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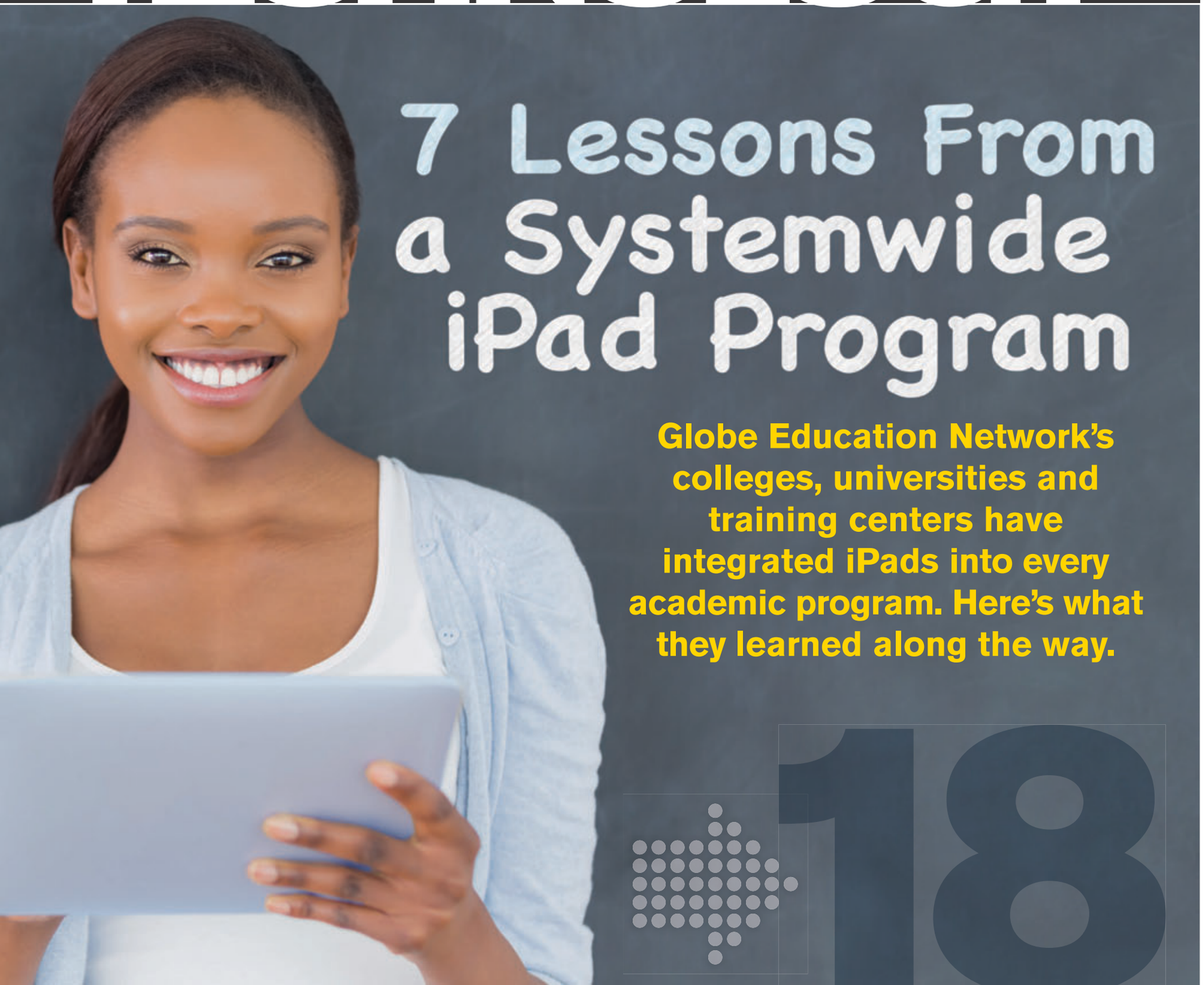
CAMPUS TECHNOLOGY

Empowering the World of Higher Education



7 Lessons From a Systemwide iPad Program

Globe Education Network's colleges, universities and training centers have integrated iPads into every academic program. Here's what they learned along the way.

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IN THIS ISSUE

Innovation Requires a Little 'Crazy'

Behind MIT's efforts to redefine the future of higher education is a willingness to experiment and take risks.

"MIT IS A CRAZY PLACE." Take it from edX CEO and MIT professor Anant Agarwal, who used precisely those words in his keynote address this July at Campus Technology 2014 to explain the institution's penchant for reinventing itself. "Messing with things is part of their DNA," he continued — akin to an engineer's devotion to continuous improvement.

"Messing with things" is a rather humble way of describing what MIT actually does, which is constantly experiment and innovate in ways that literally change lives. Initiatives like edX and OpenCourseWare are obvious examples, expanding access to higher education all over the world.

With a résumé like that, MIT could easily rest on its laurels. But instead, it has embarked on a massive effort to redefine its approach to education. An institution-wide task force of faculty, students and staff recently released a 213-page report on "how MIT can continue to transform education for future generations of learners."

Rhea Kelly,
Executive Editor

Job one, according to the report: Set up an "Initiative for Educational Innovation" to act as a hub for further experimentation. Recommended areas of focus include infusing greater flexibility into undergraduate curriculum; expanding the use of project-based and blended learning models; introducing modularity into the curriculum as a replacement for traditional classes; and studying new approaches to assessing students. The task force also proposed further innovation around MOOCs, new revenue opportunities for the institution and building new student learning spaces.

What does it take to pull off such a transformation? Some might say it requires the prestige, size and resources of an institution like MIT, but I think it's something deeper: a willingness to take risks, to try something "crazy," to learn from failure and keep going.

The personification of those qualities might just be CT 2014's closing keynoter David Sengeh. As a biomechatronic researcher in the MIT Media Lab, Sengeh is designing next-generation prosthetic sockets that improve comfort and mobility for amputees. He is also the president and co-founder of Global Minimum, an international nonprofit organization that mentors high school students in Sierra Leone, Kenya and South Africa, fostering a culture of innovation and helping young people transform their ideas into tangible solutions. He has worked to distribute mosquito nets in Africa, develop a better tuberculosis vaccine and produce microbial fuel cells. And as if that weren't enough to keep him busy, Sengeh also owns his own clothing design company and writes rap music.

When asked about the secret behind his dizzying array of achievements, Sengeh echoed the spirit of risk-taking that drives institutional change at MIT. "To be honest, I am a silly person who does not mind making a fool of myself," he said. "Because I don't take myself seriously, it's easy to try stuff out. I'm not afraid to fail or lose." CT

Continue the conversation.
E-mail me at rkelly@1105media.com.

Campus + Industry

TECHNOLOGY HAPPENINGS IN HIGHER EDUCATION

NO MORE MAILBOXES. Thanks to technology from Ricoh's Campus Mail Solutions for Universities, **Loyola University Maryland** has updated its postal workflow and eliminated the traditional mailboxes set aside for the school's 4,000 undergraduate students. Now, when a piece of mail or a package arrives, students receive a notification. They visit the mail center and swipe their student ID at a self-service kiosk; mail center workers retrieve the mail; and students collect it at a pickup counter. The new system includes a revamped method for storing packages that is so efficient, the campus has gained 10,000 square feet of space that can be used for other purposes. *Read the full story online.*

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OPEN TEXTBOOK AUTHORING. Boundless, a publisher of free textbooks that use repurposed free and open source material, is now allowing educators to publish their open educational resource (OER) textbooks via its authoring platform. The company is working with a dozen authors to add their OER textbooks to the library, including books on music theory, computer science and microeconomics. Currently, all content is available free on the Boundless Web site. The company converts those textbooks into paid "premium" offerings by adding quizzes, flashcards and other digital content and providing instructors with class management tools. *Read the full story online.*

SPEEDY RESNET. The **University of Alabama at Birmingham** worked with ResNet provider Apogee to drastically increase the speed of its on-campus residential network, with an upgrade that has brought a 250 Mbps connection to each student in all five of its residence halls. That 250 Mbps speed — which is actually just the base speed, since residents can opt to purchase more bandwidth — is about 24 times the estimated average speed of 10.5 Mbps per household in the United States. *Read the full story online.*

SPACE-AGE RESEARCH. In two to three years, students at the **University of California, Los Angeles** will be able to watch the launch of a satellite being built entirely on campus, thanks to grants from NASA and the National Science Foundation. The job of the satellite, which

CTONLINE

Breaking News

- Lynn U Expands iPad Initiative 08/20/14
- University of Houston Intervention Program Focuses on Struggling Bio Students 08/20/14
- MIT Offers STEM Institute for Middle School Students 08/20/14
- ED Asks for Feedback on Research Centers 08/20/14
- Canon Intros 3 New Cloud-Connected Printers 08/19/14
- Widespread 3D Printing in Classrooms Still a Decade Out 08/19/14
- U Minnesota To Seed Tech and Other Innovations 08/19/14
- MeetingOne Aims To Help Incorporate Meetings into Blackboard Courses 08/19/14
- This Flipped Class Is Studying Biology with a $10 Microscope and a Smart Phone 08/19/14
- Stanford Aeronautics Classmates Build Their Own Drones 08/19/14
- Pathbrite Portfolios Now Featuring Credly Badges 08/19/14

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- The University of Virginia Opts For EBSCO's Libra… Tool 08/18/14
- Loyola Students Lose Mailboxes, Gain Mail Alerts
- Mississippi Community Colleges Deploy Analytics to R… Online Dropouts 08/18/14
- NASA Awards $17 Million To Encourage STEM Ed at Community, Technical Colleges 08/14/14
- Special Ed Target of $4 Million in Federal Grants 08/14/14
- Florida Polytechnic U Develops New Supercomputing Center 08/14/14
- East Tennessee State App Helps Students Hunt Down Parking Spots 08/14/14
- U San Diego Reduces Backup Disk Storage Demands with Data Deduplication 08/14/14
- Education Boosting Chromebook Shipments to 5.2 Million Units This Year 08/13/14
- SAIT Polytechnic Consolidates Help Desk Management 08/13/14
- UC Davis Research Peers into Next-Gen Memory 08/13/14
- Sullivan Adds Business Intelligence Software, Dashboards 08/13/14

More news

is no bigger than a loaf of bread with a cane attached to it, will be to conduct research on space weather: the solar and geomagnetic storms that disrupt communications and electricity networks and could, in their severest forms, cause catastrophic failure of power grids. *Read the full story online.*

MUSIC ONLINE. This month, **Berklee College of Music** (MA) is launching a completely online bachelor's degree program that offers two degrees: one in the music business and the other in music production. Tuition in the new program is 60 percent lower than tuition in the physical college. The Boston-based school has been offering online classes since 2002, including free, non-credit bearing courses through Coursera and edX. *Read the full story online.*

REINVENTING MIT. The **Massachusetts Institute of Technology**, a school renowned for its intrepid experimental nature — MIT Media Lab, D-Lab, MITx and OpenCourseWare, to name a few experiments — wants to accelerate innovation and "reimagine" its own future. An institution-wide task force has proposed setting up an initiative focused on educational innovation that analyzes new forms of learning and encourages "bold" pedagogical experiments; extending MIT's educational impact to teachers and students inside and outside its campus; and developing new revenue streams as well as new spaces to support learning. *Read the full story online.*

WIRELESS POWER. A research project at the **University of Washington** is developing devices that are battery- and infrastructure-free. With a technique that uses "backscatter," the reflection of waves back in the same direction from where they originated, researchers are turning existing wireless signals (such as those generated through TV, cellular and WiFi transmissions) into a source of power and a communication medium. *Read the full story online.*

Webinars on Demand

Register for the latest *Campus Technology* webinars online.

Security Rivals? The Value of Measuring & Comparing Network Security Performance in Education

Learn how security performance is being measured today and why benchmarking has become a valuable tool for security teams to gain insight about strategy, performance and more. *Sponsored by BitSight*

That's the Ticket! Lessons Learned Implementing a Higher Ed Ticketing System

Manhattan College (NY) shares its experiences in implementing, developing and managing a ticketing system. *Sponsored by TeamDynamix*

Driving Student and Institutional Success With Premium Technical Support

Discover how **UMassOnline** and **Adventist University of Health Sciences** (FL) implemented reliable technology services to make sure students can take full advantage of learning resources and achieve success in the online environment. *Sponsored by Pearson*

Upcoming Events

Sept. 21–26
The Data Warehousing Institute
TDWI World Conference
San Diego

Sept. 29–Oct. 2
Educause 2014
Orlando

Oct. 19–27
The SANS Institute
Network Security 2014
Las Vegas

Oct. 29–31
Online Learning Consortium
OLC International Conference 2014
Lake Buena Vista, FL

Nov. 4–5
Campus Technology Fall Forum
Chicago

Nov. 9–12
League for Innovation in the Community College
STEMtech Conference 2014
Denver

To submit your event, e-mail editors@1105media.com.

NEW! INDUSTRY PERSPECTIVE

ENHANCING LEARNING WITH COLLABORATIVE TECHNOLOGIES

An Exclusive Industry Perspective from Campus Technology and Barco ClickShare

How collaborative presentation systems can foster student engagement and discussion

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The traditional classroom is evolving quickly. As more student-engaged learning models gain traction, trends like collaborative spaces, flipped classrooms and BYOD are driving changes in learning space design. Rushing to keep up with new methods, schools are transforming classrooms, libraries and common areas into collaborative areas complete with wireless connectivity and audiovisual technologies like big-screen displays and projectors. It's all designed to foster engagement, discussion and fast and easy sharing of information, often on the spur of the moment.

One company offering an education-centric mix of collaboration and wireless presentation solutions is Barco. Its ClickShare wireless collaboration and presentation system enables all users in a space to share content seamlessly by using a small hardware device called a ClickShare Button that plugs into a laptop's USB port, or via a free, downloadable ClickShare Presenter app for either iOS or Android smartphones or tablets. Using the button or app, students can share virtually any content on a big screen, including slides, documents, web content, music and video.

Barco's full-featured **ClickShare CSC Base Unit**, or its compact ClickShare **CSM Base Unit**, can foster collaboration in any meeting space. The larger CSC unit projects images in high resolution on one or two screens, allowing multiple users to share the central screen at once. With ClickShare CSC, up to four students can share content on-screen simultaneously, and up to 64 buttons can be ready to share content. Or, for smaller areas such as huddle spaces, Barco offers the ClickShare CSM unit. Barco AV projectors can be purchased with ClickShare installed, or ClickShare can be added to existing projectors or displays to add collaboration capabilities to these devices.

Take the next steps toward achieving elegant and easy-to-use wireless sharing on big screens in any space. Download your Industry Perspective Report today!

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Visibly yours

CAMPUS TECHNOLOGY

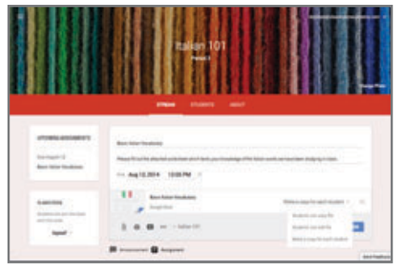
PRODUCT ROUNDUP

Editor Picks

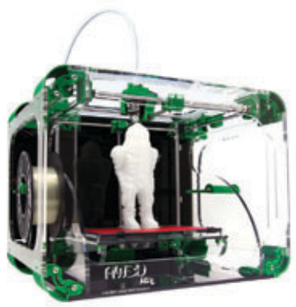
The latest releases, services and new product versions

Designed for BYOD, **BenQ America's MW665** DLP projector allows users to collaborate and share documents, photos and Web content directly from their mobile devices. *Read the full story online.*

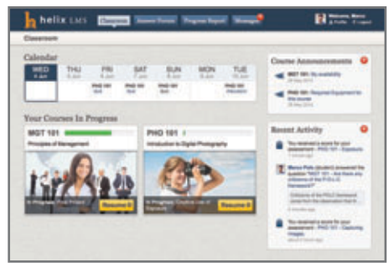
Now available in the cloud, **NEC's DisplayNote Software** enables instructors and students to share content across any device using Windows, iOS and Android operating systems. *Read the full story online.*



Now in full release, the free **Google Classroom** LMS allows teachers to create assignments directly within Google's apps, which students can then turn in through a one-click process. *Read the full story online.*



The new **Airwolf 3D HDL** 3D printer features a build envelope that measures 12" x 8" x 11", a layer-to-layer resolution of 0.08 mm and a maximum speed of 150 mm per second. *Read the full story online.*



The latest version of **Helix LMS** is designed to allow instructors to communicate more efficiently with students. *Read the full story online.*

The **SMP 351** from Extron Electronics is an H.264 streaming media processor for lecture capture and distribution, designed for recording and delivering presentations to a large audience. *Read the full story online.*

newreleases

Live News from CT Online

AV & Presentation

- NEC Takes DisplayNote Software to the Cloud
- BenQ Intros Projector for BYOD
- New Visix Room Sign Line Combines Digital Signage and Room Management

Business & Administration

- Tidemark Launches Financial Planning Tool for Higher Ed
- Wasp Rolls Out Two IT Asset Tracking Solutions
- Power PDF Offers Commenting, Review and Side-by-Side Document Comparison

Enterprise Systems

- Yammer Enterprise Coming to Microsoft Office 365 Education Plans
- Red Hat CloudForms Adds Supports for Red Hat Enterprise Linux OpenStack Platform
- rSmart Releases Automated Grant Management for Kuali Coeus

Infrastructure & Facilities

- Red Hat Releases Enterprise Linux 7
- Red Hat Announces New Linux Container Projects
- Ruckus Ships 3-Stream 802.11ac WiFi Access Point

Click here for new releases

- Surface Pro 3 Gets 12-Inch Screen, Upgraded Processors
- iGear Intros Customizable iPad Keyboard Case

Retention, Recruitment & Marketing

- Hobsons Unveils Radius Student Lifecycle Management
- Deltak Intros Engage Student Relationship Platform
- Modo Labs Releases Tour 2.0

Security

- Scenario Learning Updates Safety and Compliance Portfolio
- LRAD Rolls Out Long-Range Mobile PA System
- Bradford Networks Revs Network Sentry with Microsoft Hyper-V Server and MaaS360 Support

Teaching & Learning

- Airwolf Rolls Out Expandable Entry-Level 3D Printer for Education
- Google Rolls Out Free LMS for Apps for Education
- Adapt Courseware Expands Repository of Adaptive, Multimedia Content

Why Your University Needs More Student IT Workers

Student employees account for more than half of Southern Illinois University's IT staff. Here's why the benefits of student labor outweigh the risks.

MY FIRST DAY of work as CIO at **Southern Illinois University** included a sub-basement tour of our networking offices. I was struck with two questions: First, who knew that a basement could have a basement? And second, why is this basement packed full of students?

My previous employer, like most universities, used students to staff computer labs and perhaps some administrative duties within Information Technology. However, the IT department there had a small fraction of the student employees that I was seeing at SIU. That first day's tour revealed four full-time network engineers and 25 networking student employees crammed into cubicles like a Dilbert cartoon.

This use of students is certainly not typical for any university, much less for a research university like SIU. According to the 2013 Educause Core Data Survey, institutions, on average, use "16 percent student workers as a percentage of total central IT FTE." In comparison, SIU has 116 permanent central IT employees working approximately 4,350 hours per week. We also have 239 student employees working approximately 4,780 hours per week. These student employees account for 52 percent of our central IT FTE, which is more than three times the national average. Actually, most of our IT departments have an even higher percentage of student employees since a few of our departments don't use student labor at all.

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Benefits

Upon my arrival at SIU I was skeptical of this student-heavy employment strategy, but over the last couple of years I have become a true believer due to the following benefits:

Cost-effectiveness. The students provide a very cost-effective alternative to traditional IT staffing. The average student hourly wage is often less than a quarter of the full-time employee wage. For a public university that has seen years of declining state allocations, this has proven essential to providing technology to the campus at a very low cost. Additionally, some of these students are employed through the work-study program, where they are paid out of federal funds instead of the Information Technology budget (read: free labor).

Experiential learning. The majority of our student employees come from the academic departments of Information

Systems or Computer Science. Employment within the Office of Information Technology provides these students with hands-on experience where they can apply what they are learning in their classes. It also gives them real-world work experience, which is invaluable in helping them get their first job post-graduation.

Talent pool. Having students who are already trained in our work environments provides us with a tremendous talent pool from which to hire entry-level positions as they arise. We can hire former students who are not only fully trained but have already proven their value and work ethic. Our place in the "employer food chain" is to provide an entry-level opportunity for the talented graduates that our school is turning out year after year. In this way we are growing our own workforce.

Special skills. Our students often possess knowledge and skills that are otherwise not available in our regional job market. For example, according to a 2013 Dell SecureWorks presentation, there is only one qualified candidate for every 20 available information security positions. We use six student employees to supplement our full-time information security team of four employees. Some of these student employees are also members of SIU's "Security Dawg" team for Cyber Defense competitions. This team recently won the Illinois state collegiate championship. These students' deep security expertise would not be otherwise available in the talent pool of our rural area. In addition, we use students as developers for our mobile applications and have found that they bring a fresh perspective and highly innovative ideas.

Ability to relate. We also employ students for many nontechnical positions in IT because of their ability to relate to our student population. For example, we use a team of communications students to market our Mobile Dawg tablet

initiative to prospective students. These students have already been trained on presentation and communication skills in the classroom. They are able to communicate with new students at a peer level. We are also using these students to conduct large training seminars for the new freshmen, preparing them to receive their tablets, electronic textbooks and a host of other software and services.

Short-term labor. Student employment has proven invaluable when we need many employees for a short duration of time. For example, we utilize a large group of students for several weeks as part of our Mobile Dawg project. Students are used to prepare, distribute and support the tablet computers. Additionally, we use lots of students for residence hall computer setup, computer inventory and computer surplus projects. It is a great way to apply serious manpower to a short-term project at a very low cost.

Dealing With Challenges

This isn't to say that using such a high percentage of student labor is always easy. Student employees bring a different reality that includes higher turnover rates, more supervision required, additional training and increased information security risks. However, we have dealt with these challenges in a number of different ways:

Proper supervision. We hire team leads and other full-time staff based not only on their technical ability but on their ability to supervise and teach. For example, each of our full-time network engineers manages a handful of student employees. These technicians need to be good communicators with both supervisory and mentoring skills.

Each of our full-time network engineers manages a handful of student employees. These technicians need to be good communicators with both supervisory and mentoring skills.

Training and documentation. Our processes need to be fully documented to help student employees become productive quickly. We also provide regular training sessions before the start of each school year.

Academic partnering. It is critical to partner with each of the academic areas from which we receive student employees. We collaborate to recruit students and, when possible, to integrate the student employment experience with the academic program in the form of internships, class projects, etc.

Information security. In a world of state-sponsored cyber-attacks and daily reports of data breaches, we need to be constantly aware of our information security exposure. We manage any additional security risk by carefully limiting students' data access and applying information security best practices.

Limited work hours. Southern Illinois University also carefully manages the number of hours that each student can work. Students are limited to 20 hours per week with only rare (and limited) exceptions. This limit on their work hours is to ensure that they still have time for their classwork and to make certain that we don't violate the Affordable Care Act. It also means that a higher volume of students receive student employment opportunities.

Overall, I think that this is one of those rare situations where everyone wins. The university receives an inexpensive source of labor and a valuable recruiting pool; the student gets a part-time job and real-world experience in his or her field; and the eventual employer gets a graduate with real-world technology experience. Now, if I could only figure out why networking is in a sub-basement…. CT

David Crain *is assistant provost and chief information officer at Southern Illinois University.*

go back to TOC

NEXT: Getting Ahead of the Non-traditional Tech Curve

Getting Ahead of the Non-Traditional Tech Curve

New technologies are gaining influence in areas outside the normal purview of IT. How can IT position itself to support the Internet of Things, 3D printing, wearables and more?

BY NOW, EMERGING tech such as the Internet of Things, 3D printing and wearable devices should be on every CIO's radar. But there's a problem: These technologies tend to grow in areas that are outside the normal purview of IT. How can IT leaders position their organizations to support a new wave of technologies for which decision-making and purchases are often handled without IT's involvement?

According to Gartner, IT organizations need to expand their skill sets and business acumen in order to help develop use cases and test business cases for the technologies in the early stages. In other words: Get ahead of the curve.

Gartner has identified five digital business technologies of strategic importance:

The Internet of Things (IoT). At some point, Gartner predicted, the majority of endpoints on the institutional network will be "things," not PCs or mobile devices. These include sensors for buildings, people and other purposes. The use of IoT will come out of divisions that currently have little to do with IT.

For that reason, noted Gartner, "CIOs will need to approach these with a lighter hand, because there is likely to be a pre-existing body of technology invested over many years, or even decades, by engineering and operations groups."

To avoid stepping into turf not their own, CIOs will need to navigate political challenges carefully and plan for resources and skills that can span operational and technology projects.

3D printing. Right now, what appears to be a niche market for hobbyists and engineering programs could affect multiple areas, particularly those that traditionally use a supply chain to get materials and parts. Why order materials from an outside entity when they can be printed on campus? In this area, Gartner advised, CIOs need to understand 3D printing intellectual property issues and how the technology could be used within their institutions.

Human augmentation and wearable technology. This category covers wearable devices that collect data continuously as well as brain-interface and implanted technologies that are surfacing. Schools will need to develop clear-cut policies regarding the use of devices in the bring-your-own category.

Photo courtesy of MakerBot

Robotics and autonomous machines. As computers, mechanical systems and other electronics converge, new uses will appear in the areas of human workforce replacement, safety and transportation. CIOs will want to have a position on how these might play into the campus environ-

ment beyond just the experimental.

Cognitive machines. These technologies take on decision-making previously thought to be the domain of humans — acting as customer service agents, performing personal assistance, even writing news articles. Gartner advised that CIOs seek use cases to identify repetitive services that "complement, rather than replace, human employees."

IT's Role

Gartner recommended that CIOs work in an advisory role in digital activities, particularly in the areas of technology procurement, risk management and security. Acting as "digital risk mitigators" instead of project owners removes the IT organization from being financially responsible for these initiatives.

Even in the event that a given digital business project proves successful, the CIO may be in the best position to educate the business function about the fiscal dangers of success, since IT tends to have a more realistic understanding of the "long-term costs, risks and benefits of technology," Gartner said in a statement. For example, software licensing costs to process and store data generated through the Internet of Things could grow exponentially. Or, as the consulting firm explained, "A dramatic upturn in unforeseen demand can prove even more expensive to satisfy at short notice. Supply costs rise, unless negotiated as part of the initial deal. Worst of all, there may not be enough money in the allocated budget to meet demand."

In this type of initiative, there's often a disconnect between the business user and IT regarding expectations around funding. As Gartner noted, the business user frequently wants a "monthly consumption price without a long-term commitment," whereas the IT organization understands that a short-term service can require long-term assets, such as a way to store data "that must be retained forever, or at least for many years."

Gartner recommended that CIOs determine how to share costs with the business "by identifying who should 'own' the IT organization's assets." One strategy offered is to "encourage lines of business to run pilots and experiment with digital innovation." Should those projects be suitable for longer-term adoption, the IT organization can then take on scaling and "industrializing" them without taking over ownership of contracts or assets. **CT**

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

Keeping Students on Track With a Mobile 'Nudge'

The University of Washington Tacoma is hoping to improve retention with a daily support message sent to each student's mobile device.

RETENTION AND student success have long been among the biggest issues facing institutions of higher education, but a new generation of students is complicating matters. "There has been a change in who goes to college," according to Colleen Carmean, assistant chancellor for instructional technologies at the **University of Washington Tacoma**. "We think of the traditional student as the person right out of high school; but now the demographic is across the board. What in the past was a small percentage of students returning to college is now the majority. We are a *nation* going to college, as people realize they need a college degree in order to have a more successful life."

As an urban-serving university in the downtown hub of Tacoma, WA, UWT has firsthand experience with today's "post-traditional" or "new traditional" learners. Many of its 4,300 students are first-generation, part-time, low-income or underprepared for college. What's more, research indicates that young people going to college are not as mature as in previous generations, noted Carmean. "This is a change for American higher education," she said. "This is a more protected generation, coming into adulthood much later. They arrive at college not prepared for their new responsibilities. So how does the infrastructure of a university, with certain expectations, change to accommodate this fact?"

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The Mobile Nudge

Looking for a way to help these "new traditionals" persist from freshman year into succeeding years, UWT turned to a technology that is already ubiquitous to most students: mobile. The institution was the first school to use Persistence Plus, a personalized mobile support system that uses behavioral interventions to reach out to, engage and support students throughout their college years. The service helps keep students on track by delivering a mobile "nudge," a daily text message that reminds them about quizzes and tests; helps with time, stress, and performance management; and encourages appropriate behavioral responses.

"We deliver support through the channel that students use most," explained Jill Frankfort, CEO and co-founder of Persistence Plus, a two-year-old company that uses behavioral science, mobile technology and data analytics

NEW! INDUSTRY PERSPECTIVE

5 MOVES FOR DRIVING STUDENT ENGAGEMENT AND RETENTION

An Exclusive Industry Perspective from Campus Technology and Dell

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Imagine then and now. A lone computer has morphed into a foursome: notebook, tablet, smartphone and game player. Nobody thinks about "plugging in" a device. Wireless is expected to reach every quiet corner of the campus. Learning is done on the run as often as in the classroom. Tending to school business isn't face-to-face; it requires a visit to a portal.

But one thing hasn't changed: IT is still on the line for delivering the services and support required, desired and expected by students in this "active campus" environment.

Campus Technology and Dell have produced this playbook that lays out the five basic moves every campus IT organization needs to master to do its part in helping drive student engagement and learning — because when they're played right, the result will be improved student outcomes.

The tactics for building and sustaining the active campus explained in this free report will show you how to:

- Increase success by putting everything students need right on their devices.
- Prepare faculty with the tools and training to help them integrate technology
- Support innovative uses for mobile devices to extend learning beyond the classroom.
- Leverage your buying power in the data center.

Take the next step in staying ahead of the endless changes that characterize your active campus. Download your Industry Perspective Report today!

DELL intel

CAMPUS TECHNOLOGY

to foster the behaviors and mindsets associated with college success. Students receive Persistence Plus mobile nudges via SMS or through an Android or iOS smartphone app. The cost of the service is structured around a setup fee and a license based on per-student cost and the customization level required.

Regular behavioral nudges are designed to enhance resiliency, planning skills and progress tracking. The service aims to help students learn how to prepare for and deal with academic setbacks and external obstacles; organize their time and responsibilities; and make progress toward short- and long-term goals. "There is growing research showing that students drop out of college not just because of lack of finances or weak academic skills," Frankfort said. "Increasingly, students do not 'persist' because of noncognitive factors: lack of confidence, lack of connection, feeling overwhelmed."

UWT course instructors work with Persistence Plus to code assignments and test deadlines into the daily nudges, as well as reminder dates for the university's academic calendar. Deadlines are turned into timely, supportive nudges. A learning algorithm monitors students' response to the messages and determines appropriate support replies.

As Frankfort explained, "We work with behavioral experts, both on staff and externally. Studies show that if you help people identify time and place to complete a certain task, they are far more likely to complete the behavior that is prompted. One way we help students is to help them plan their time, or to create a mental map, if you will." The complexity, according to Frankfort, lies in identifying the right nudge for the right student at the right time: what the message looks like; when it should be delivered; and the type of response that is solicited.

Student Support

"Our mission is to do what we can to get our students to the finish line," said Carmean. "If this support helps, if we can help them to stay on track, our students will be better prepared, more successful." Carmean compared the daily nudge to the Microsoft Calendar "ding." "We're hoping to create mobile 'dings' that help with time, stress and information management, that give [learners] the research information they need about what makes a successful student, that help them with their mental and emotional needs as students."

As an example, she cited the full-time working mother with children at home. "She is stressed; her commitments are high across many different obligations. Anything we can do to help her could make the difference between whether or not she makes it to graduation." She added that the same goes for first-generation students who don't know what to expect from the college experience. "There's no one at home to mentor or support them in this experience, and there is high anxiety among them."

"This is the new majority," Carmean emphasized. "We need to start thinking about how to serve the needs of these students, rather than thinking of the typical college student as ourselves years later."

At UWT, the greatest retention struggle is often the first year. Students are discovering the commitment is long and difficult, with much sacrifice ahead. Carmean explained that their greatest challenge is coming back after the summer off: "It's hard," she said, adding that, hopefully, daily support nudges over the summer keep students feeling connected and curtail "summer melt." The evidence, for Carmean and her associates, will be in September, when they see how many students return for sophomore year.

"There has been a huge change in the way we think about supporting our students," concluded Carmean. "We have to get around that at the institutional level. Behavioral reminders need to be the default, not the option. To increase access to disadvantaged populations without recognizing the need for new forms of engagement is a venture sure to fail." CT

Toni Fuhrman *is a writer and creative consultant based in Los Angeles.*

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NEXT: Rethinking the Campus Web Portal

Rethinking the Campus Web Portal

Wayne State University is rolling out a homegrown portal focused on real-time, two-way communication and better anticipating users' needs.

WHEN I.T. LEADERS at **Wayne State University** in Detroit talk about the limitations of their legacy campus portal, they reach for analogies to describe their dissatisfaction. "Our old campus portal looked like the classified section of your daily newspaper," said Rob Thompson, director of academic and core applications. "There was very little design cohesiveness."

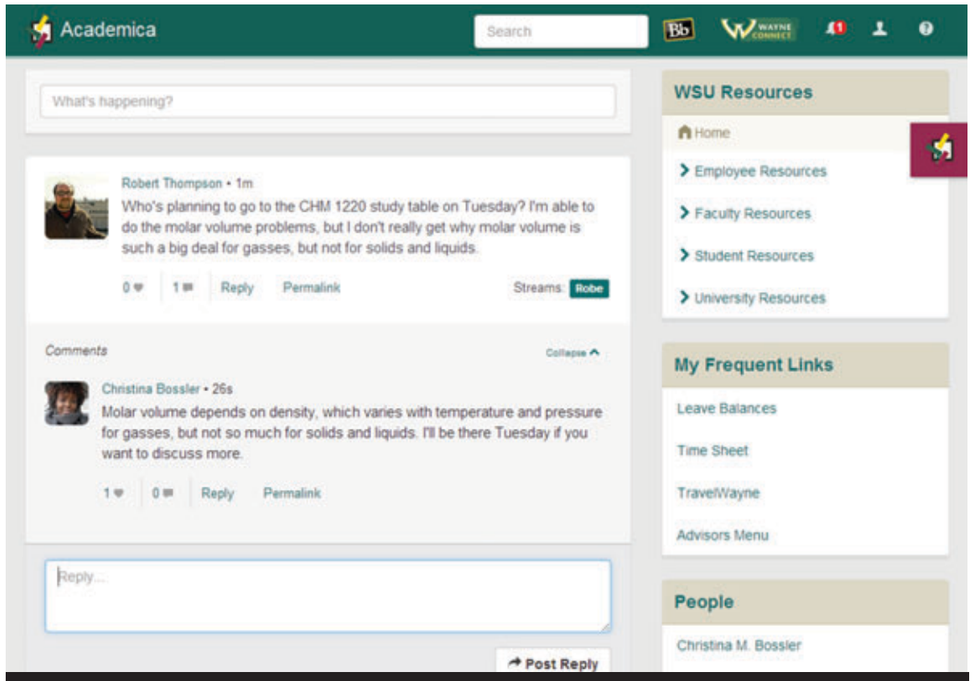
Or as Daren Hubbard, senior director of enterprise applications, put it: Universities have designed portals as "parcels of real estate like it was some kind of a shopping mall. If you got a storefront, meaning a link or a tab, then you got some eyeballs coming your way. That was your goal, instead of adding value for the users coming to the site."

A Portal for Collaboration

Two years ago, Wayne State executives started thinking about how their Web portal might serve the campus community in new ways. Students had been complaining that the existing portal, called Pipeline, did not support mobile devices well, and that university messaging was not well targeted — resulting in what they perceived as internal "spam" being sent out. "We didn't have any way to stop administrators from over-communicating in a one-way fashion," explained Thompson.

Yet as they surveyed the landscape of commercial offerings, Wayne State's team was underwhelmed. "They were no better than what we already had," recalled Hubbard. "For the basic design they had a screen with three to five columns of stagnant information. We didn't see anything revolutionary or that used newer Web 2.0 technologies."

Thompson agreed, noting, "They were rehashes of old-school Web design, and there really wasn't anything innovative, especially in the higher ed space."



Wayne State's Academica portal uses message streams to bring groups of people together around common interests.

So Wayne State decided to build its own portal solution, focused particularly on fostering real-time, two-way communication and better anticipating users' needs. Called Academica, the new portal offers single sign-on as an authenticated front door to applications, and is designed from the ground up to work on any mobile device. But first and foremost it is a social networking platform that enhances and enables collaboration.

"This is what we thought had the most potential for improvement," Thompson said, explaining that traditionally students go to a portal to look at announcements and campus events, but have no way to interact with that information. "How crazy is that? We expect this to be the meeting

spot for our campus and we have only one-way communications," he said. "This is what the marketplace hasn't thought about yet: the portal as a vehicle for true two-way, real-time communication, which is what an essential function of a portal should be."

How It Works

At the core of the social networking piece is what Wayne State calls "message streams," which operate like a Facebook wall or a Twitter hashtag. Streams can be created by anybody and can be subscribed to by anybody, although there are permission levels. For instance, a user could create a stream for chess and invite people to subscribe. There is a stream discovery tool that allows users to search all the public streams, or ask to join private streams.

"One of the major things we are doing to bring cohorts of people together at the university is that you are automatically subscribed to streams fed from our Banner ERP system," Thompson said. "Students and instructors are enrolled in a stream for each of their courses. We think that is a main innovation of what we are doing. We know via studies that the more students are engaged with peers, faculty and the institution, the better they do."

"We are extending that to our freshman orientation sessions as well," added Hubbard. "Folks who come into orientation have a stream and they carry that into the first semester."

That same concept extends beyond courses. If you are an administrator, you are automatically connected via streams to the rest of your college or division. Employees can also create streams in ad-hoc ways when they want to create smaller groups.

The streams concept has many features you would expect from any social networking platform, Thompson said. "We did not want to rewrite the rules on user interface here. Facebook, Twit-

ter and Google got it right. We wanted to use the same sort of mechanisms and make it as intuitive as possible to use."

Another new approach involves links. With the old portal, students reported having difficulty finding the links they needed among the dozens on the site. "Most people do only between five and 10 things on the portal," Thompson pointed out. "We are now keeping track of what you do on the portal and what people like you do, and are automatically populating that in a sidebar," he said. "So the first time you log in, the portal knows things that will likely interest you based on what other users like you are typically doing."

The Academica development team is also working on a way to deal with administrative announcements that people view as spam. Using a virtual currency called "Academicoins," administrators are charged to post announcements; the more people a message is sent to, the more it costs. If an announcement gets a good response from recipients, the sender gets more currency, but if not, the sender runs out of Academicoins to make announcements with. "We are creating a virtual economy that incentivizes people to target their messages well," Thompson said, "and it is fun."

The same level of innovation extends to the portal's infrastructure. Wayne State made a strategic decision to leverage Amazon Web Services' elastic cloud, which allows the system to expand as necessary to accommodate high traffic. Portals often see the most traffic in a one-hour period after registration opens in the fall, pointed out Thompson — the usage might be 10 times more than any other time of year. "By using the cloud, we can expand very cheaply to any size we want to," he said.

"As a university, we are not out to become a software development company, but we do want to position ourselves where we could help somebody else implement this. We are still talking about what that might look like." *— Rob Thompson, Wayne State University*

Expanding Beyond the Institution

Wayne State is in the middle of its Academica rollout, with approximately 4,000 users having switched from Pipeline. The plan is to have the whole campus of close to 30,000 students switch over for the fall 2014 semester.

The institution also hopes other schools will be interested in Academica. "We know other universities need an option for a new portal. We wrote it in a way that is portable," Thompson said. "We are lucky to have a bunch of very professional people on the development team with experience creating commercial solutions," he added. "We took the approach that this is not meant for one customer. If this can benefit Wayne State, I am sure others will be interested."

Thompson and Hubbard said the university has not yet developed a plan for how to share the system with other institutions. "As a university, we are not out to become a software development company, but we do want to position ourselves where we could help somebody else implement this," Thompson said. "We are still talking about what that might look like."

That expansion may include federating with other instances of Academica at other institutions. If other campuses were using Academica, for example, they could unify their message streams by topic. Thompson imagines a stream about atomic physics, populated by community colleges, universities and K-12 schools: With 10,000 people subscribed, a high school senior could post a question and receive an answer from a **Harvard** (MA) student. "This could not only enhance collaboration on one campus," he said, "but among institutions." **CT**

David Raths *is a freelance writer based in Philadelphia.*

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NEXT: 7 Lessons From a Systemwide iPad Program

7 Lessons From a Systemwide iPad Program

For the past year, Globe Education Network's colleges, universities and training centers have been integrating iPads into every academic program. Here's what they learned along the way. **By Dian Schaffhauser**

Globe Education Network (MN) has spent the last year integrating iPads into every program it offers. Its formal tablet program — dubbed edUX, for educational user experience — runs across the network's private and career colleges, universities and training centers, all of which report a level of faculty energy and discussion like they've never seen before.

Here, the college system shares seven lessons it has learned along the way. ▸

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1 Help Everybody Onto the Bandwagon

While all of the network's six schools have transitioned to the use of iPads in the classroom, it took six months to get there. The pilot program kicked off in July 2013 at three locations: two **Globe University** (MN) campuses and the **Minnesota School of Business**. By October, **Broadview University** (UT) and **Broadview Entertainment Arts University** (UT) had made the transition. In January 2014, the **Institute of Production and Recording** (MN) and the **Minnesota School of Cosmetology** launched their programs too.

Now, said Naomi McDonald, director of communications for the network, 100 percent of the courses across all six institutions are using iPads.

To make sure all of its students can afford to hop on the iPad bandwagon, the network allows financial aid dollars to be applied to the pricey devices. In addition, Globe U and the Minnesota School of Business created a scholarship program with a fairly low threshold. To receive the full scholarship of $600, students don't need to apply: They're automatically qualified to receive it if they enroll in a diploma or degree program; take a certain number of credits; and maintain "satisfactory" academic standing. Funds are doled out over two quarters.

So far, McDonald added, the network has handed out about $3.2 million in scholarship funding.

Elayne Hass, resident veterinarian at Globe University-La Crosse, has students in her veterinary pharmacology course take photos of medications with their iPads. Then they add the photos to **Flashcards+**, an app for memorization, to learn how to identify the drugs and review terminology.

2 Converting to Digital Textbooks Is Not Simple

The use of digital textbooks was a key part of the network's iPad

program. Yet as the college system learned, you can't always assume that the printed textbooks in use will have electronic versions. Nor can you assume that the digital textbooks you've chosen will be available through the e-textbook platform where students will access them.

For example, Katrina Neckuty-Fodness, project director of curriculum development for the network, had a great deal of difficulty finding texts on creative writing or world literature that were available as e-books. So she'd hunt down alternatives and give the faculty time to review and vote on the options. In other cases, especially for areas such as digital video and audio production, no digital alternatives existed — ironic considering that their topics tend to cover highly technical subjects.

"There are some media software [companies] out there that just haven't given those rights up to be put out in a digital way, so they're not accessible yet. In that case, those books are only available in print," she said.

According to McDonald, 92 percent of the network's courses are currently using e-books; the rest are using printed textbooks. But this is an area that's evolving quickly. "[Publishers have] definitely been inspired by what we've done. I've had several publisher reps tell me, 'We're moving faster because of what you did.'"

Choosing an e-book platform is also a challenge, pointed out Neckuty-Fodness. "It's easy for a publisher to sell you an e-book through their publisher site. But it's more difficult for them to create a contract with e-book platforms like CourseSmart or VitalSource. [The negotiation] definitely takes more time."

Although the network could have chosen multiple platforms, that would be more confusing for students, since they'd have to download software for each one and then try to figure out which service to go to for any given textbook. Globe has settled on VitalSource for now because it works well with Blackboard, the system's learning management system. Courses are loaded with the appropriate e-books even before students get access to the class, and students can download the material to their iPads about a week before the course starts. They're charged a learning resource fee for every course that uses a digital textbook, which also includes whatever electronic resources go with that book.

Allison Broeren, Globe University-Woodbury's business program chair, has her business students **set up Twitter accounts** and follow each other — along with the top business tweeters — in order to share "current perspectives" in class.

More Isn't Better

Apple estimates that its App Store features 75,000 education apps designed for the iPad. And some faculty get so excited about the possibilities, they want to try a whole bunch of them in class. That's a problem, said Neckuty-Fodness. "We learned very quickly to make it really clear to [faculty], you don't [need to] worry about using everything at once. More isn't always better."

The dilemma is that faculty often identify multiple apps that would be useful in their courses — and that adds up fast. "You have to remember your students are taking maybe two, four or five classes, and every instructor is going to have an iPad," she noted. "If every instructor has four or five favorite apps, that student has to learn 20 or 30 new things." On top of that, she added, forcing the student to buy that many apps can get pricey quickly.

Now Globe's faculty training emphasizes keeping app choices to a minimum — perhaps two or three at most — to use consistently throughout a course. Then, as instructors get comfortable teaching with the iPad, Neckuty-Fodness said, they might consider adding another app to their repertoire.

Erica Healey, business and legal studies program chair at Globe University, uses quiz app **Socrative** in class to survey students on what they understand, so she knows when it's time to move onto the next subject. ▸

Let Faculty Teach Faculty

Although the schools hold service training focused on integrating iPads into the classroom, one of the most effective ways Globe has found to educate its faculty is allowing instructors to teach each other about the apps they're using. The network calls these kinds of training "Appy Hour." As Neckuty-Fodness explained, Appy Hours are hour-long presentations in which a faculty member — full-time, part-time or adjunct — shares what he has learned about a given app or multiple apps through use in his classes.

"It's always helpful when somebody can present it and say, 'This is how you use it. This is how you can use it in your classrooms. This is what you can ask students to do with it. These are some of the pitfalls,'" she noted.

That kind of detailed peer-to-peer sharing is especially useful for faculty who want to understand the differences between free versions and paid editions. "We really encourage free app use," Neckuty-Fodness said, "unless we can find an app that we think is so amazing we can [designate] it as almost a required app for a program or a course."

Staff and faculty have also formed iPad advisory committees to help the teaching staff "navigate" the plethora of apps and to help troubleshoot problems.

The combined approach has been fairly effective. According to a survey done by the network's director of institutional quality and effectiveness, six out of 10 instructors have reported that they "were able to effectively integrate the technology into their courses within the first quarter of implementation." More than three-quarters indicated that "their proficiency in using the iPad in the classroom improved over the course of the quarter."

New instructors ramp up quickly with an online course that runs eight to 10 hours and covers iPad setup, basic usage and various apps that might be useful overall. That training course also provides a forum for getting questions answered, posting screenshots and doing self-reflection on faculty implementation.

Dana Wallace, Globe librarian, recommends **EasyBib** for automatically generating citations for books in research projects.

Remember Equity

Since there's no guarantee a student will have broadband Internet access at home, an important aspect of choosing an e-textbook platform was identifying one that would allow students to download their books onto their iPads for offline reading.

Faculty have helped out by providing extended schedules for some students or, at the very least, notifying them ahead of time that some of their projects will require access to the Internet. If students are unable to come to campus outside of scheduled class hours to use WiFi there, that alert gives them a heads-up to come up with their own accommodations. "Not surprising the student is always important, I think," said Neckuty-Fodness.

Tom Hakko, a member of the business faculty at Globe University-Woodbury, gave students a choice to write a final paper or use the iPad to **create a movie** as a final project. Half went with one and half with the other. Then they reflected on what they'd learned in the process.

Embrace Flipping

As Globe faculty become more comfortable with their integration of technology in the classroom, they're also beginning to flip courses. Starting this fall, for instance, the network will have a systemwide subscription to online training service Lynda.com. So if an instructor is teaching a course on Photoshop, explained Neckuty-Fodness, he can tell students to watch a basics video and come to class ready to "play around" with features shown in the video.

Math and science instructors are adopting the use of Khan Academy videos along with digital textbook assets such as simulations and video lectures from publishers. Faculty have

As the iPad program grows, the level of excitement among faculty has fostered more energy, discussion and participation.

begun telling classes to do something over the weekend and come back in ready to go "right into the lab."

The next step is to put more structured faculty training around it, including offering weekly "lunch and learns." "Having these digital assets really helps create more of a sense of urgency of trying it," added Neckuty-Fodness.

7 Faculty Enthusiasm Is Contagious

Neckuty-Fodness spends a lot of time with faculty members, and nobody can miss the "level of excitement" they're showing as the iPad program grows. "It's brought energy and discussion and faculty saying, 'Oh, can we spend the next half-hour talking about this in our classroom? Oh, you're doing that? How are you doing that? Can you share that with me?'"

That exhilaration has a positive outcome in another area too. Previously, getting people to participate on committees "was like pulling teeth." Now they're happy to participate when the focus is coming up with new ways to make the schools better.

She expects that faculty enthusiasm to infuse students' classroom experience as well. It's too soon for definitive data on student learning outcomes. But Neckuty-Fodness calculated the probable impact this way: "The potential has grown in terms of what [faculty] can add to their pedagogical toolkit. I like to think that's increased the student engagement." CT

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

go back to TOC

NEXT: Leading Change in Higher Ed IT

Leading Change in Higher Ed IT

Campus Technology 2014 brought together technology thought leaders for a dialogue on data, change, MOOCs, innovation and more.

AS TECHNOLOGY continues to turn higher education upside down, perhaps it's fitting that those at the forefront of change should meet in Boston, a place full of revolutionary history, to plan their next steps. This July the city was host to approximately 1,300 ed tech leaders for Campus Technology 2014, our annual conference devoted to technology in post-secondary education.

Innovation and change were a running theme throughout the event, evident in inspirational keynote addresses, detailed panel sessions and a vibrant exhibition hall.

Driving Change With Data

In his opening keynote, Stephen Laster, former CIO of **Harvard Business School** (MA) and currently chief digital officer of McGraw-Hill Education, encouraged IT leaders to collaborate with others on campus in order to better support the teacher-student relationship and experience.

Although the title of his talk was "How Big Data Is Changing Everything We Know About Education," Laster switched things up by arguing that the standard definition of big data really doesn't match up well with education. "I do not believe higher education is about gathering terabytes of data and asking it to tell me the patterns. I love the idea of bringing data together to look for patterns and insights, but not in education," he said.

"We need measurement to have feedback and drive engagement, and we need data," he continued. But setting aside the hype around big data, Laster argued for the potential of "small data" to create personalized learning experiences that cut down on student frustration and confusion.

SLIDE SHOW: Campus Technology 2014 in pictures

Laster gave an example from the **University of Texas at El Paso** that included the use of a knowledge map and an artificial intelligence engine to help guide students through a summer bridge course and prepare them for college math classes. UTEP is seeing much better graduation and completion rates from this small data initiative, he said. "There were no big datamarts or

a massive campus initiative," Laster noted. "Small data is not going to be the sole driver. But it can be one small piece. We cannot unilaterally drive the change. But we can drive a lot of it. Let's start small."

IT as Change Leaders

The keynote by **University of Maryland, Baltimore County** President Freeman Hrabowski III reminded attendees always to keep the larger context of their work in mind.

VIDEO: Watch a mashup of CT2014 keynote highlights.
For captioning, visit **CT** *on YouTube.*

"We have so much data around us, but a story is what gives it context," Hrabowski said. For instance, he talked about the importance of the GI Bill as a great experiment in opening up higher education to the middle and working classes, as well as the Higher Education Act of 1965. Millions of people were able to go to college and better themselves. "The work we do is noble," said Hrabowski, who has been president at UMBC for more than 20 years. "Where would we be without the education we received?"

He implored the IT executives to see themselves as thought leaders. Too often, people tend to question the value of what IT does, he said. "You do not want people to pigeonhole you as technologists. You are thought leaders who happen to be experts in technology."

Hrabowski used his relationship with UMBC CIO Jack Seuss as a positive example, noting that it was critical that his CIO report directly to him. "I wanted to send a message. There was nothing more important than making clear that technology is not separate but infused into the fabric of what we do," he said. "This expert in technology is at the table from the beginning and not as an afterthought."

He rhetorically asked the audience what it means to be academically innovative. "It means that success is never final. We are always asking, 'What's next?' We know we can be much better. We focus on the use of technology to redesign teaching and learning."

Returning to his initial theme of huge societal change agents such as the GI Bill, Hrabowski said, "The vets who went to college knew the world of tomorrow did not have to be the same as today. That was innovation." Today we can improve outcomes, he added, "if we change the way we do business. You have the ability to help campuses use technology to transform the institutions as they transform the lives of students."

NEW IN 2014

This year, special 50-minute interactive panels focused on three critical technology trends: mobility, security and the cloud. For instance, on the cloud panel, Dennis Ravenelle, senior project manager for **Harvard University** (MA) Information Technology, revealed that Harvard IT intends in the next three years to have all new services deployed in the cloud and migrate 75 percent of existing services to the cloud. "It is an audacious goal," said Ravenelle, who talked about some of the cost and scalability benefits the university is considering.

The MOOC Movement

Massive open online courses (MOOCs) have been a hot topic at past Campus Technology events and this year

was no different. In his keynote speech, Anant Agarwal, CEO of the nonprofit edX MOOC platform, talked about edX's potential for using big data to improve teaching and learning outcomes, both online and in blended learning environments.

EdX was launched in 2012 with seed funding from **MIT** and Harvard. Agarwal, a professor of electrical engineering and computer science at MIT, taught the first edX course on circuits and electronics. It drew 155,000 students from 162 countries.

Agarwal tried to put those numbers in perspective to stress the impact edX has already had. "That 155,000 figure is more than the total number of alumni of MIT in history," he said, adding that the 7,200 who passed the rigorous course are more than the total number of students he will ever teach in his career at MIT. "From a lark two and a half years ago, it is becoming a movement."

The next step is to use all the data being gathered from the edX platform to study how people learn.

In the space of a few years, edX has amassed more than 3 billion records. Agarwal wants to use that data to find out how students learn, in order to continuously re-engineer the platform in much the same way that Google tweaks its Web site. "We have terabytes of data, including students working on problems," he said. "We know they got it wrong four times and right the fifth. We can see what they did in between the fourth and fifth try. We know which parts contribute to successful outcomes."

Empowering Innovation

The conference closed with a keynote talk that broadened the focus on higher education and technology with a global perspective. David Sengeh, a biomechatronics researcher at MIT Media Lab, talked about what's involved in empowering people to innovate.

At MIT, Sengeh, a native of Sierra Leone, is working to design better, more comfortable prosthetic sockets and wearable interfaces. The work combines medical imaging, materials science, human anatomy, computer-aided design and manufacturing. He's also the co-founder of Global Minimum, a group aiming to inspire innovation in Sierra Leone, Kenya and South Africa.

"We have terabytes of data, including students working on problems.... We know which parts contribute to successful outcomes." *— Anant Agarwal, edX*

NEW IN 2014

In a new "Goldfish Tank" session, presented in partnership with the SIIA Education Division, entrepreneurs took the stage to share brief descriptions of their new product or service. After their presentations, attendees voted for the solution they would most likely use in higher education. The winner was a company called Campuscene, which is building a college search site that includes virtual tours, video content, interactive maps and social media content for every school on a student's list.

He noted that he and colleagues had the creative freedom to tackle problems at MIT. In that vein, rather than having foundations impose solutions to problems in Africa, it is important to encourage the same type of problem-solving mentality among young people there. "How do we create an ecosystem," he asked, "a network of opportunities so people can stop to think about challenges in their community and learn how to attempt to solve them? That is the only way to guarantee a sustainable future." **CT**

***David Raths** is a freelance writer based in Philadelphia.*

go back to TOC
NEXT: CT Innovators in Depth

meg lloyd

Reinventing Decision-Making With Data for All

Looking to better serve its 115,000-plus student population, the City Colleges of Chicago system built a "data democracy," empowering all faculty and staff with a flexible reporting and analytics system.

CAMPUS TECHNOLOGY innovators AWARDS 2014

Category: Administrative Systems

Institution: City Colleges of Chicago

Project: OpenBook

Project lead: Brendan Aldrich, executive director, data warehousing services

Tech vendor/partner: ZogoTech

AT THE City Colleges of Chicago (IL), key strategic priorities revolve around data: empowering all 5,800 employees of the college with access to a fully interactive reporting and data analytics system.

These priorities came about through a widely understood need for change. The City Colleges of Chicago is a large system, with seven community colleges, six satellite facilities, a center for distance learning, a culinary institute, two owned and operated restaurants, a public radio station and a public TV station. Educating about 115,000–120,000 students each year, it's the largest community college district in the state of Illinois and one of the largest in the country, yet graduation rates had dipped to about 7 percent per year.

To address these challenges, Chancellor Cheryl Hyman founded a program called "Reinvention" about four years ago. A continuously rotating group of about 100 administrators, faculty and staff came together, each for a term or two, to take on the problems of the institution. They were charged with identifying and characterizing the ways in which the organization was operating and serving its students; identifying best practices; and putting positive change in motion.

The OpenBook leadership team

Photo courtesy of ZogoTech

One of the main ideas that came out of the "Reinvention" initiative was the need for data in order to do any kind of meaningful analytics for decision-making. At the time, City Colleges did not have a data warehouse or any kind of centralized reporting system. Reports were pulled from the institution's front-end PeopleSoft system, or from other shadow IT systems that had cropped up over the years. The colleges brought in Brendan Aldrich, who had worked on several data warehouses for large organizations, to lead a project to establish better access to data throughout the colleges. Aldrich focused on the idea of building a "data democracy" — so that everyone could have the data they need — and took the job of executive director, data warehousing services for the City Colleges of Chicago. Work on the new data warehouse began in November 2012. In the spirit of "Reinvention," data warehousing and analytics were put in place that would completely reinvent the way the colleges used information. City Colleges of Chicago officially launched the system, "OpenBook," in September 2013.

OpenBook's data warehousing and analytics services are built on technology from ZogoTech. The system's inno-

vative functionality is geared toward empowering all employees: "Static" reports have been eliminated, replaced by fully interactive reports where all elements can be changed with drag-and-drop simplicity to answer evolving questions. A Student Navigator module enables on-the-fly student analytics, and dynamic data environments ensure that each employee has truly relevant data across multiple roles at his fingertips. Complete data dictionaries with full definitions, samples and notes are available within every report and integrated "just-in-time" training provides on-demand videos to demonstrate OpenBook's functionality for users of all skill levels.

The system is structured by "user views," so that data is filtered according to user needs, noted Nancy Lee Chavez, associate vice chancellor, decision support at City Colleges of Chicago. "If I'm a faculty member, for example, I'm seeing all the data on the students I am teaching, plus the students I have taught in the past — and I'm not just restricted to the 'past' records, as I can also have the ability to look forward and see the students I have taught and how they are doing in their current coursework."

City Colleges of Chicago is now working to fully integrate OpenBook into day-to-day operations across district, college, program, department and faculty areas, with the goals of increasing student retention, accelerating student success in declared programs, facilitating progress on developmental education pathways and helping adult education/GED/ESL students transition to college-level coursework. But perhaps more than anything else, the OpenBook project has brought a renewed vision of what the colleges can be doing with data, now and going forward. **CT**

***Meg Lloyd** is a freelance writer based in Northern California.*

Grassroots IT Leadership

A community-led group is helping NYU's highly distributed IT organizations collaborate better, build relationships, share information and impact IT strategy across the university.

CAMPUS TECHNOLOGY innovators AWARDS 2014

Category: Leadership, Governance and Policy

Institution: NYU Silver School of Social Work

Project: TorchTech

Project lead: Evan Silberman, IT director

Tech vendors/partners:

Google, Livestream, Twitter, WordPress

FOR A LARGE institution like **New York University**, a distributed IT structure has its advantages. For example, according to Marilyn McMillan, vice president of information technology and CIO, one key benefit of having separate IT organizations across NYU's 17 schools and institutes is that it enables IT staff to respond quickly to emerging needs, through close communication with constituents.

But the tradeoff, she noted, is often weaker communication and coordination on IT initiatives with interdependencies. "Old methods of communicating amongst NYU's IT professionals are too much work and generally provide too little useful information too late," she admitted.

An antidote to that problem has grown up in the form of TorchTech, a new way for IT employees from all over the university to come together and share ideas. The brainchild of Evan Silberman, IT director for NYU's Silver School of Social Work, TorchTech is a community-led group focused on fostering collaboration, building relationships, sharing information and impacting IT strategy university-wide. Open to professionals at NYU who have an interest in technology, it includes participants from across NYU's various global IT organizations and academic units.

"As NYU becomes a global network university, we have administrators, faculty and staff doing work between Abu Dhabi, New York, Shanghai and Florence. There can be a sense of disconnectedness and technology has a tendency to perpetuate that," Silberman explained. "We are trying to humanize the experience by giving people time and space to physically connect and interact."

For instance, at a recent networking breakfast on user experience design, one person was participating via Google Hangout from Abu Dhabi. "No one in New York had met this person before and now he was connecting face-to-face," Silberman said. "And that is really valuable for relationship-building, which is the backbone of our collaborative work environment."

Project lead Evan Silberman

Photo courtesy of New York University

The group's genesis did not involve a great "aha moment," Silberman said. "We just recognized that there are a lot of smart people and a ton of talent at NYU, and there wasn't something bringing people together across the IT organization," he said. "So we brought together IT leaders from across schools and administrative units to talk about what a community like this would look like and what would it do." The effort has resulted in the first ever university-wide IT project directory, IT communities of practice and the start of an IT-specific membership directory.

Since its inception in the fall of 2012, TorchTech has organized seven events with participation from 45 NYU organizations and 550 people. TorchTech's flagship events are called "UnMeetings" — based on the concept of **Stanford University**'s (CA) "unconferences," facilitated discussions in which

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the attendees create the agenda and lead the conversation. "Our IT leaders spoke at the first event to set the context and then we opened it up to attendees to create the agenda," Silberman explained. "In 10 minutes we had 26 topics. People broke up into conversation groups. Some topics they can carry forward and spin into new communities of practice."

The events also have more tangible value, pointed out McMillan. For example, at this year's UnMeeting, one group's chosen topic of conversation was identity management (IdM). Folks from university IT, who are upgrading university-wide IdM services, shared the thinking behind their timetable. This gave IT folks from the units at the table the chance to decide whether to roll out their own local IdM solutions or to coordinate their rollout with the central upgrade. "It saved work all around, refined the central timetable and gave everyone ways to stay in touch as the projects proceed," she said.

In addition to the UnMeetings, last year TorchTech put on a cloud computing event that brought to campus leaders from Google, Amazon, VMware and Gartner for a discussion on the future of cloud computing. NYU IT staff said they found it useful to connect what they do on a day-to-day basis with what they have to plan for in the future, Silberman said, as well as connect with others working in the same field at NYU.

Another TorchTech program involves IT groups arranging tours of each other's workspaces. "NYU has a huge footprint in New York City," Silberman explained. "Each school has its own set of offices and its own approach to IT and that is represented in its physical space. It is interesting to see where a person you talk to all the time works. You might walk away with a gem. Or you might be able to teach something."

TorchTech also developed a meeting called the Share Fair, which is an opportunity to display campus IT projects in poster sessions. The first fair had 30 presenters and 160 attendees. "It creates a space for people to talk about the work they are doing and learn from each other," Silberman said. "I hope that becomes a regular thing."

TorchTech members use Google Groups and Google Hangouts to communicate, and Twitter and Google+ for social media. A WordPress-based Web site provides one-stop information on events, news and ways to get involved with the group. Recorded events are broadcast via Livestream.com in partnership with NYU TV.

A growing relationship between TorchTech and the NYU CIO Council takes TorchTech's grassroots influence to the next level. "The council was receptive to the idea that we join forces and it is a natural fit, because TorchTech provides a way to filter information up and sometimes filter information down," said Silberman. "It allows people at different levels of the organization to share their voice and to be heard."

"One of the Council's goals is to make the best possible use of NYU's limited IT resources, wherever they may be located," noted McMillan. "Linking TorchTech with the Council helps ensure that TorchTech operates and evolves as a strategic asset of the institution. Retaining, developing and leveraging the efforts of all of NYU's IT professionals is a critical success factor for the units and for the University."

The response from across campus has been overwhelmingly positive, according to Silberman. "Who doesn't want to meet the people they work with?" he quipped, adding that people are coming together around principles of collaboration, relationship building and sharing. "This just elevates all of us. When we know what others are doing and how exceptional their work is, it raises the bar for the community, and I think that is valuable for each individual and for the organizations involved." CT

Video courtesy of New York University

VIDEO: TorchTech members talk about the importance of having a forum to share ideas with peers.

For captioning, visit CT on YouTube.

David Raths *is a freelance writer based in Philadelphia.*

meg lloyd

Open Source Planning and Advising Tool Supports Student Success

To keep students' academic plans on track, the University of Washington developed open source software that integrates previously siloed administrative functions such as degree audit and articulation, student lifecycle and recruitment, registration and advising.

CAMPUS TECHNOLOGY innovators AWARDS 2014

Category: Student Systems and Services

Institution: University of Washington

Project: MyPlan Integrated Planning and Advising System

Project lead: Darcy Van Patten, director, student information systems

Tech vendor/partner: Kuali Foundation

TRADITIONAL student-advising tools often exist in silos, with administrative functions such as degree audit and articulation, student lifecycle and recruitment, registration and advising all operating as separate systems. Faced with students' concerns about keeping their academic plans on track — especially in these challenging economic times — the **University of Washington** set out to create an integrated planning and advising system that would break down those silos and support student success.

Led by Darcy Van Patten, director of student information systems at UW, developers began work on MyPlan in November 2011. The team realized that the key to success was developing not yet another isolated tool, but a truly integrated offering that would draw on useful information from advising, registration and other relevant student data. The MyPlan system was also designed to address the broader strategic institutional goals of increasing degree attainment and supporting articulation and transfers from community and technical colleges into the university system.

Photo courtesy of University of Washington

UW's MyPlan Team

An agile, iterative development process brought fast results, and by January 2013 the university began marketing MyPlan to students. Today, MyPlan offers short- and long-term academic planning tools and information for both current and prospective students; registration planning; degree audits; and adviser recommendations and feedback. Though use of MyPlan is optional, the tool has already been adopted by nearly 30 percent of UW undergraduates — chalking up more than 45,000 unique visitors and 12,000 academic plans created.

A Kuali Foundation partner institution, UW built MyPlan as an open source system, using the Kuali Student framework and Kuali Rice developer tools. Funding from UW's Student Technology Fee Committee, with additional monies from the Bill & Melinda Gates Foundation, is allowing ongoing refinement. The university's ultimate goal is to incorporate MyPlan into Kuali Student — starting with a limited Founder's release in fall 2014 and culminating with a full release after the software completes the rigorous process of software contribution and integration into the Kuali Student System. At that point, other institutions will be able to obtain open source licensing of the Kuali Student Academic Planning software through the Kuali Foundation. MyPlan has already been implemented at **Indiana University**, another Kuali founding partner, where it is integrated into PeopleSoft as iGPS.

Jill Yetman, MyPlan project manager at UW, noted that the support of the Student Technology Fee Committee and the widespread interest of UW students in general has helped to create a strong emphasis on user-centered development: "In 13 years working on software development projects in higher education, I don't think I've seen such a heavy emphasis on user experience. In the first year alone we did 10 rounds of usability testing with students. We didn't just complete a checklist of features — we created an enticing application. And we've seen adoption rates that show how well that idea is working."

With a long-term focus on end-to-end career and academic planning, and a commitment to user-centered design, UW has proposed work (yet to be funded) that can extend MyPlan into the area of big data with robust academic-exploration and decision-support tools. **CT**

***Meg Lloyd** is a freelance writer based in Northern California.*

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REACHING THE STAFF
Staff may be reached via e-mail, telephone, fax, or mail. A list of editors and contact information is also available online at *campustechnology.com/pages/contact-us.aspx*.

E-MAIL: To e-mail any member of the staff, please use the following form: FirstinitialLastname@1105media.com.

CORPORATE OFFICE
(weekdays, 8:30 a.m. to 5:30 p.m., PT)
P (818) 814-5200; F (818) 734-1528
9201 Oakdale Avenue, Suite 101,
Chatsworth, CA 91311
1105media.com

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Sales Contact Information

Dan LaBianca
Chief Revenue Officer
P (972) 687-6702
C (818) 674-3416
dlabianca@1105media.com

David Tucker
Director of Sales
P (515) 256-0156
dtucker@1105media.com

Jean Dellarobba
Senior Sales Account Executive
P (949) 265-1568
jdellarobba@1105media.com

Patrick Gallagher
Sales Director, Public Sector Events
Event Director, Education Events
C (617) 512-6656
pgallagher@1105media.com

Media Kits: Direct your media kit requests to Carmel McDonagh, (703) 876-5040 (phone), cmcdonagh@1105media.com

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