



**KYLE
ZIVE**

talks about the hottest new spot on San Diego State University's campus

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Why we're at the beginning of a data-driven era in education

Online tools make campus sustainability efforts evergreen

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Digital or BUST

Tech is non-negotiable when school leaders set their sights on transformation

CAMPUS LIVING ROOM

The place: Conrad Prebys
Aztec Student Union at San
Diego State University

The tech:

- ✓ state-of-the-art digital displays
- ✓ event automation software
- ✓ HDMI switcher tables
for collaboration
- ✓ wall-mounted USB jacks

The buzz "Honestly, it's
probably one of the coolest
places on campus."

TECH ON CAMP

Colleges and universities are investing big bucks in technology outside the



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The new student lounge in the Conrad Prebys Aztec Student Union (ASU) at San Diego State University (SDSU) is, to put it simply, the talk of the campus. The space — or SLounge as it’s referred to on campus — is only 1,500 square feet, but inside students and faculty members can charge devices in wall-mounted USB outlets, play Xbox on a media wall, or collaborate at special HDMI switcher tables that enable users with multiple laptops to share a screen.

Kyle Zive, assistant director of operations at the facility, which is operated by the Associated Students of SDSU, says when the space opened in late August 2016, it established itself as unlike anything else on campus — a place where technology rules.

“Honestly, it’s probably one of the coolest places on campus,” he says.

Students are partial to the space as well. “The new student lounge truly embodies the steps being taken toward continuing the initiative of making the Student Union a ‘home away from home’ for all students, faculty, staff and even alumni,” says Vanessa Girard, SDSU student and ASU Board vice-commissioner of operations. “I have seen students from all different affiliations of campus come and enjoy the SLounge in more ways than just doing homework. Students enjoy the SLounge because it is a safe, open space for them to hang out with friends, work on group projects, have lunch, take a nap, or just relax and listen to music.”

To some on campus, the lounge is an anomaly, one of the only places where students can engage with the latest and greatest technologies without ponying up big bucks of their own. In reality, however, the media room is representative of a larger trend — growing numbers of higher education institutions across the country are investing more on technology for non-classroom spaces overall.

No particular organization tracks this exclusive silo of IT spend, but data from EDUCAUSE, a nonprofit that promotes the intelligent use of IT in higher education, indicates that

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classroom to attract students and enhance learning.

FRANK ROGZIENSKI

Motivators for Non-Classroom Technology



Source: Center for Digital Education survey, September 2016

VANESSA GIRARD
SDSU Student and Vice Commissioner of Operations, Aztec Student Union Board



tech spending increased between 2009 and 2015. A 2014 report from UK-based Futuresource Consulting confirmed this trend, noting that global education technology spending has increased by 11 percent since 2012 to \$13 billion a year.

Anecdotal evidence proves this point. Much has been written — some of it critically — about how college athletics programs suddenly are flush with technology. Elsewhere in academia, institutions are investing big bucks for technology in other kinds of non-classroom spaces, including student centers, libraries, training facilities and department offices.

What's driving these expenditures? That depends on whom you ask. While some academic technologists say they're simply striving to provide students with the best technologies, others say choices are motivated by pressure to compete with other institutions for student attention and dollars.

The bottom line: Technology is everywhere, which benefits just about everyone involved.

There's more to the circa-2014 ASU than the new student lounge; all told, the facility measures 206,000 square feet, and new technology is woven throughout. This means lightning-fast Wi-Fi. It also means ample AC plugs for laptops and charging devices. There are state-of-the-art digital displays, a 300-seat multipurpose theater and 13 meeting rooms fronted by 90-inch screens.

Another tech-focused feature that students love: the event automation software. As Zive explains it, whenever the union is hosting a scheduled event, this software automatically unlocks all of the requisite doors and

operates the HVAC system to heat or cool the room appropriately.

"With this system we no longer have to worry about dispatching someone to unlock a room or turn on the fan," says Zive. "Everything is handled remotely and automatically."

Sustainability also is a huge component of the ASU. The facility achieved LEED platinum certification shortly after it opened, and a big part of maintaining that distinction is educating students and other users about some of the eco-friendly features of the structure. To achieve this, the university invested in a tech-heavy exhibit that provides a real-time look at energy consumption and other logistical performance statistics.

The centerpiece of this exhibit is a touch-screen — most of the real-time data appears there. On either side, the school has placed display

45% of IT decision-makers say their **out-of-classroom technology spend** is comparable or higher than their in-classroom technology spend in the last year.

Source: Center for Digital Education survey, September 2016

cases to house museum-quality artifacts found during build-out.

Finally, the Mission Revival-style ASU serves a more functional purpose, establishing itself as “the living room” of campus. The facility has a bowling alley (with high-tech automatic scoring, of course), a small gym, a number of fast-casual restaurants, and a host of student organization offices, including a Commuter Student Resource Area, the Center for Leadership and Community Service and the Center for Intercultural Relations. Zive says technology is incorporated into each of these features and offices as much as possible.

“There are some things that are still low-tech and low-touch, but, for the most part, everything is the latest and greatest technology,” he says. “We’re always looking for new ways to engage students and keep them here; the more often they leave the less often they come back.”

At the University of Denver (DU), a renovation and expansion of the campus library has yielded similar results. The facility, Anderson Academic Commons (AAC), opened in March 2013 and is one part library and the other part academic support services central, with offices for the campus writing center, University Technology, and tutorial services — an attempt to allow students to go back and forth between service points they need.

The \$35 million building boasts high-tech features, including touch-screen displays, a 3-D printer, high-speed Wi-Fi and 135 public computer terminals.

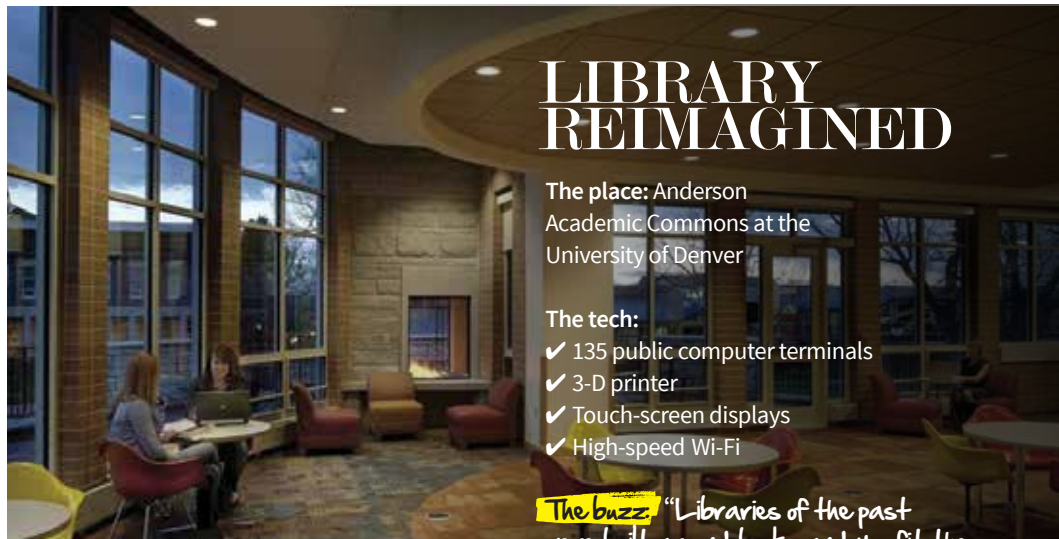
Michael Levine-Clark, dean and director of university libraries, says another facet of the university’s commitment to technology is the Digital Media Center (DMC), which strives to help students integrate technology into whatever work they are doing. The DMC also has a host of technologies it lends out on a first-

come, first-served basis — everything from cameras and video recorders to lenses and tripods. All equipment is due back within a 48-hour window.

“It’s a fantastic resource, especially when you consider that the center is open to anyone,” says Levine-Clark. “While you could use the

center for help with an assignment, you also could just use it if you’re interested in technology.”

Also in the building is the university’s Center for Statistics and Visualization, a research support service. This group operates a large data visualizing space that



LIBRARY REIMAGINED

The place: Anderson Academic Commons at the University of Denver

The tech:

- ✓ 135 public computer terminals
- ✓ 3-D printer
- ✓ Touch-screen displays
- ✓ High-speed Wi-Fi

The buzz: “Libraries of the past were built around books and you fit the study space around that concept; this entire building uses technology to turn that philosophy on its head.”



features a huge touch-screen. The visualization exercises can be used as part of a lesson, but their primary purpose is for research support.

According to Levine-Clark, the driving force behind the revamped library was the recognition that DU needed something that wasn't "a collection space, but instead a people place," a place young people can go to collaborate or get lost in technology — or both.

"Libraries of the past were built around books and you fit the study space around that concept; this entire building uses technology to turn that philosophy on its head," Levine-Clark says. "Students should be learning how to be comfortable and fully integrated with technology and trends. You never know when that sort of knowledge might come in handy."

Another place technology is transforming the non-classroom experience: Columbia University School of Nursing in New York. Here, when officials began construction on a new facility in October 2015, they set out to erect an 8,000-square-foot building that incorporated technology at every turn — to make technology an integral part of the very fabric of the new digs.

Though the building is only half finished, according to Stephen Ferrara, associate dean of clinical affairs, the school is well on the way to achieving its goal.

The centerpiece of the building is a simulation lab — a non-classroom space where nursing students can practice skills in a clinical setting to expand their comfort and skill set and familiarize themselves with procedures they would need to use in the real world.

"This type of hands-on learning isn't happening in traditional classrooms," Ferrara says. "If you didn't know better, you'd walk in there and think this lab was the real thing."

To date, the lab has four separate simulations: an exam room, a hospital room, an emergency room and an operating room. All of the simulations are exclusively based on technology. Each room features computerized mannequins that double as patients. The mannequins are programmed to put students into challenging situations; video cameras throughout the facility record how students react to the challenges, and professors can review the videos at a later date.

Unlike other nursing schools, which might leverage technology here and there to train students in

asynchronous hypotheticals, pervasive technology in the new building enables the university to train its students in real time and record the results.

"Because of the technology, we can use simulation as a teaching supplement," Ferrara says.

Technology appears elsewhere in the new facility as well. For example, the school has touch-screen control panels in every room, just in case someone needs to activate a space for a lecture, demonstration, presentation or any combination of the three.

Ferrara looks back on his time in graduate school 16 years ago and says he can't remember a time when technology was such a key part of the curriculum. He adds that this sort of evolution is good.

"[Technology] is a huge part of what we're trying to accomplish here today," he says. "Other nursing schools utilize sims and technology as replacements for the traditional curriculum. At Columbia, we see the new stuff as a supplement — a way to make everyone better."

TRAINING IN REAL TIME

The place: Columbia University School of Nursing

The tech:

- ✓ Computerized mannequins
- ✓ High-tech lab spaces
- ✓ Video cameras
- ✓ Touch-screen control panels

The buzz: "This type of hands-on learning isn't happening in traditional classrooms."



RECLAIMED COLLABORATION SPACE

The place: Collaborative Learning and Innovation Complex at Tufts University

The tech:

- ✓ Videoconferencing
- ✓ VoIP
- ✓ Projectors and other AV
- ✓ Adaptable furniture

The buzz: "We used a broad interpretation of the term technology."

Technology can even be used to modernize department office space into something spectacular. Such is the case at Tufts University, where the 95,000-square-foot Collaborative Learning and Innovation Complex (CLIC) is a renovated 1920s industrial warehouse that rivals local Google and Facebook offices for cool.

The facility houses seven different department offices, and offers formal and informal learning spaces with white boards, welcoming social spaces with comfortable seating, huddle rooms to encourage conversation and collaboration, and cross-disciplinary teaching labs. The design of the building minimizes walls and maximizes glass not only to make learning and research visible (science on display), but also to optimize and share the building's natural light.

The place also incorporates a variety of technologies. Some of it is traditional in nature — including Wi-Fi and shared videoconferencing units that can be used in any of the dozen meeting rooms. But the rest is more subjective.

"We used a broad interpretation of the term 'technology,'" says Alicia Russell, associate director of the Center for Enhancement of Learning



and Teaching. "We incorporated AV, projectors, screens, conference phones and VoIP, all of which can encourage the kind of collaboration and learning that we want to foster."

Russell adds that she and her colleagues considered part of the "technology" to be furniture — hence the reason CLIC has chairs, desks and carts on wheels that can be configured and adapted as students want, in the space they want.

While some schools might handle these decisions unilaterally, at Tufts the team opened the process to everyone — employees and students alike. To evaluate technologies, technologists tried them out in the informal spaces. They then took those lessons and applied them elsewhere across the university.

Lois Stanley, director of campus planning, says Tufts is using what



it learned from CLIC in the 180,000-square-foot Science and Engineering Complex (SEC) that is scheduled to be completed in summer 2017.

According to Stanley, this new building will maximize shared space and minimize dedicated space; carve out interdisciplinary research spaces that are not "owned" by any particular group; create a critical mass of research in science, math and engineering; and foster interdisciplinary research within two broad research themes — environmental science and neuroscience.

"We'll use the same approach to technology, and CLIC and SEC together will create a new Science and Technology Corridor that will enhance the south gateway to the campus," she says. ◉

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