus Investment in Information Technology

THURSDAY, JULY 28

8:30 AM – 11:00 AM	TH31	Learner Analytics via the Cloud: Sophisticated Statistics Made Easy
	TH32	Building a Culture of Assessment Using Rubrics: A Web 2.0 Approach
	TH33	Energing Technologies in Content Delivery: eBooks and eReader Devices
	TH34	CT 2011 Innovator at Work Award
9:00 AM – 10:30 AM	THSE1	FEATURED SESSION: Project Rescue: Lessons on Leadership
	THSE2	A Conversation with Apple Education
9:45 AM – 10:45 AM	TH36	Securing Campus Network Access for an Improved User Experience
	TH37	IT Literacy in the Internet Era
	TH38	Using Popular Social Networking Tools In (and Out of) the Classroom
	TH39	Welcome to Class. Please Take Out Your Cell Phones!
11:00 AM – 12:00 PM	**Closing Keynote: The Fourth Decade of the 'IT Revolution': Continuing Challenges and Opportunities:** Kenneth C. Green, Founder, The Campus Computing Project	

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Trendspotter

Changing the Way We Teach

Put authentic learning first—the technology will follow. By Mary Grush

*Michael Wesch is a cultural anthropologist, a researcher in digital ethnography, and an associate professor at **Kansas State University**. He will present the opening keynote, "From Knowledge-able to Knowledge-able: New Learning Environments for New Media Environments," at Campus Technology 2011 in Boston, July 25-28.* CT *asked for his insights on teaching with technology.*

CAMPUS TECHNOLOGY: You've said that when you first began teaching in higher education, it was nothing like you expected. Why?

WESCH: Each semester I face 200 to 400 students in a large university lecture hall. Each semester I ask them a simple question, "How many of you do not like school?" It is not uncommon for more than half of them to raise their hands. I follow with a slight variation on the question: "How many of you do not like learning?" No hands. We love learning, but dislike the institution we have created for it.

CT: How has the college experience changed since you were a student?

WESCH: The primary goal of most students has not changed in the 15 years since I was a student. We still live in a society in which identity and recognition are not givens, so most students spend most of their time trying to figure out who they are, who they want to be, and what they want to do. What has changed is the media environment in which this quest is carried out. Marker boards on dorm doors have given way to online status updates. Phones stopped being just phones. Notes and letters became e-mails, texts, and IMs.

CT: Which technologies are changing the student experience the most?

WESCH: The most potentially disruptive technologies are those that allow for broad-scale authentic collaborations that transcend the boundaries and limitations of classroom walls.

The most potent collaborative learning machine ever created finds its primary use in university classrooms as a distraction device.

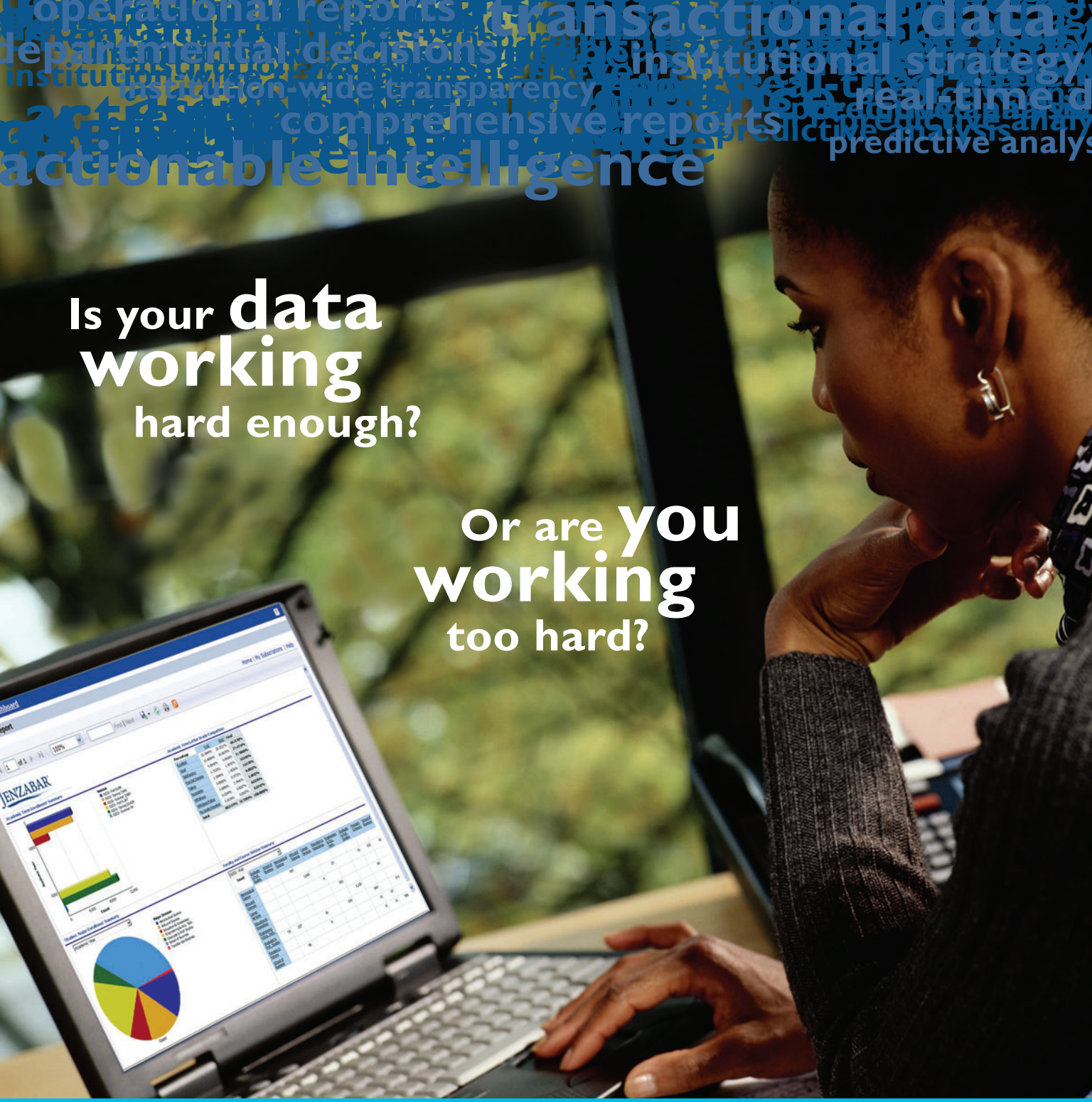
Of course, these technologies are also the ones that are most difficult to implement because they do not work well with the traditional habits, assumptions, and structures of higher education. When I asked my students this same question, they responded that the highest impact technologies are those they most commonly use: Facebook, texting, and instant messaging. When I noted that these are not really used much in the classroom, they laughed (because of course they *are* used in the classroom—just not with the permission of the professor).

And therein lies a glimpse into an even more disturbing phenomenon. The most potent collaborative learning machine ever created finds its primary use in university classrooms as a distraction device. We live in a world that is quickly racing toward ubiquitous computing, communication, and information about everything everywhere, accessed at unlimited speed and uploaded from anywhere on all kinds of devices—all of which makes it possible to connect, organize, share, collect, collaborate, and publish with almost anybody and to almost anybody in the world. How did we end up in a situation in which the institutions we have designed for learning see this as a distraction rather than an asset?

CT: What can institutions do to teach 21st century skills?

WESCH: We have to start with problems and projects that are real and relevant to students. There is nothing more difficult or more important than finding a purposeful project to share with our students. From there we can build a community of learners, leveraging the appropriate tools and working together to accomplish real results. The worst thing we could do at the moment is to make the technology yet another assignment for students to complete, to get their grade, and move on. We have to help them see the technology as essential to learning, collaborating, and accomplishing their real goals. **CT**

Editor's Note: For more information about Campus Technology 2011, go to campustechnology.com/summer11.



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