Opening Doors to Accessibility
It shouldn’t take a lawsuit for universities to pay attention to accessibility for all students.

RECENTLY, A Campus Technology reader challenged us to consider the accessibility issues involved in each topic we cover. And while there’s no way to cover every angle of every story, the point is well taken: Accessibility should not be an afterthought, and it needs to be part of the higher education technology conversation.

Too often, it takes drastic measures to get accessibility into the spotlight. Just last month, the National Association of the Deaf (NAD) and four deaf and hard of hearing individuals filed class action lawsuits against Harvard and MIT, charging that “the schools discriminate by failing to caption the vast array of online content they make available to the general public, including massive open online courses.” While MOOCs purport to bring higher education to the masses, the lack of captions for some video content essentially closes the door to people with disabilities.

The lawsuits are not seeking monetary damages; instead, their objective is to change the universities’ conduct. As NAD CEO Howard Rosenblum explained in a YouTube video, “Both universities have many of these videos, so we are suing them first and expect to ensure full online video access at all other universities and colleges across the country. This lawsuit is part of our battle for full access to online media content. We want equal access for all.”

Of course, ubiquitous captioning is easier said than done. Quality transcription is not yet scalable: Computer-generated captions often are unintelligible, while manual captioning processes can be time-consuming and cost-prohibitive. With the sheer quantity of video content being generated by MOOCs, it’s no wonder that some captions fall through the cracks. Stymied by the technological challenge, many universities seem to be waiting for federal guidelines to force them into action.

This month we have put together a special section focused on accessibility, with advice and best practices ranging from procurement policies to course design. Worthy of particular kudos, I think, is Temple University’s work to build comprehensive IT accessibility across the whole institution (see page 28). After a self-assessment identified accessibility gaps in Temple’s learning spaces, labs, instructional materials and Web sites, the institution embarked on a methodical process of forming work groups, creating standards, training staff and monitoring compliance. And the effort has paid off: The entire university is working together to make sure learning is accessible to all.

One of Temple’s key lessons learned: Accessibility is an ongoing process. “This is not going to happen overnight or even in a year,” CIO Tim O’Rourke told CT, “but we needed to put a plan together and attack things as we can, and we have done that.”

RELATED READING
5 Accessible Design Tips for Blended Courses
Revamping a course to be accessible to students with physical or learning disabilities can help make it more accessible to everybody else too.

Accessibility-as-a-Service in Georgia
Georgia Tech’s AMAC Accessibility Solutions and Research Center is a full-service resource that supplies repositories of accessible digital textbook files, Braille, assistive software and remote captioning for students with disabilities, as well as training and consulting services.

Using the Cloud to Improve Access for the Disabled
The Global Public Inclusive Infrastructure initiative aims to give students with disabilities unfettered access to the Internet by using the cloud to automatically customize any device for their needs.

Access Denied
Making university Web sites and course content accessible may be the law, but many institutions have a long way to go toward compliance. CT looks at three key elements of a more proactive approach to accessibility on campus.
ONLINE TUTORING. Penn State World Campus is rolling out Tutor.com’s personalized learning services for the institution’s 12,000 students and faculty worldwide. Students will gain 24/7 access to more than 3,000 tutors in 40-plus subjects, from math and economics to science and nursing. "Each live, online session focuses on the student’s needs and questions and is archived, including images, lesson transcripts and tutor feedback," according to a press release. Read the full story online.

WIN AN INTERACTIVE PROJECTOR. The Epson BrightLink Projector Teacher Contest calls on classroom instructors to "share three creative ways to engage students in the classroom using an interactive projector." Entries will be judged on creativity, practicality and potential impact of the ideas; three winners will receive an Epson BrightLink 595Wi ultra-short-throw interactive projector. Enter by April 15 at epson.com/brightlinkcontest. Read the full story online.

AUTOMATED PROVISIONING. Looking for a more efficient way to provision user accounts for its 3,200-plus students, faculty and staff, Marywood University (PA) has rolled out the User Management Resource Administrator (UMRA) from identity and access management provider Tools4ever. UMRA has automated the university’s account management process, so manual action is no longer required from IT staff. Once a student’s information is added into Marywood’s Ellucian student information system, all appropriate accounts are automatically provisioned, and a Gmail account is created along with a pass-word for the university portal. Read the full story online.

OPEN SOURCE INTEGRATION. Sinclair Community College (OH) is working with open source services provider Unicon to develop an integration between the Apereo Notification Portlet and Student Success Plan (SSP) for the institution’s uPortal environment. The integration, or data source, will "make it possible for advisors, faculty and students to view action items from within uPortal in regards to their activity in SSP," according to a press release. Sinclair will contribute the code back to the Apereo Foundation open source community. Read the full story online.

3D INNOVATION. The Midwest has a brand-new resource for 3D printing and prototyping: Ohio’s Xavier University is the first in the region to open up a MakerBot Innovation Center on campus. With a mission to promote entrepreneurialism, education and innovation, the facility features 31 MakerBot Replicator 3D printers, a large supply of MakerBot PLA filament, several MakerBot Digitizer desktop 3D scanners and MakerBot MakerCare protection plans. Dedicated spaces for startups and networking are designed to foster creativity and collaboration in the 3D printing space. Read the full story online.
Website developers and managers in higher education are discovering the benefits of website management platforms that eliminate the need for developers to deal with system administration and complex infrastructure and instead allow developers to focus on what they do best: create great websites.

For many universities throughout the country, the challenge of hosting hundreds or even thousands of websites can be overwhelming. At Arizona State University (ASU), the University Technology Office (UT) is solving their hosting headaches through a collaborative effort with Pantheon, a website management platform, and Kalamuna, a digital agency. Through Pantheon, ASU is now delivering an innovative new site-building tool called ASU Webspark, built by Kalamuna and based on Drupal, for development, deployment, and maintenance of hundreds of ASU websites. With Pantheon, web developers are no longer faced with the frustration of handling backend infrastructure but instead can focus on creating great websites without worrying about hosting, launching, or administering the site. Here’s how this collaborative effort is transforming web technology across ASU’s campuses.

Pantheon is a website management platform for Drupal- and WordPress-based websites.

Kalamuna, a digital agency specializing in web design and development.

Arizona State University (ASU), a public research university and the largest public university by enrollment in the United States.

LEARN MORE about how Pantheon has revolutionized website development for higher-education Drupal and WordPress sites. Download your Industry Perspective Report today!
to attract local entrepreneurs, innovators and researchers, giving students an opportunity to gain hands-on experience collaborating on real-world projects. Read the full story online.

NEW EDUCAUSE PREZ. Educause has named John O’Brien as its next president and CEO, beginning June 1. O’Brien succeeds Diana Oblinger, who is retiring in May after leading the higher education technology association for 10 years (first as a vice president, then as president). O’Brien is currently senior vice chancellor for academic and student affairs for Minnesota State Colleges and Universities. Read the full story online.

O’Brien

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PRODUCT ROUNDPUP

Version 14 of Kurzweil Education’s Kurzweil 1000 text-to-speech software adds the option to extract images into PDF files; optical character recognition upgrades; and more. Read the full story online.

Designed for large auditoriums, the dual-lamp Christie D12HD-H and Christie D12WU-H1 DLP projectors weigh just 52.5 pounds — and are about half the size of other devices in their class. Read the full story online.

Logitech’s Conference-Cam Connect is a portable all-in-one video-conferencing device that costs less than some office chairs. Read the full story online.

Upcoming Events

April 8–9
Campus Technology Forum
Long Beach, CA

April 11–18
The SANS Institute
SANS 2015
Orlando, FL

April 19–22
The Association for College & University Technology Advancement
2015 ACUTA Annual Conference & Exhibition
Atlanta

April 22–24
Online Learning Consortium
8th Annual Emerging Technologies for Online Learning International Symposium
Dallas

April 26–29
United States Distance Learning Association
USDLA 2015 National Conference
St. Louis

May 3–8
The Data Warehousing Institute
TDWI Chicago 2015
Chicago
Innovative MOOCs Take Learning in New Directions

Recent efforts are tweaking the formula for massive open online courses and expanding their reach to new audiences.

**THE MOOC** philosophy has always come across as “Go big or go home.” But some of the most interesting experiments occurring right now would better be described as “Divide and conquer.” These undertakings — one an experiment at Harvard (MA) and the other a longer-term commitment at the University of Michigan — are allowing schools to try out new practices from a narrower perspective, while still impacting the broader workings of the institution.

**International Ties**
The population of non-U.S. students at the University of Michigan has increased every year over the last decade. The 2,619 students from China, Hong Kong, and Macau make up 44 percent of the institution’s international enrollment in the 2014-2015 academic year. Yet that’s a pit- tance compared to the nearly 23,000 Chinese students who have registered for “Model of Thinking,” one of U Michigan’s first massive open online courses to be produced in Mandarin for the China market through its Coursera ties.

Coursera’s site features Chinese-language courses from four schools in China, including Peking University and Shanghai Jiao Tong U. But over the last couple of years the company has announced deals with three Chinese firms, NetEase, Hujiang, and Guokr, to launch Chinese-language versions of its English-language courses.

As one of the first four institutions to sign up with Coursera in 2012, it makes sense that U Michigan would participate in the China projects, alongside other Coursera members. But beyond that, said James DeVaney, assistant vice provost of Digital Education & Innovation at the university, this project could also be considered an extension of the school’s own ties to the country. The institution has been undertaking research, education initiatives and partnerships with Chinese universities “since James Angell was president,” he noted (Angell’s term at the university lasted from 1871 to 1909.)

Harvard is experimenting with “small private online courses” exclusively for its alumni community.
WHEN FACULTY SPEND LESS TIME LEARNING HOW TO USE THEIR LMS, THEY SPEND MORE TIME JUST USING IT.

Fun to use. That’s how faculty at Rider University describe the Canvas Learning Management System. And based on faculty adoption, which has doubled since Rider switched from its previous LMS to Canvas, fun must be the right word. Even with twice the number of faculty using Canvas, the university now sees fewer LMS support tickets. So what transforms a “campus IT thing” from frustrating to fun? According to instructional technologist Shaun Holland, Canvas is so easy to learn and use, teachers can build courses and integrate tools that empower student learning like never before. Sound like fun?

To learn more about how faculty at Rider University have turned “fun” into a synonym for modern, easy-to-use LMS, visit www.CanvasLMS.com/learning or call 800.203.6755.
Reaching Out to Alumni

At Harvard, MOOCs are targeting a population closer to home: the university’s alumni. HAA, the Harvard Alumni Association, certainly isn’t new to engaging online with its alumni. Its Web site includes tools for connecting with alumni and finding out about upcoming events. There are YouTube and iTunes channels for tapping into Harvard content. And several years ago the school offered “Justice,” a series of online videos and forerunner to today’s MOOCs. Developed for alumni and eventually shared with the rest of the world, “Justice” featured Michael Sandel, a well-known professor teaching covering neuroscience, poetry, history, computer science and other topics. Each was a hybrid featuring materials created for HarvardX MOOCs and content such as faculty conversations created exclusively for the alumni program. As Mackey Kistler described it, the final product reflected “more dinner party than dissertation.”

The outcomes of the SPOC test provided insights that are influencing how the association engages with Harvard graduates going forward:

Be prepared for a big response. Alumni from the ages of 22 to 96 seized onto the SPOC with wild enthusiasm — so much so that the Harvard Alumni Association’s help desk answered 4,300-plus support calls, a tremendous increase over the usual number.

Surveys had shown HAA that alumni were particularly drawn to events featuring faculty members, current scholarship and research, and the chance to learn. After HarvardX started producing courses for edX, the association began to consider how it could use the MOOC platform to fulfill alumni desires, especially for those who no longer had “physical proximity” to campus.

“We saw this as an opportunity to fill in those engagements digitally and get the content out there [in a format] that isn’t dependent on time or location,” observed Erin Mackey Kistler, senior associate director of college alumni engagement.

Over the course of a little less than four months, HAA’s “small private online course” (SPOC) experiment presented seven programs — a new one every two weeks — covering neuroscience, poetry, history, computer science and other topics. Each was a hybrid featuring materials created for HarvardX MOOCs and content such as faculty conversations created exclusively for the alumni program. As Mackey Kistler described it, the final product reflected “more dinner party than dissertation.”

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build, she explained.

“We went into this with a bias toward action, to get in there and give it a try,” she recalled. “That resulted in a lot of people here working very hard. The response in terms of staff stepping up to the plate was tremendous.”

Promote the experimental nature. Lovejoy said HAA warned SPOC participants that they were signing on for “an experiment.” As such they could expect to be asked for input and feedback so that the association could learn what was and wasn’t working and adjust the program on the fly. For example, additional content was quickly developed when people clamored for it in a pre-event survey. “Those kinds of iterative improvements were something that we were happy to be able to do and also something we learned a lot from,” he remarked.

E-mail still works. HAA saw the SPOC as a “huge opportunity” to test and understand more about e-mail communication. Throughout the course registrants received more than 35 e-mails, typically two or three — and even as many as four — in a week. Because the team had data about the alumni who had signed on for the program, that was used for “segmenting and targeting messages by age, stated interests in the different topics of the course, by a number of things,” said Mackey Kistler. That’s been hugely informative, she added. “When people opt into a program, they want to know about it and they want to be informed.” In a survey at the end of the program “almost everyone said they received just the right amount of e-mail.”

Those e-mails helped drive up participation in the modules as they were being released. According to Lovejoy, the revamped communication strategy countered “a little bit of the MOOC dip,” an outcome of interest to HarvardX in general as it ponders how to communicate with participants in its MOOCs.

Getting clubs and SIGs involved perpetuates interest. Harvard’s alumni clubs and special interest groups, all volunteer-run, provided ways for people interested in the SPOCs to connect locally in person. For example, even after a program had ended, HAA left the course open for an extended period — and some of the clubs took advantage. The Cape Cod club, for instance, convened an in-person discussion group in the summer after the course had ended, “because that’s when they had critical mass and that’s when it was best suited for them to get together to talk about it,” recalled Mackey Kistler.

Although HAA hasn’t committed to a next step regarding MOOC use with alumni, Lovejoy suggested that one possible model may be to find “more consumable modules of rich content, because time and long-term commitment is a real challenge.” Instead of 12 lectures over the course of a term, for instance, “maybe it’s three lectures clustered into a coherent module,” he said.

The question of what’s next always seems to chase the topic of MOOCs. What’s new and of note “seems to be something where we’re all interested,” said Mackey Kistler. “We all want to learn how to use the tools available to us to the best advantage. I feel like we were an early entry.” But in time, she added, “I certainly don’t think we’ll be standing here alone.”

Worth Watching

The University of Wisconsin-Madison is in the process of testing short-form four-week MOOCs as part of its “phase two” offerings. The goal for these courses, which focus on environment and community, is to see whether the school can grow the overall 3.2 percent completion rate it saw in phase one. The courses will be hosted on Coursera.

Harvey Mudd College (CA) will soon be releasing “Middle-Years Computer Science” (MyCS), a MOOC intended to show middle school teachers how to offer computer science to their students. The work is funded by an NSF grant and has been tested live in California and Hawaii school districts; a planned February 2015 launch has been shoved to later this year.
An ‘Easy Button’ for Video Production

An automated video production studio is enhancing teaching and learning at Penn State University, allowing students and faculty to record video content with no technical expertise required.

At Penn State University, students and faculty can record high-quality video with the push of a single button. Designed to simplify video production for anyone— with no technical knowledge required — the One Button Studio automates the control of lights, microphone and camera settings, so that all users have to do is insert a thumb drive to capture their recording and push a button to begin recording.

“Rather than worry about the different types of technology, we really wanted to focus on the user experience so they can focus on their content,” said Ben Brautigam, manager of advanced learning projects at Penn State.

Brautigam, who spoke about One Button Studio at last summer’s Campus Technology 2014 conference in Boston, described the problem with traditional studio equipment used on most campuses: “There is an HD camera, but you have to know how to use that. There are lots of buttons and lots of room for error. With microphones, you need to know how to adjust audio buttons for the space you are using. And then they have to get that file off that camera into their computer in a format that makes sense,” he said. “Notice that I didn’t mention content or learning objectives because the focus was on the technology. We need to shift that because if the focus becomes the technology itself, I think we failed. We need to build solutions that enhance teaching and learning, that enrich content, not distract from it.”

For students, the primary uses of the One Button Studio are practicing classroom presentations, e-portfolio introductions and studio components of larger video assignments. Faculty members use it to create introductions to online courses or to record lectures when they are “flipping” their classes.

Brautigam noted that when people see the One Button Studio for the first time, some say it just looks like an empty room. “That is exactly what we were hoping for,” he said. His team wanted to devise a solution so intuitive that when you walk in, you already know how to use it, even if it is your first time. “One of the proudest moments for me was having faculty members say that they had never
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Everything then turns off and resets for the next user. “This is a self-service learning space,” Brautigam said. There is no guidance, no tech support, no manuals.”

Melissa Marshall, a senior lecturer in Penn State’s Department of Communication Arts & Sciences, uses the One Button Studio in her public speaking courses for engineers. Before each speech, students do a video draft of their talk for self-reflection. “Many have anxiety about public speaking and this is a low-stakes way to practice their presentations,” she said. In fact, once she encouraged them to try out the studio, her students suggested to her in course surveys that it be a requirement before each speech. Before One Button Studio, she wouldn’t have considered asking students to make videos, but the convenience factor now makes the task easy.

Faculty members also are taking advantage of the ease of use, Marshall said. “Before if you wanted to include video in a course before One Button Studio and never even thought about it, but now they are,” he said.

That simplicity is evident in the studio’s design: “Everything is off the ground,” Brautigam said. “There are no cables. There is nothing to get in the way.” Lights, camera, microphone and projector are all mounted from the wall or ceiling. “There is no reason to touch any of it,” he explained. “The only user interfaces are a USB hub and a button.”

How It Works
When a student or faculty member walks into the One Button Studio, he inserts a USB flash drive into a port. That automatically turns lights on, starts the camera and gives the user a live preview. Then when he is ready, he pushes a silver button. When he’s done recording, he just pushes the button again, and the system compiles, compresses and loads the video in MP4 format onto the flash drive.
Students use the One Button Studio to practice classroom presentations, record e-portfolio introductions and create studio components of larger video assignments.

In two years at Penn State's main University Park campus, there have been 8,874 users in just two studios, according to Brautigam. “That equates to more than 10 percent of our main-campus student body, per year, for just two rooms,” he said — or about six users per room each day, 365 days a year for two years. In 2014, the university added 10 more One Button Studio spaces, three in University Park and the rest spread across seven other campuses.

Brautigam and Saul said the off-the-shelf hardware to set up a One Button Studio costs around $7,000, depending on things like camera and lighting choices. They had a local corporate furniture company build a custom kiosk for the controls. They continue to work on enhancements, such as a way to automate the impression of a green screen background using LED technology. They also are experimenting with Lightboard, an illuminated glass chalkboard for taping online lectures developed at Northwestern University (IL). But because their goal is to keep the studio simple, they said, they are trying to avoid “feature creep.”

Sharing the Studio

Penn State has made the One Button Studio software available for free via the Mac App Store. “The beauty of distributing it through the App Store is that as we make improvements we can just push them out to everybody,” said Brautigam. Institutions such as George Mason University (VA), University of Nebraska-Lincoln, Abilene Christian University (TX) and Juniata College (PA) have used the app to set up their own versions of the studio.

When representatives from the University of Nebraska-Lincoln saw Penn State’s One Button Studio presentation at the Committee on Institutional Cooperation TechForum, they agreed that it was something they needed to bring to campus. “Once we saw it working, we found some funding through the Student Tech Fee and set up one in our Love Library before the current semester began,” said Brad Severa, student learning technology support associate, in an e-mail interview. “The setup was not very difficult, and Penn State staff was very helpful answering any questions we had while testing the system.”

The One Button Studio “addresses problems we didn’t know we had,” Severa said. Mostly it is an easy way for anyone on campus to create a quick, easy video or practice a presentation, he explained. Faculty assign students to use it for handing in presentations, and students use it to practice or create assignments for class. There are departments that are using it to create presentations for informational videos. “It is still early,” he said, “so we
expect a variety of uses we have not anticipated."

Kyle Dickson, director of the AT&T Learning Studio and associate professor of English at Abilene Christian University, described the response to One Button Studio on his campus: “Faculty members have been most interested in a place to capture quick media introductions to course material, ready to upload almost as soon as they’ve finished speaking. Whether they’re preparing content for a flipped class or for online distribution, the time invested in media production is no longer an intimidating hurdle.”

Dickson added that by the end of the first full year on campus, use of the One Button Studio had increased by 24 percent, leading Abilene Christian to begin looking for space for a second installation.

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David Raths is a freelance writer based in Philadelphia.
4 Lessons for Serving Adult Learners Online

At a school where the average age of students is 38, delivering online education requires a unique combination of tactics.

**THE AVERAGE STUDENT** at private, nonprofit Excelsior College has about 20 years of life experience over the typical undergraduate. Many students come with a hefty background in the military or other professions where they’ve picked up skills that deserve credit. Recently, Excelsior President John Ebersole shared four lessons his online-only college has learned for helping adult learners succeed in earning their degrees.

**Lesson #1:** Recognize Experience in All Its Forms
Excelsior was founded by the New York State Board of Regents in 1971, even then primarily serving the adult student. For several decades, Regents College, as it was known, never actually offered any instruction of its own; it performed assessments of what was already achieved in college credits and helped students complete their degree programs by earning the remainder from other institutions inside and outside the state. Then in 2003, the school renamed and reinvented itself as a private, nonprofit institution delivering online instruction. Currently, 70 percent of Excelsior’s revenue comes from online learning; the other 30 percent is still derived from the assessment business.

As Ebersole explained, Excelsior follows the “HMO model of medicine.” “What we are trying to do is minimize the costs to the student to the greatest extent possible,” he said. When a candidate applies for admission, Excelsior tells him or her what can be accepted as prior academic work, including credit earned through military or other non-institutional sources. “And after we’ve found out how that maps to a New York state-approved degree, we’ll show you where the holes are and help you find ways to fill the holes,” whether through courses at Excelsior or another institution.

“We often find that people are surprised at how short the
task can be, because of so many different ways of learning that we’re prepared to recognize and other institutions are not,” he noted.

Previously, the college charged an “enrollment fee” to do that credit audit, but last year, the fee was eliminated. Now the service is offered free. “We thought that was hurting people, that it was creating a barrier,” Ebersole said. “Our job is to remove barriers.”

Lesson #2: Scaling Fast Is Tough
Of Excelsior’s 38,000 students, 18,000 are studying in one of the college’s nursing programs, which include associate, bachelor’s and master’s degrees. That’s good and bad, according to Ebersole. On the good side, it shows that there are a lot of nurses with clinical experience who want to advance their skills, and the college has developed an approach that appeals to them. On the bad side, “Frankly, we can’t accommodate all of the demand we have,” he said. “It’s time to get more capacity, because we’re losing very motivated students who want to study this way.”

So the school is modifying its approach in several ways. First, it’s increasing the size of classes. Although programs at the college typically have 25 students per section, nursing long maintained it at 20. “The fear was that 25 at one time might be too much,” Ebersole reported. Now nursing sections too are stretching to that size.

Second, the college is hiring more instructors and issuing more sections. But growing to fit demand is taking time. After all, Ebersole pointed out, 18,000 students divided by 25 per class still totals 720 sections.

Third, Excelsior is considering how to use simulation assessments as a replacement for its final clinical competency exam, which has been a bottleneck. “[The clinical competency exam] requires us going into real hospitals and doing real procedures on real patients,” Ebersole explained. “You can’t do better than that, but it’s not scalable. We can only do about 2,000 of those a year. We have to accommodate the hospital. It’s not easy to get a hospital that will allow us to do this. That’s probably the biggest controlling factor. And getting Ph.D.-qualified nurse educators trained in our process is also a limiting factor.”

According to Ebersole, the school has invested $100,000 in redesigning each of its nursing courses to make them “highly, highly interactive,” building in simulations with videos and case studies. As those approaches prove themselves, Excelsior expects to be able to apply lessons learned to the clinical competency exam as well.

Lesson #3: Course Interactivity Is the Goal
Ebersole has seen the highs and lows of delivering compelling online courses. Among other postings, he was at John F. Kennedy University (now part of the National University System) in San Francisco when it became the first institution in the country to offer an accredited master’s program online. At the University of California, Berkeley, he was involved in converting “paper and pencil courses” to an online program with money from the Alfred P. Sloan Foundation. When the completion rate of that program dropped from 47 percent to even lower, he learned a valuable lesson: “It’s not about the content as much as it is about the instructional design. We had some terrific content, but it was dry as toast. People were bailing with great regularity.”

“Frankly, we can’t accommodate all of the demand we have. It’s time to get more capacity, because we’re losing very motivated students who want to study this way.”
ONLINE LEARNING

Since those days, he noted, “the whole profession of instructional design has really grown up. It has become the essential element in using technology well. Instruction and learning don’t have to be a flat, boring, laborious affair. The degree to which we can make it interesting, if not entertaining, the more we’re going to hold onto those students. Technology allows us to do that.”

For one, technology can deliver interactivity. “We learned long ago that there’s a direct correlation between interactivity and student retention,” Ebersole said.

For another, Excelsior isn’t relying overly much on video. “Showing streaming video isn’t our idea of online learning,” Ebersole stated. The college’s preference is to provide audio with visual images and print. “It’s not just a case of an instructor standing in front of the room lecturing and us videotaping and streaming it over the Internet. We think that’s pretty primitive actually.”

Excelsior worked with a number of universities, including Boston University (MA), Harvard (MA) and the University of Texas in launching Access to Learning, a site demonstrating how online learning can work. Although none of the specific examples are from Excelsior’s own collection of simulations, the examples show a mix of photos, animation, on-screen text, video and interactive exercises.

Using a mixed bag of techniques lets the school do “so much more,” Ebersole explained. “What we want to do is stress the importance of interacting with the material. We want you to do online activities and exercises and prove to yourself that you’re getting the material before you move on. We’re going to assign problems to you and the expectation is that you’re going to solve those problems, and then we’re going to critique what you got and didn’t get.”

Lesson #4: Remind Students to Enroll

In spite of having a 96 percent degree completion rate, the college still struggles to get students to move from one course to the next. “It’s not that they drop out,” said Ebersole. “It’s that they don’t enroll in it.” Partly, he noted, with older students, there’s always the “time issue” or the “money issue.”

The school has found that adult students prefer to study a single course at a time. But since students need to take two courses in a semester to qualify for any kind of federal financial aid, Excelsior delivers two courses in sequence.

Faced with some “disappointing” course registration numbers, Excelsior tried a small change in its practices. As Ebersole explained, “Two to three weeks before the start of the term, if an existing student hasn’t enrolled, they’re going to get an e-mail reminding them and recommending what the next course might be. If they’re a week out and they haven’t enrolled, we call them. That seems to be having a positive impact.”

In fact, he added, by implementing those measures, “we’ve just blown the doors off of our course registrations for the second term.”

Ultimately, every aspect of Excelsior’s operations is intended “to make the educational experience such a positive one that you’re motivated to stay with it. The biggest barrier to adult-serving programs is lack of self-confidence on the part of students,” said Ebersole. “So if we can get them to be successful in their first couple of courses, the likelihood of them staying with us just goes up dramatically.”

Dian Schaffhauser is a senior contributing editor for Campus Technology.
Campus Spaces Inspired by Tech-Industry Culture

When the University of San Francisco reimagined the function of academic advising on campus, it borrowed from its high-tech neighbors to rethink adviser workspaces.

CHALKBOARD-PAINTED walls, Lego murals, sleeping pods, ping pong tables — companies like Google and Facebook have rewritten the rules not just for how business and social interactions take place, but also for how and where people work. So when the University of San Francisco embarked on a remodel of its academic advising offices, it took inspiration from its Bay Area tech-industry neighbors.

The renovation was partially a matter of necessity. As part of an effort to reimagine the function of academic advising for its 10,000 students, USF decided to move its advisers out of individual colleges and into the University Center, the hub of student life at the 55-acre campus. But facilities planners knew that finding space for 15 to 20 advisers among the food services, student activities groups and study spaces would be tough.

The challenges were many, recounted USF project planner JJ Thorp. "We are landlocked. We’re in the middle of the city. We can’t just build new buildings. So we have to take the area that we have and be really intentional and efficient with it. Where we can use a space with two different functions, we try to accommodate that. We also know that we needed more student hangout space. We need more student public space. This proposed project was going to take some if not all of that away. And we’re not Uber. We don’t have millions of dollars to spend on a remodel."

Rethink the Office Space

USF advisers needed private offices with doors that closed. At the same time, those spaces needed to take up as little square footage as possible to fit into the new area. The university worked with One Workplace, a Santa Clara, CA, space-planning and office-design company, which in turn brought in DIRTT, a manufacturer of custom, prefab interiors. All three entities held conversations to discuss the criteria and "generate ideas about what the workplace should look like for those folks," recalled Thorp.

Efficiency was the focus. They figured out that eliminating paper documents and file cabinets would free up floor space. If they could find a place for people to put their coats, that
would free up additional floor space. If computer gear — primarily a monitor, keyboard and mouse — could be tucked away when it wasn’t needed, that would create more usable space. Little by little, said Thorp, the design efforts “eliminated all the pieces of furniture except the chairs” and squeezed adviser office space down from about 120 square feet to about 75 square feet — about a third smaller.

The final result — office “pods” — “feel quite spacious, because there’s not a whole bunch of stuff in the way,” Thorp said. Machine-fabricated by DIRTT, the pods comprise two walls of glass and two “solid” walls, a design that Thorp calls a “Murphy office.” The solid walls are actually 12 to 16 inches deep, and contain the infrastructure needed to power the technology in use by the adviser as well as other features. For example, one wall in each pod has a panel that opens up to reveal a monitor and work surface; when they’re not needed, they can be folded back up into the wall, just like a Murphy bed. File drawers are built into that wall too, along with a small coat closet. The tidy setup “compensates for about 10 square feet of office space,” Thorp estimated.

Keep Your People Happy
Of course, the job of moving people from their homes all over campus to the new “offices” wasn’t necessarily going to be easy. To deal with the advisers’ concerns, Thorp enlisted a champion from the area to act as a liaison on the project and made a point to stay in touch with those affected by the move.

“I kept catching [advisers] sneaking into the construction site to check it out,” he said. “I’ve been around here a long time, and I know a lot of those folks. So after they started sneaking, I started bringing them in, and showing them and talking with them to find out what their concerns were.”

Privacy was a big issue. Would the pods’ glass walls and sliding glass...
doors allow for the kinds of private conversations advisers hold with students? To prove that the DIRTT walls would be soundproof, Thorp brought a group of advisers to the site and situated them in one of the pods. Then he went next door and turned up music on his phone as loudly as he could. He returned to the advisers and asked whether they could hear the music. While they could hear something, “they couldn’t identify the artist.” Showing them exactly what they’d be getting, he said, “alayed their fears.”

Even then, though, not everybody was fully sold: “Some said it was too small. Some said it was fantastic,” said Thorp. So he kept encouraging the advisers to keep an open mind. He was convinced that the new design provided an intimate space, with a desk chair for the adviser and a “soft chair” for the student. “You don’t need a big, giant space,” he said. “You don’t need a desk barrier between you and somebody you’re working with in that fashion. I think it really created a more intimate setting for them to do their coaching.”

Now, he declared, “They’re quite proud of it, because they have people coming to check it out from around the university. People tell them how cool their space is. I think they feel pretty proud of it.”

Computer Labs Are Old-School
The adviser offices took the place of an outdated computer lab, a 1980s throwback “where students were elbow-to-elbow in long, straight tables,” said Thorp. The lab had 75 workstations “with the classic vanilla box and a screen and a place to print” and a staff member to protect the equipment.

To retain some of the workstations, One Workplace used the other side of the “Murphy” walls of the advisers’ offices for mounted computer screens and small keyboard shelves. Inside the walls are tucked “tiny computer boxes,” Thorp described. Chairs are placed at each display, where students can sit and do their work. “It’s much more attractive, much more efficient, and we got away without really reducing much study space,” he said.

The goal isn’t to include all 75 workstations in this space; it’s to give people the opportunity to step up to a computer wherever they happen to be. “If I travel around San Francisco, there are people working with their laptops everywhere,” Thorp pointed out. “The technology’s available in different ways now.” The university has also set up smaller pods of workspace in its residence halls.

Own the Process
Coordinating among multiple parties in the design process can be a challenge. Though Thorp had prior experience working with One Workplace — which helped establish a level of trust — he also made sure that the university, as the “owner” of the project, was at “the center of the universe.”

So when One Workplace recommended bringing in DIRTT on the project, USF still called the shots. “We want to be the folks making the decisions and have the architects responding. I think that because we’re used to working in that fashion, it was a little easier to introduce somebody new into the design process,” Thorp explained. “If there was a stopping point or a point that needed a decision, it wasn’t the architect making it; it was the owner’s group. Instead of the architect running everything and DIRTT having to respond, the owner was making decisions and both DIRTT and the architect had to respond.”

A computer monitor and work surface can be folded up into the wall when they’re not needed.
Use Technology to Solve Problems

DIRTT uses technology throughout its entire manufacturing process. An application called ICE (named for the fact that it “melts” into many different software platforms, such as AutoCAD) allows the client to do a virtual “fly-through” of the new facility. Once the design is approved, ICE pulls together the computer-aided design drawings, specifications for the factory automation process that builds the interior pieces and even a price list for the customer.

The components making up the office pods have remarkably precise fits, said Thorp. “We had glass on two sides of these office pods. But there’s a segmented section, so it almost appears as a curve.” The glass, which was fabricated at the DIRTT factory, is cut on a bevel somewhere between 45 degrees and 90 degrees, and the segments fit together like building blocks. “There’s no sound leakage. It’s really amazing, the tolerances [DIRTT was] able to meet from the ICE design and fabrication system.”

That fabrication work was done in parallel with the demolition and overall construction of the old space. The DIRTT “product” was delivered toward the end of summer; the ceiling was in place; the partition system was put up; the electrical was connected; and people could move in. “We started on June 1 and we were ready to open up nine weeks later,” Thorp marveled — in time for the arrival of students.

Traditional Economics Can’t Calculate Value

Evaluating the cost of the office pods requires a sense of perspective. Lewis Buchner, the DIRTT sales representative who worked with USF on its project, said that DIRTT is typically more expensive than the alternative if the alternative is a “very simple series of rooms made out of Sheetrock with painted walls and one electrical outlet.” However, it’s competitively priced “if you have a glass front and a nice sliding glass door and two or three electrical outlets.”

Thorp concurred. If somebody were to look at the price of a single office pod, it would look “quite expensive,” he said. But that’s not the way to calculate the price of a project such as the one USF undertook. “We took a floor plate back to the studs and rebuilt the whole thing. Across 10,000 feet, where we have public spaces included, bathroom spaces, if we included the furniture we would have purchased for those locations, the cost was exactly on par.”

His advice is not to look “just at the unit cost of DIRTT, but consider the total project costs. That’s the way it becomes more in line with the traditional budgeting methods.”

Flex Is Good for University Flux

Fast Company has designated people who can continuously apply creative adaptation with the moniker “generation flux.” Universities, which continually have to rebuild themselves to adapt to changes in learning and student needs, could easily be said to fall into this category too. USF’s approach to interior design offers a level of flexibility that is key for the education environment, said DIRTT’s Buchner. “We don’t know what educational technology is going to look like in five years. We could build rooms that would be adapted for current technology and then in five years we may need to do something else. The DIRTT system is extremely flexible because you can get inside the wall cavity and change what’s going on inside there very inexpensively and very rapidly.”

The pod walls can be taken down with a “little lever tool” in “minutes,” Buchner said. In fact, he added, during sales presentations, he’ll frequently do just that — take the surfaces off to show how easy it is to do so.

“Demountable walls,” as they’re called, are more “sustainable” than conventional construction, Buchner asserted, which is a concept that also has appeal for higher ed. The traditional building is “built with metal studs and drywall and site-built glazing systems, and after five, 10, 15 years, they all get thrown into a Dumpster. The insides of building are continually being demolished and rebuilt and demolished and rebuilt. It’s a tremendous waste of materials, raw material resources and embodied energy in all of that,” he said. “The DIRTT system provides an interior that can be reconfigured and repurposed over time so it doesn’t get thrown away.”
FACILITIES

And that’s just what’s happening at USF. The university initially built some pods to be used as study areas; now those will be converted to office pods for an expanded crew of advisers. After that, there may be additional applications of the pods in the campus library for group study spaces. That too will require displacement — not of people, but of periodicals.

Although Thorp doesn’t want to oversell the benefits of redesigning campus space, he can’t help but wonder about the impact of the project at USF. The first year it was in place, he said, the freshman-to-sophomore retention rate went up. “Who’s to say whether it’s the structure or whether it’s the centralization? [It’s] probably the accumulation of all those things we’ve done at the university [that] has helped.” But the bottom line is, it worked. “That metric is great evidence that the program is successful.” CT

Dian Schaffhauser is a senior contributing editor for Campus Technology.

Student workstations line the opposite side of the adviser office pods.

Courtesy of DIRTT

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The NMC Horizon Report identifies six barriers — some solvable, some complex — facing higher education this year.

BY DAVID NAGEL

AS COLLEGE AND university administrators shift their priorities away from the mission of education, the role of faculty-as-teacher is diminishing, and the consequences for the profession — and for students — look to be getting rapidly more severe.

In 2009, just half of faculty members in higher education were part-timers. But now, owing in part to resources moving away from classroom instruction and toward student services, research and other areas, adjuncts make up 76.4 percent of the total across all institution types in the United States.

That’s an issue identified by researchers in a new report as one of the “wicked challenges” facing higher education right now.
The NMC Horizon Report from the New Media Consortium and the Educause Learning Initiative identifies significant barriers facing education, as well as major trends in education technology and technological trends that will help shape teaching and learning in the near future.

Expert panelists for this year’s report identified six barriers facing education, half of which carried over from the previous year’s report. The challenges fell into three categories: those that are solvable; those that are difficult to solve but within our capabilities to understand; and those that are so complex they’re difficult even to grasp … and nigh impossible to fix.

The 2 “Wicked” Challenges
The issue of instruction as a deteriorating priority in higher education was a significant one for this year’s Horizon Report panel. Last year’s report placed this issue in the category of “solvable” problems. The solution, however, seems more distant now than ever.

According to the report:
“Teaching is often rated lower than research in academia. In the global education marketplace, a university’s status is largely determined on the quantity and quality of its research…. There is an overarching sense in the academic world that research credentials are a more valuable asset than talent and skill as an instructor. Because of this way of thinking, efforts to implement effective pedagogies are lacking. Adjunct professors and students feel the brunt of this challenge, as teaching-only contracts are underrated and underpaid, and learners are subject to the outdated teaching styles of the university’s primary researchers. Overemphasis on research has caused a number of negative ramifications, including an excessive dependence on part-time faculty, which has diminished mobility within higher education, complicating the dilemma even further.”

Among other problems, the report authors noted, this has led to many part-time faculty living below the poverty line. It’s also led to overpriced, “mediocre” experiences for students at regional public institutions.

NMC Horizon Project Director Samantha Adams Becker, who is also lead author and researcher for the report, said that this year’s panel was “concerned that great pedagogy is not formally recognized enough at higher ed institutions — especially research universities. There is a shared view that not only does effective teaching need to be rewarded with promotions and other benefits the same way getting grants and being published are, but also that universities need to get better at encouraging and creating opportunities for outstanding teachers to share their practices with other faculty.”

There are some bright spots, however. Prioritizing educa-
For this year’s NMC Horizon Report, researchers identified six technologies that will have a profound impact on higher education within the next five years, sorted into three categories: those whose impact will be felt soon (or is being felt now); those that will come into play in the mid-term; and those that are a bit farther out on the horizon.

**The Near Term: 1 Year or Less**

Leading off the 2015 list of important technological developments in the near term is the “bring your own device” (BYOD) model, followed by the flipped classroom.

According to the report, BYOD made the list this year not because it’s new or having a major effect on IT spending, but because of the growing evidence that BYOD is leading to productivity gains and allowing for more personalized instruction and learning.

The flipped classroom, which also appeared in last year’s Horizon Report as a significant near-term technological development, is a model of teaching in which traditional methods of instruction are experienced outside of the classroom — and classroom time is spent discussing, rather than presenting, material.

About 29 percent of faculty in the United States are now using flipped instruction to some degree, and another 27 percent plan to add it to their repertoire within a year.

**The Mid-Term: 2–3 Years**

In the mid-term, researchers identified makerspaces as a significant technological development. The report defined makerspaces as “community-oriented workshops where tech enthusiasts meet regularly to share and explore electronic hardware, manufacturing tools and programming techniques and tricks.”

According to the researchers, these spaces are becoming increasingly relevant owing to a dramatic shift in “what types of skillsets have real, applicable value in a rapidly advancing world. In this landscape, creativity, design and engineering are making their way to the forefront of educational considerations, as tools such as 3D printers, robotics and 3D modeling Web-based applications become accessible to more people.”

Wearable technologies are also becoming increasingly relevant to education.

**The Long Term: 4–5 Years**

In the longer term, adaptive learning technology is seen as a means to break free of a “one-size-fits-all” approach to education and is suited well for online and hybrid learning environments, “where student activities are conducted virtually and can be monitored by software and tracking applications,” the report noted.

The Internet of Things (IoT) was the final technological development identified by the researchers as one that will have a major impact on education in the coming years.

“Use of IoT in educational environments is finally coming into focus as terms such as ‘hypersituation’ are being coined to explain the potential of IoT in learning situations,” according to the report. “Hypersituating is the ability to amplify knowledge based on the user’s location. In other words, learners that carry connected devices with them can benefit from a host of interdisciplinary information that is pushed to them from their surroundings. For instance, a learner exploring a city with a rich historical past can explore their environment through an architectural, political or biological lens, depending on how the surroundings are equipped. IoT can also create an environment where learners are informed by crowdsourced contributions and observations from the community via networked objects.”
tion and rewarding teaching — providing an environment in which faculty can learn and grow as instructors — is happening in some segments of academia. Some examples cited by the researchers:

- The Spotlight on Innovative Teaching program at Carnegie Mellon University’s (PA) Eberly Center for Teaching Excellence and Educational Innovation, where professors “host workshops to impart their techniques to other educators” over the course of a semester;
- The adoption of inquiry-based learning at institutions such as the University of Texas Department of Mathematics; and
- Implementation of flipped learning as “an application of technology that enables high-quality teaching practices.”

The second challenge the researchers identified as “wicked” — competing models of education — was another one that carried over from last year but that was considered by this year’s panel to be more daunting than previously reckoned.

According to NMC’s Becker: “This challenge is becoming less about brick-and-mortar institutions feeling threatened by free online educational resources (e.g. MOOCs) and more about the traditional approaches of these institutions no longer appealing to students. Universities are being challenged at all angles (including by the [United States] Department of Education and their move to redefine the credit hour to include amount of work represented by learning outcomes) to update their degree programs and curriculum to embrace more unconventional practices, such as competency-based degree programs, flexible learning programs and more.”

Notably absent from this year’s “wicked” list was the issue of access to higher education. Becker noted, however, that it was considered important, but just didn’t get the votes from the panelists to make the final list. “It does not mean it is not important or worthy, it just means other topics were more compelling to the panelists this year. We may even see expanding access back in 2016. It’s a Horizon Project staple….”

**The complete 2015 NMC Horizon Report for higher ed is available at go.nmc.org/2015-hied.**
6 EMERGING TRENDS

The NMC Horizon Report identified six trends driving technology adoption in higher ed, divided up into three categories: near-term trends, those that will drive adoption for the next one to two years; mid-term trends, those driving adoption for the next three to five years; and long-term trends, those driving adoption for the next five or more years.

2 Long-Term Trends

The burden is on universities to advance the culture of innovation: “to foster environments that accelerate learning and creativity” and “to create the conditions for innovation to happen,” according to the report.

In order to advance the culture of innovation, the researchers argued, university leaders will have to embrace policies that will support agility.

“There is a growing consensus among many higher education thought leaders that institutional leadership and curricula could benefit from agile startup models,” according to the report. “Educators are working to develop new approaches and programs based on these models that stimulate top-down change and can be implemented across a broad range of institutional settings.”

Increasing cross-institution collaboration was also cited as a longer-term technology driver and a trend that can be seen as a survival mechanism in the long run.

2 Mid-Term Trends

Measuring learning was one of two midrange trends identified by the Horizon Report’s expert panel. There’s been a growing push to measure learning data in order to drive personalized instruction, while also protecting student privacy.

The proliferation of open educational resources was also identified as a midrange trend.

Unlike other technological solutions, OER is viewed in a positive light by faculty, though among faculty members, implementation of OER and deep knowledge of available resources is not yet widespread. The report cited a Babson Survey Research Group publication that said that while a majority of faculty members (of more than 2,100 surveyed) had a positive view of OER, just 5.1 percent of respondents answered “that they were ‘very aware’ of OER and its use in the classroom.”

Further, the report noted, “More than half of the respondents said they were deterred by the lack of search tools or a comprehensive catalog of materials. While understanding about OER is lacking, Babson researchers highlighted why knowledge in this area has the potential to increase greatly over the next three years; more than three-quarters of faculty members indicated that they expected to use OER or would consider using OER in the future.”

2 Short-Term Trends

In the shorter term, blended learning will play a key role in ed tech decision-making, according to the report.

In addition, rethinking of how learning spaces should be laid out and equipped — all in an effort to promote active learning and foster collaboration — will drive ed tech adoption in the short term.

The shift affects both the design of formal learning spaces and the reimagining of informal learning spaces — lobbies and hallways, for example — as spaces where students can congregate and get academic work done.

These reimagined informal spaces “often feature comfortable furniture, power outlets for charging mobile devices and LCD monitors for connecting laptops,” according to the report.
The imperative: “In today’s world, higher-order thinking is not only a valuable skill, but necessary for understanding and solving complex, real-world problems. Equally important is the ability to communicate complex information surrounding global dilemmas in ways that are accessible to the general public.”

The difficulty arises from the fact that there is no “one-size-fits-all solution.”

The “Solvable” Challenges
Finally, at the low end of the difficulty scale come the solvable challenges — those problems that the researchers categorized as both understandable and within our capacity to fix. One was a carryover from last year’s list, the other new to the 2015 report.

Improving digital literacy in last year’s report focused primarily on improving technological literacy among faculty members. This year, the challenge focused largely on instilling digital literacy in students. However, in order to do that, the report noted, institutions must better equip their faculty. And that means professional development, personalized for individual needs.

One of the other difficulties in addressing this challenge is a “lack of consensus on what comprises digital literacy,” resulting, in some cases, in inadequate policies and practices.

“Compounding this issue is the notion that digital literacy encompasses skills that differ for educators and learners, as teaching with technology is inherently different from learning with it,” according to the report. “Supporting digital literacy will require policies that both address digital fluency training in pre- and in-service teachers, along with the students they teach.”

The final challenge offered up by the researchers is the blending of formal and informal learning.

According to the report: “Traditional approaches to teaching and learning with roots in the 18th century and earlier are still very common in many institutions, and often stifle learning as much as they foster it. As the Internet has brought the ability to learn something about almost anything to the palm of one’s hand, there is an increasing interest in the kinds of self-directed, curiosity-based learning that has long been common in museums, science centers and personal learning networks. These and other more serendipitous forms of learning fall under the banner of informal learning, and serve to enhance student engagement by encouraging them to follow their own learning pathways and interests. Many experts believe that a blending of formal and informal methods of teaching and learning can create a higher education environment that fosters experien-

“Teaching with technology is inherently different from learning with it. Supporting digital literacy will require policies that both address digital fluency training in pre- and in-service teachers, along with the students they teach.”
Building University-Wide IT Accessibility

While many higher ed institutions focus mostly on Web accessibility or rely on a disability resources center to serve students in need, Temple University has ramped up its accessibility efforts across the board. Here's how.

Temple University (PA) CIO Tim O’Rourke is the first to admit that in 2011 his organization didn’t give technology accessibility enough consideration. “Our whole philosophy at the time was that if we have a disabled student, we have a really good disability resources center. Students can go there and they will handle it. That was our thought process,” he said.

But just four years later, Philadelphia-based Temple has a university-wide Accessible Technology Initiative, with liaison positions in each college and department responsible for monitoring and reporting on Web and instructional-material accessibility. So how did Temple launch such a comprehensive initiative and maintain momentum?

Broadening the Scope

O’Rourke recalled that Sheri Stahler, associate vice president for client services and computer labs, had worked to convince him that accessibility was about to become a much bigger issue. Then in 2011, Pennsylvania State University and the National Federation of the Blind announced a major settlement agreement of a U.S. Department of Education Office for Civil Rights complaint.

The PSU settlement did two things: “It told us that our philosophy of just sending people to the disability resources center was not enough,” O’Rourke said. “It also gave us some guidelines on what to do, because we really didn’t know what to do. The first thing we realized was that we had to do a complete audit.”

O’Rourke realized launching a university-wide initiative would be difficult. “We are dealing with systems ranging from e-mail, Blackboard and classroom technologies to administrative and parking systems, and every system is different. What kind of program do you put in place to make it happen?”

Although he didn’t have a budget to assign to the project, O’Rourke put Paul Paire, executive director of special projects, in charge of the accessibility initiative in early 2012. The external auditor’s report told Paire that Temple was on par with other institutions that hadn’t really
addressed this issue, and the university needed to address gaps in learning spaces, labs, instructional materials and the Web. Some institutions focus mainly on Web accessibility, Paire noted. "But when we looked at what happened at Penn State, it was obvious we couldn’t just focus on the Web. We needed to address the institution as a whole. We needed a much broader scope."

**A Team Effort**

Paire spoke to IT accessibility leaders at PSU and California State University about how to proceed. "They suggested team structures, work groups to create and who to include on teams, and the consultant who performed the audit also made suggestions," he said. O’Rourke reached out to faculty representatives and deans, the legal team, the provost, human resources and library executives, to find people willing to participate.

Work groups were formed to help identify or create standards around procurement, instructional materials, Web sites and learning spaces. In some areas, standards already exist, Paire said, while in others there are not clear guidelines. For instructional materials, they looked at resources created at places such as Cal State and Stanford (CA).

"We looked at things such as accessible syllabus templates, and asked whether they make sense for us or are more rigorous than what can be done by faculty without significant assistance," he explained. "We really want faculty to be able to do this as part of their normal processes. We took lengthy documents and boiled them down to checklists, and then developed training seminars for how to make a syllabus accessible or how to make a PowerPoint accessible." Besides checklists, faculty members get a clear rationale for the process. "Then they tend not to see it as just arbitrary rules, because they get an explanation for why this is necessary," he said.

**4 TIPS FOR ACCESSIBILITY ACROSS THE BOARD**

Temple University’s university-wide accessibility initiative is challenging but important work. Here are four best practices for getting there.

1) **Read the Penn State University settlement agreement** with the National Federation of the Blind. “It provides a guideline for where they need to be and describes the scope of the problem,” explained Temple CIO Tim O’Rourke. Also, make sure someone in the legal counsel’s office is involved, he added. Legal counsel for Temple worked to get up to speed with all relevant laws and has been instrumental to the process.

2) **Recognize that accessibility is an ongoing process.** “It is not something you can solve and then walk away from,” said O’Rourke. “It is ongoing, because the technology is constantly changing, so you have to keep the awareness alive.”

3) **Begin with an audit** to help set priorities; make improvements; and then evaluate again, recommended O’Rourke. Focus on communication capabilities: IT and disability services must figure out how to spread the message that accessibility is a shared responsibility, he added. They must promote resources and tools everyone can use to create IT access. “People want to do the right thing, but they have to be shown how.”

4) **Find a champion.** According to Paul Paire, executive director of special projects, the greatest success factor at Temple was having the CIO be a strong leader on the effort. “If you want to launch an initiative on campus,” he said, “get a leader who will back you up, lead by example and talk to peers, the deans of schools and colleges, to garner support.”
The purchasing department came on board quickly. Any piece of software or hardware purchased is checked for accessibility. “We ask the vendor for the VPAT [Voluntary Product Accessibility Template],” Paire said. “If it is not compliant, we ask people doing the purchasing to look at other products. In some niche areas — in science, for instance — there are no fully accessible products, so we created an exception process to handle that,” Paire said.

An Accessible Technology Compliance Committee is tasked with effecting change and is responsible for setting standards, enforcement and granting exceptions.

Accessibility Liaisons
One early idea that came from an instructional materials work group was the creation of liaison positions in each college. “There is so much that we needed to address in the schools and colleges — computer labs, learning spaces, Web sites — every one of those aspects is handled by each college,” Paire said. Without liaisons, central IT would have to do road shows and presentations to every single faculty member, he said. Creating liaison positions was seen as a way to get continuity and establish priorities. Every year the liaison for each college must write a progress report on accessibility and create a plan for making improvements.

“College deans appoint the liaisons based on knowledge, interest and ability to make it happen,” said Barbara Dolhansky, associate vice president for computer services. “They must be respected within the college and have some level of authority and be committed to it.”

Aaron Spector, director of disability resources and services and co-chair of the compliance committee, said the liaison positions are important because communication is key with this type of wide-ranging initiative. “There are policy statements and guidelines, but the ultimate goal is to change the culture at the university. So you need structures and channels for communication,” he said, adding that the liaisons allow the compliance committee and working groups to get their work out to key people in each school and college.

Monitoring Compliance
O’Rourke noted that setting reasonable deadlines for compliance is important. “This is not going to happen overnight or even in a year,” he said, “but we needed to put a plan together and attack things as we can, and we have done that.”

Liaisons’ annual reports touch on four areas: computer Labs, course materials, learning spaces and Web sites. “We ask them to tell us how we communicated what the requirements are; how well they communicated that out to their college; and their progress,” Paire said. Every school and college has made progress. There are resources issues, so some colleges are further along than others, he added. Some have launched brand-new Web sites, so they could bake accessibility in from the ground up. Others had to remediate theirs, which involved much larger projects.

As the deadline for Web site accessibility approached recently, a letter went out to all schools asking for updates on progress and a plan to reach compliance for those not yet at 100 percent. The letter said that if a plan was not submitted, the university might be forced to shut down the unit’s Web site. “Rather than taking any Web site down right away, we are trying to work with them,” Dolhansky said. “We will sit down with them and go over where they are not compliant and help them. That is our first step.”

So why are universities with strong IT accessibility programs still the exception rather than the rule? “I think like at Temple previously, many universities view accessibility as the responsibility of a small disability resources unit,” Spector said, “and that unit is usually not positioned to have a wide enough reach or authority to move large masses of people at the university. It is only when the CIO or a vice president takes ownership of this important compliance initiative that it can really move.”

David Raths is a freelance writer based in Philadelphia.
How Colleges Can Better Serve Students With Learning Disabilities

Although assistive technologies and other supports can help, too few students who need them take advantage.

DEANNA GUETSCHOW always had a hard time focusing, but by the end of her junior year of college, she felt overwhelmed.

A studio arts major at Adrian College in Michigan, Guetschow found that her reading assignments were taking hours to complete each night because her mind would wander as she tried to read the text. She’d always been an honors student, but now she was scraping by with C’s and D’s.

“I thought, I need help,” Guetschow said.

She went to her school’s Disabilities Services office, where Disability Specialist Danielle Ward recommended that she be tested. Guetschow was diagnosed with mild dyslexia and severe ADHD, and Ward suggested that she use a text-to-speech software program called Kurzweil 3000-firefly to have her texts read aloud to her the following year.

The results were “phenomenal,” Guetschow said. What used to take her hours only took minutes to complete, and she was retaining the information longer as well. With the help of the Kurzweil software, Guetschow finished her degree in May and is now teaching art at near-by Kalamazoo Valley Community College.

Students who have learning disabilities like Guetschow’s often face steep challenges in making the jump from high school to higher education, and these challenges go well beyond the shift to more intensive, college-level work.

The transitioning of students with learning disabilities from high school to college “is a very important issue, and it often gets overlooked,” said Tracy Gray, managing researcher for education at the American Institutes for Research. A nationally known expert in improving opportunities for students with disabilities, Gray used to head the now-defunct National Center for Technology Innovation, which supported researchers and entrepreneurs in creating new assistive technologies to help all students learn.

While assistive technologies (like the Kurzweil software) can help with this transition, Gray and other disability specialists warn that too few college-level students are taking advantage of these kinds of tools, and they say campus leaders need to be more active in addressing the challenges students with learning disabilities face at their institutions.
Not Getting Help

Guetschow wasn’t diagnosed with learning disabilities until she was in college. But many students arrive at college after having an individualized education program (IEP) in high school. For these students, “the process is very different for getting services in K-12 compared with higher education,” said Sam Johnston, a research scientist for CAST, a nonprofit organization that works to expand learning opportunities for all students.

At the K-12 level, the onus for identifying learning disabilities and providing the right kinds of support is on the school or district, Johnston said. When students move on to college, the responsibility shifts over to them, and “it often falls apart somewhere along the line,” Johnston said.

As students get older, “they don’t necessarily want people to know they have a disability,” Gray said. “They don’t want to be singled out.” As a result, many college students choose not to self-identify as having a learning disability.

This problem is made worse by the fact that many college students do not live at home and therefore no longer have their parents advocating for their education.

What’s more, the scope of services that colleges and universities offer to students with learning disabilities varies widely. While the Higher Education Opportunity Act of 2008 requires colleges to support students with learning disabilities, colleges differ in terms of the resources they have devoted to this challenge.

“It’s still a bit of the Wild West out there,” said Gray, describing colleges’ focus on the issue. “Some colleges and universities have been more responsive to the needs of students with disabilities, but we hear from many students that the kinds of supports they had in the K-12 system just aren’t there.”

As a result, the adoption of services at the college level is quite low. A national longitudinal study from the United States Department of Education found that 87 percent of students with learning disabilities received some kind of support at the K-12 level; but when these students moved on to college, only 19 percent continued to get support.

“It’s shocking to see such a huge change” from high school to college, Johnston said. “These are the same students, but for whatever reason, they’re not being served in higher education.”

How One College Has Responded

Guetschow was lucky that her college had such a responsive support staff. Another institution at the forefront of this issue is Taft College, a rural community college outside Bakersfield, CA.

Taft College is known for its Transition to Independent Living program, which has become a national model for serving adult students with moderate to severe developmental or intellectual disabilities. Most students who complete the program are able to move out and live on their own. But Taft College also has a Disabled Student Programs and Services office that serves students with less severe disabilities. These might include learning disabilities, such as dyslexia, dyscalculia or a lack of executive functioning, such as difficulty in organizing schoolwork or planning essays.

“We take the approach of giving students a variety of options,” said Joseph Polizzotto, an associate professor and access specialist at the college’s High Tech Center. He said about 15 percent of the college’s students receive special services.

Polizzotto meets with students who are confirmed as having a learning disability to discuss what kinds of services and accommodations would best serve their needs. These might include having someone help them take notes in class, giving them more time to take tests or introducing them to assistive technologies that can help with various tasks.

For instance, if students are having problems with organizing information, they might be given a Livescribe Smartpen that can record the audio from lectures at the same time they’re taking notes. By tapping their notes, students can play back the audio recording to hear what the professor was saying at that particular point in time, which could help them...
understand what they had written.

If students have difficulty writing, they might receive Dragon speech recognition software. If they struggle with reading, they might be introduced to text-to-speech software.

Polizzotto shows students all the options at their disposal and teaches them how to use these tools, going over the various menus and commands. He also schedules follow-up meetings with students to make sure they are using the technology effectively to support their learning.

If students are not able to retain what they read, a text-to-speech program like Kurzweil 3000-firefly “can help them auditorily process information and comprehend information better,” Polizzotto said.

Advice for Schools and Students

Because many college-level students don’t admit to having a learning disability, it’s important for instructors and support staff to look for some of the telltale signs, Polizzotto said: problems focusing or organizing thoughts, for instance, or a gap between a student’s potential and what instructors actually are seeing.

Colleges and universities also need better sharing of information across their campuses, he said, including more coordination between their academic departments and disability offices. In addition, colleges should teach every student how to use the basic support features built into a computer’s operating system, such as its limited screen reader functionality.

Guetschow urged students with learning disabilities to find out what supports are available on their campus. Her final advice to her peers? “You don’t have to struggle with this on your own.”

Dennis Pierce is a freelance writer with 17 years of experience covering education and technology.
for instance, faculty might incorporate video or graphic organizers to help visual learners understand the material. They might make course readings available in multiple formats, including audiobooks. They might "flip" their classroom, having students watch a lecture on their own and using class time to engage students in a discussion of the content. Or, they might find creative ways to assess students’ knowledge, like asking them to design a project.

The Center for Applied Special Technology (CAST) is a leading proponent of UDL, and the organization has launched a Web site with guidance to help campus faculty and administrators tackle this approach.

One of the challenges to adopting UDL in higher education is a lack of centralized decision-making on many campuses.

Students with learning disabilities are often “anonymous” on college campuses, Williams said, adding: “There are a lot of students with learning differences we just don’t know about, because they don’t self-disclose. But they can still benefit from an educational environment designed with UDL in mind.”

More Flexible Instruction … and Richer Forms of Assessment

UDL calls for instructional approaches that give students multiple means of representation, so they have various ways of acquiring knowledge; multiple means of expression, so they have alternatives for demonstrating what they know; and multiple means of engagement, to tap into their interests, challenge them appropriately and motivate them to learn.

Rather than simply deliver information in a lecture format,
said: Faculty and administrators also must explore richer forms of assessment. “We’re still using multiple choice for assessment because it’s expedient, but it’s not effective for a large number of people,” she said. For many students, recalling facts can be a challenge; for others, when they sit down to take a multiple-choice exam, “you’re getting a better read on their anxiety than on their skills.”

Faculty should give students a range of options for demonstrating their knowledge, Johnston said, such as creating an artifact, performing a task or even completing a simulation.

The San Francisco company Forio offers a platform for universities to build their own simulations, and many business schools — including Harvard Business School (MA) and the Wharton School of Business (PA) — have partnered with Forio to develop simulations as part of their curriculum.

If colleges aren’t offering a wide range of assessments, they aren’t going to get an accurate picture of their students’ true abilities, Johnston said. “If all we’re doing is throwing the same form of assessment in front of all students again and again, we’re going to be constantly remediating a certain population of students,” she said, “when maybe what we need to do is find some different approaches. We might find they actually know more about the topic than we’re giving them credit for.”

She added: “You can improve the classroom environment … but at the end of the day, people are passing or failing based on how they’re assessed.”

“It’s Okay to Try One Thing at a Time”

Another challenge to implementing UDL in higher education is that few faculty members have been trained in how to teach students with learning disabilities.

“They’re at a different starting point,” Williams said of college faculty.

North Carolina’s College STAR project seeks to “meet faculty where they are,” she said, with online communities of practice designed for instructors at varying stages of implementation. Some have redesigned entire courses to make them more accessible, while others are just beginning the process.

For those just beginning, it’s perfectly acceptable to start small, Williams reassured. “It’s okay to try one thing at a time,” she said. “Is there a new instructional practice that you’ve heard about that you’d like to investigate in your classroom? Or, is there a specific problem that you really want to look at, like increasing engagement?” The online communities of practice are places where faculty can share ideas, successes and lessons learned as they experiment with UDL in their courses.

The College STAR Web site also contains modules on topics such as flipping one’s classroom, creating a welcoming learning environment and implementing game-based learning. And College STAR offers in-person training for faculty, Williams said — especially new instructors — to make sure they’re aware of the issue.

Besides ECU, other project participants are Appalachian State University (NC) and the University of North Carolina at Greensboro. College STAR’s organizers hope to expand their efforts throughout the UNC system if they can secure more funding.

In leading a UDL revolution in North Carolina, College STAR is following the example of the California State University system, whose EnACT program (Ensuring Access through Collaboration and Technology) includes a component called UDL-Universe. Like College STAR, this program supports college faculty as they weave UDL into their course design. UDL “can be done in a college setting,” Williams said. “It just takes time.” It also involves changing the culture of an institution.

She concluded: “We’ve been thrilled with the response from faculty and students across our campuses. Faculty want to do right by their students. They want to help their students be successful, and they’re hungry for ideas.”

Dennis Pierce is a freelance writer who has been covering education and technology for more than 17 years.
Jefferson College Cuts Help Desk Requests With Identity Management System

By Leila Meyer

A NEW IDENTITY MANAGEMENT (IdM) system at Jefferson College in Missouri gives students and staff access to Google Apps, Blackboard and other accounts through a single sign-on Web portal, and lets them reset their own passwords, resulting in a significant reduction in help desk requests. And the college implemented the entire system in only five weeks, rather than the typical six to 12 months.

The college previously used a proprietary Web portal to serve its intranet. The portal handled user authentication for access to campus systems such as finance, HR, payroll and student information systems, but it no longer met the college's needs and provided a single point of failure. When the developer released a major new version of the software, the college was faced with a "forklift upgrade" whether it stayed with the same vendor or implemented something new, according to Tracy James, senior director of information technology at the college.

Finding a New IdM System

James and his team decided to switch to a new Web portal called myCampus from CampusEAI, but it required a separate identity management system for user authentication, something that James wanted to separate from the portal anyway.

“We wanted a single system that was separate and stand-alone, not dependent on any other system to authenticate and provision our user accounts,” said James.

“But primarily we wanted a system that gave us redundancy, one we could place in our virtual environment, where we could run in high availability mode with two systems running simultaneously, so if one goes down or fails, the other one takes over.”

Since this was Jefferson College's first foray into identity management, James and his staff also wanted a system that was backed by a strong support team. James appointed several people to evaluate IdM vendors and narrow it down to a short list. The team soon discovered that a lot of the identity management systems on the market were subscription-based or hosted off-site — neither of which Jefferson wanted — and they were beyond the college's budget.

“All identity management is expensive,” said James, “but we couldn’t really get the flexibility with the subscription-based or hosted solutions.”

Deployment Partners

According to James, Fischer Identity quickly rose to the top of the list for three reasons: 1) because Jefferson College could install it in a virtual environment to eliminate performance issues; 2) because it could run in high availability mode with redundancy; and 3) because Fischer was willing to train the college's IT staff on the complete management of the system, so they would have full control of it.

In February 2013, James and his team started working with Fischer with the directive that they needed to go live with the new Web portal on June 1, and the identity management system had to be in place by then. "
“We knew that February to May was a short time frame,” said James. “Six to 12 months is typical for an identity management rollout because it touches every system. There’s a lot of work behind the scenes.” The implementation process required a significant amount of information gathering before the actual deployment could take place, and the entire system would need to run in a test environment before they could move it to the production environment.

Fischer came back to the college with a radical proposal: The company would change its rollout model to meet Jefferson’s tight timeline, something it had never done before. Fischer dedicated a team of five or six people to the project exclusively, and James in turn committed his staff to the project as a top priority. The entire implementation took five weeks from start to finish.

“We collaborated daily online via WebEx, and it was a lot of work,” said James. “It was exciting because it was a neat project and we were able to accomplish so much daily between my staff and Fischer. It was an ideal partnership.”

The reciprocity of the partnership was critical to the success of the project. If Fischer needed information from Jefferson, the staff would respond within an hour, and vice versa.

Identity Management in Action
Jefferson’s IdM system provides policy-based provisioning, password reset and synchronization and other integration with the college’s Banner student information system, Microsoft Active Directory, OpenLDAP, Google Apps and Blackboard.

“We ended up with a robust identity management system that operates in high availability, in a virtual environment, which was one of our goals, and it provisions our accounts based on roles,” said James.

When a student enrolls at Jefferson, the college creates an account for him or her in Banner with a student role, and that Banner account is the sole source of authority over the student’s access to the portal. The college uses Gmail for campus e-mail, so students are given a Gmail account, and if they use online learning through Blackboard, that account is created automatically. The passwords are synchronized between all of the accounts, so once students log in to the portal, they can just click a link for Gmail or Blackboard and they’re automatically logged in through a secure link.

Because Jefferson implemented Fischer Identity’s self-service password reset component, if students or staff members forget their portal password, they can reset it themselves. “And that is welcomed by all of our students and staff because they’re used to that,” said James. “When they set up their own personal Gmail or Yahoo accounts, they are able to reset their own password. And that service also greatly reduces our help desk requests for password resets. That was a really big win for all of our users.”

Leila Meyer is a technology writer based in British Columbia.

U Central Florida Enhances IT Security With Privileged Account Management System
By Leila Meyer

THE University of Central Florida has implemented a new password management system to provide IT staff with privileged access to the enterprise systems it uses to support the campus.

Prior to installing the new system, the university’s Central IT department had been using an in-house password management tool, but when administrators wanted to implement new features to meet the university’s evolving security needs, they weighed the cost of upgrading the in-
Project Spotlight

house system against purchasing an off-the-shelf password management tool. “[We concluded that] maintaining the in-house tool was not cost-effective when off-the-shelf software offers better features, support and software security assurance,” said Matthew Fitzgerald, senior security analyst at the university.

“Maintaining the in-house tool was not cost-effective when off-the-shelf software offers better features, support and software security assurance.”
— Matthew Fitzgerald, University of Central Florida

Searching for a Solution
The university assembled a selection committee — including IT leadership and end users from the Central IT department — to research the password management tools offered by several vendors. “The goal was to replace our password vault, enhance auditing capabilities and expand into using advanced features such as automatic password changing, password checkouts and launching privileged access without the end user knowing the credential used,” said Fitzgerald.

The committee identified the ability to prevent pivot attacks — where an attacker gains access to one system on the network and uses it to attack other connected systems — as a key requirement for protecting the university’s systems. To prevent such an attack, the university needed the ability to assign a unique password to each machine, share certain passwords between teams and automatically change passwords on a predetermined basis, according to Fitzgerald.

Regulatory compliance requirements for the university’s multiple data centers also meant that IT needed to manage an increasing number of credentials effectively. Other key
requirements included the ability to generate and store long, complex passwords using granular group- or role-based permissions for multiple types of systems; high availability; the ability to automatically randomize system and appliance passwords; and two-factor login authentication. On top of all of that, the tool needed to be easy to learn and use.

After evaluating its options, the committee selected Secret Server enterprise password management software from Thycotic. “Our previous tool did not have the advanced features that Secret Server offers,” said Fitzgerald. “Secret Server is able to integrate with UCF’s systems and provide a level of proven security assurance on par with other major university enterprises like our own.”

Implementation
The Central IT staff used Thycotic’s installation and security best practice guides, as well as an in-application hardening checklist, to install the software themselves in UCF’s virtualized environment, with occasional remote support from Thycotic staff. “Thycotic’s easy install process on a single machine allows any IT person to quickly launch a proof of concept,” said Fitzgerald. “I like that the tool offers various configuration options that help it to install in any environment and secure the deployment.”

UCF uses Secret Server to manage enterprise passwords for system, network and database administrators; application developers; security practitioners; managers; and other operational staff in the Central IT department. The software stores all of the passwords for the enterprise systems that the department uses to support the campus.

Since Secret Server manages the department’s powerful privileged user accounts, the department implemented the tool’s built-in support for two-factor authentication — a combination of two separate user authentication methods — for all accounts. “Once users are authenticated, they can easily search for the password they need to use and launch a session directly from Secret Server,” said Fitzgerald. UCF’s central IT teams also use the software to share secrets with each other within Secret Server because the password never leaves the encrypted database.

Results
One of Fitzgerald’s favorite features of the software is its ability to help thwart pivoting attacks by changing all of the local server passwords to unique, complex and rotating passwords, but the new system has provided other benefits as well, he said. For example, it improved the de-provisioning process when people leave the department. Now staff can quickly search the database to identify the accounts a user has access to and reset those account passwords.

Fitzgerald said that UCF also uses Secret Server to improve its implementation of the “least-privilege” security principle, which hides passwords from junior administrators while still allowing them to elevate their privileges when necessary and launch a remote session to complete a task.

“Secret Server keeps track of all the actions a user performs in the system so we know which administrator accessed which system,” said Fitzgerald. “The password checkout and approval workflows help secure privileged accounts by changing the passwords upon check-in.”

Central IT plans to begin offering the password management system as a service to other colleges and departments on campus. Central IT plans to begin offering the password management system as a service to other colleges and departments on campus. Fitzgerald thinks all universities should consider implementing a privileged account management tool “because most laws, regulations and security best practices, such as the SANS Critical Security Controls list, recommend limiting and controlling privileged account use.”

Leila Meyer is a technology writer based in British Columbia.
CIO on the Sidelines

Brian Voss explains how former chief information officers can find a new role as coach for their on-field peers.

By Mary Grush

It’s generally understood that the CIO role in higher education is extremely demanding. Can former CIOs help their on-field colleagues, coaching them from the sidelines? We asked Brian Voss.

Voss has held high-level IT leadership roles throughout his career. His past positions have included (among other earlier posts) vice president for information technology at the University of Maryland (2011-2014); vice chancellor for information technology and CIO for Louisiana State University (2005-2011); and prior to that, a variety of positions at Indiana University culminating in associate vice president, telecommunications. His IT posts, paired with an impressive log of service to the community on national advisory councils, steering committees and boards, and in professional associations, sum up to a lifetime of experience in higher education IT and a great understanding of the CIO’s perspective.

Retiring at a relatively young age from the University of Maryland in 2014, Voss quips that he enjoys being called a “youngster” in the buffet line for early-bird dinners at family restaurants in his hometown of Naples, FL. But along with many other retired higher education CIOs, he’s a rich resource to be tapped. Just try to retire from the higher education CIO role: You’ll find yourself as the “CIO on the sidelines.”

CT: You’ve been talking about the “CIO on the sidelines” — former CIOs who coach their on-the-job peers.

Brian Voss: Yes, I’ve started to think about and reflect on this more and more. Even when I recently saw the movie Interstellar, which has a plot thread around some explorers who go through a wormhole to another galaxy, I identified with them: I’ve entered this new, and previously unknown to me, retirement world and I feel like those intrepid explorers sending reports back to Earth!

CT: Have you really retired? You are early on this, aren’t you?

Voss: I am retired now, and I’ve done so at an age that has led some people to either question my sanity or think that there’s something more to it than me deciding to live my life differently. But to anyone worried about me, rest assured it was my choice.

CT: Still, like many retired CIOs, you have kept a hand in your profession.

Voss: Right. In the first several months I participated in the Internet2 CIO group and emceed a track at the I2 Global Summit; did some speaking engagements and keynoted a couple of conferences; did some consulting at the board level on
the role of IT in the online learning world; and for two-and-a-half months took the interim CIO role at Case Western Reserve University [OH]. All this and particularly the interim role at Case gave me a chance to crystallize a lot of my thoughts about the CIO role in general.

CT: Case Western Reserve University — a prestigious private university — is a little different from the large, public institutions you’ve worked at. Did you find similar challenges?

Voss: I did. One of the things I learned is that the grass isn’t greener: At a public institution, you are concerned with the rules and regulations of the state and how they affect your ability to procure things, but private universities have their own constraints put in place by their boards or executive administration.

CT: In particular, is IT relatively important at all types of institutions?

Voss: Across the board, IT is increasingly critical to our institutions. But there’s a huge caveat: I found that institutional executive leadership and boards are not quite fully grasping the critical nature of IT, and all the implications of that. I sense a belief that, now that we have the cloud and SaaS, everything is almost commodity in nature, and that’s it for IT — almost a “one size fits all” approach.

Actually, the commodity elements of IT are not the most important to focus on — instead, they should be considered a means to free up the CIO’s mind and his or her ability to get involved with broader issues that are facing universities today, such as updating the teaching, learning and research missions for their community.

This is not a new observation, certainly, but I think the challenge remains.

CT: So getting back to “CIOs on the sidelines,” how can they help?

Voss: For CIOs, retired or otherwise, to spend more time talking with each other is fine, but still, that’s preaching not only to the choir, but to the clergy. Where I think these messages have got to get through is to institutional leadership — particularly on the academic side, whether that be provosts, presidents or, ultimately, the board. We need to help them grasp the relevance that IT plays.

CT: Are there any other perspectives you’ve gained since retirement, that you might have missed when you were in the thick of things as a CIO?

Voss: One of the questions that occurred to me a bit when I was on the job as a CIO, but that strikes me now as a much more important issue is: When you are on the job, are you on your guard about having the job and keeping the job? Of course, you are! You need to...
keep that job; it’s only natural. But as a result, as a CIO, you probably don’t push back hard enough on your leadership in certain areas. And most of the people sitting in the CIO seat are not protected by a tenured faculty position. They are hesitant to push back, even when they really should.

CT: What do you wish those CIOs would do? What would you advise?

Voss: You should keep aware of this and try to put yourself in a good position so that when something comes up, you will be able to say what you really need to say. So you can address issues you feel would truly advance your institution. There are a lot of hard messages that presidents, CFOs, boards and others need to hear. But too many of our messengers are afraid of being shot.

CT: From your perspective as a retired CIO, what’s another of the more important issues that should be addressed?

Voss: Decentralization is a big one. I’ve seen this at a variety of institutions. Higher education institutions tend to be, by nature, very decentralized. In some areas, like intellectual freedom, that’s generally a good value. The idea is that the central administration shouldn’t become overbearing in the academic culture. But in some elements of the IT infrastructure and organization, decentralization can introduce problems.

When it comes to IT, wherever you have a decentralized power play, then there are a lot of things in place that are beyond what the CIO knows about. One time I had a colleague in university administration ask me, “How much storage is the university buying from outside sources?” I had to reply, “How do you think I would know that?” Of course, I heard back: “Well you are the CIO, aren’t you?” Well I was, and as the head of Central IT, I reported to the president. But that didn’t mean I had omniscience into how much storage individual departments were springing for. In fact, many times decentralized IT and departmental administration didn’t want me to know how much storage (or other IT components) they were acquiring.

In earlier times, maybe that was okay. But times have changed, for this and other types of IT infrastructure. We don’t let departments negotiate their own rate for gas or electricity. But storage, cloud applications, e-mail — why are universities still allowing these to be purchased or outsourced by the departments? It’s just inefficient. And in light of the aforementioned security and data risk concerns, it can also be downright dangerous.

CT: Finally, do you see a need for exited or retired CIOs to get more involved with succession planning and help more with the CIO pipeline?

Voss: Historically for the CIO pipeline, I think that in general we have not done a good job grooming next generations. Having said that, if I look at some of the more significant hires this last round, and the people available at the time, I notice that there were a lot more people who weren’t already sitting CIOs who were able to get into the chair for the first time. So that’s a good thing for this academic year.

Still, as a profession, there has to be more thought given to who’s going to take our seat when we leave. I think what soon-to-retire or already retired CIOs can do is to get involved in leadership training and to stay involved in their profession at some level, to be a resource for upcoming and active CIOs. It would certainly be a pity if all the expertise of all the CIOs that move on is lost to the golf course. CT
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