

New Tools Enrich Learning and Improve Communication on Higher Ed Campuses

By Alan Joch

Digital learning tools, including interactive whiteboards and smart podiums, are giving rise to new teaching models, such as flipped classrooms.

“Instead of using class time to convey content, instructors are shifting that content online and then using classes for more hands-on, high-touch activities,” says Glenda Morgan, research director for higher education at Gartner.

To facilitate those interactions, students may use their notebooks and tablets to create content together and share the results on a large HD display or digital whiteboard. “In art history classes, for example, it’s a traditional pedagogy to show two images for comparison,” says Bryan Alexander, a consultant who specializes in future trends in technology and education.

The good news is that whiteboard and related technologies continue to advance. “We’re now in a period of ferment—we’re seeing a wide variety of exciting products coming to the market,” he adds.

Multitouch whiteboards, such as Promethean’s ActivWall, can simultaneously capture 20 touch points. Similarly, digital podiums from Smart Technologies and others allow instructors to write on digital screens and project the information on large displays.

Video Opens New Vistas

Video content and videoconferencing [expand learning opportunities](#) by opening classrooms to new ways of delivering content and by engaging far-flung experts, colleagues and students.

“We’re increasingly seeing video used in higher education to dissolve institutional boundaries in interesting ways,” Morgan says. “In one particular course, about wars in Ancient Greece, the instructor brought in alumni who were military veterans to talk about their experiences. It was a win-win — not only does that make a course so much richer, it keeps alumni more closely connected to the institution.”

The University of Maryland School of Dentistry uses videos to create more flexible learning opportunities for students. For nearly a decade, the school has captured faculty lectures on video and now makes them available to students via an online portal. Officials there say the lectures aid both recruitment — 69 percent of students said the option attracted them to the school — as well as retention.

Athletic departments also leverage HD video cameras, mobile devices and cloud-based tools to improve performance. The University of Pittsburgh’s athletic department installed multiple Panasonic PTZ video cameras at its baseball, soccer and softball fields to capture video from a variety of telling angles. During games, video department staff record each play and categorize the action. Later, coaches and players log in to the university’s cloud-based host, search for a specific type of play and review all matching results. A soccer coach can review all shots on goal, while a baseball coach can review at-bats to gain a better perspective on players’ hitting mechanics.

Digital Signage Delivers Information — and Peace of Mind

Digital signage plays an important role in both day-to-day communication and emergencies, two use cases where it is critical to share information quickly and accurately. IT managers are finding that the first step in deploying the technology successfully is to understand the newest innovations. “Digital signage technology is light-years ahead of where it was five years ago,” Kerravala says. “Today, it’s much more connected and interactive.”

New signage options connect to campus networks, so administrators can centrally control the information on display, whether that’s a reminder about registration times or a safety instruction, such as no backpacks at an upcoming rally. “Some newer solutions come with monitors to capture data about how many people pass the sign,” Kerravala adds. “Others are interactive, so at a bus stop, a student can push a button to see when the next ride is due.”

Solutions include the Digital Media Suite from Cisco, the NEC E505 50-inch display and Planar’s UltraRes HD display series.

Signs can also provide peace of mind. As administrators at West Virginia University watched news of a shooter on the Virginia Tech campus in April 2007, they committed to install 10 digital signs by year-end. The day’s events illustrated the importance of a system that could notify students, faculty and staff of emergencies in real time. WVU now uses more than 100 signs to display emergency notifications, day-to-day communication, wayfinding, video walls and donor walls.

Surveillance cameras also promote on-campus safety. The good news is that IP cameras are now smarter and offer greater flexibility and scalability, in some cases even leveraging cloud storage options or allowing mobile control. IP protocols enable IT managers to connect the cameras to other devices, such as access control systems, which leads to valuable information sharing.

“Surveillance cameras are useful, but with added intelligence they become much more valuable,” Kerravala says.

To capitalize on existing investments, colleges can incorporate analog cameras into an IP network with video encoders from Axis, Panasonic and Grandstream, among others. The units digitize analog camera data so that staff can view it alongside IP network images.

Create a Goal-Oriented Strategy

Experts in higher ed technology acknowledge that modern, connected campuses require a wide variety of components, many of which must work together. A [multiyear plan that focuses on underlying architecture](#) can help institutions put all these pieces in place. The first step is to define the desired outcomes of a modernization plan.

“Start by listing the main goals, which may include increasing retention, attracting more students, creating new revenue streams or decreasing costs,” advises Patton, the Cisco education director. “Then compare the current IT environment with the desired future state so you can create a journey map that leads to your goals.”