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Can You See Me Now?
Advances in videoconferencing technology make it much easier for students and faculty to work together, regardless of where they are located.

This is part three of a six-part series on the elements of a collaborative classroom. For parts one and two, see our November and December issues.

TEN YEARS AGO, integrating videoconferencing into a college course required considerable effort on the part of the instructor and IT support staff. “It was stylized, like a production,” notes Ruth Reynard, executive director of academic programs and faculty at Daymar College, which has 16 campuses in three states. “It took technical skill to manage the cameras. It was like preparing for a broadcast.”

Today, video- and web-conferencing tools are more sophisticated. Distance education has morphed from audio- and videocassettes featuring talking heads to a more interactive experience with greater immediacy. “Now it is more peer to peer, and we are adding new features such as chat and social media to the video,” explains Reynard. And the very fact that students and faculty can set up a videoconference using their smartphones and tablets now makes it possible for groups to stay connected outside the classroom much more easily.

In fact, the capability to enhance the sense of collaboration is allowing some universities to experiment with extending the definition of the classroom and office hours even for courses that aren’t labeled online learning. As Reynard notes, online and “on-ground” courses now meet somewhere in the middle, and students see them as one seamless whole.

Here, CT profiles four universities that are finding their own way to enhance collaboration with web conferencing.

Connecting With Students Outside the Classroom
In 2009, the Iowa State University College of Engineering purchased several Adobe Connect licenses to enable meetings between its researchers and corporate partners working on federally funded grants. But when Michael Olsen, associate professor of mechanical engineering, experienced the software, he saw possibilities for using it in his undergraduate teaching.

Olsen has as many as 150 students in his undergraduate fluid mechanics class. “With so many students and limited time
COLLABORATION

for office hours, it is hard to have that personal contact,” he says. “I wondered how I could answer all these questions in a more efficient manner. I decided that a couple of nights before homework was due and before exams, I would hold web-conference help sessions.”

In spring 2010, he began using Adobe Connect to project audio and video of himself along with a whiteboard. “I liked that it had an interactive whiteboard,” Olsen says. “Fluid mechanics has a lot of math, and it helps that students can see you writing equations.”

To ask questions, students sign in anonymously via a built-in chat feature. “We always say there is no such thing as a dumb question, but it can still be intimidating to ask questions,” explains Olsen. “So they can log in as Mr. T or Chuck Norris.” The students can also answer each other’s questions.

What’s more, neither Olsen nor his students need to be on campus to participate. “We can do it wherever we can log in,” he notes, “so I can do it from my parents’ house at Thanksgiving break.”

Today, about a quarter of the students in each class attend each session in real time. Olsen likes the fact that he can record the help sessions so that students who can’t attend can still view them. As the sessions have become more popular, other faculty members in the department have started offering them as well.

Ease of Use Is Key

In a necessity-as-mother-of-invention story, business and engineering students at Ottawa-based Carleton University, who were unhappy with commercially available options, created their own web-conferencing system. The tool, known as BigBlueButton, has now been adopted by Carleton and several other universities, according to Patrick Lyons, Carleton’s director of instructional technologies.

BigBlueButton’s genesis was three years ago when students tried to hold some of their class meetings online. At the time, commercial conferencing...
products were expensive or clunky, and open source options lagged. “The open source attempts to that point were mostly false starts or weren’t feature-rich enough or simple enough for faculty members to use,” recalls Lyons. So the students set out to create an open source product of their own to meet their needs.

At the time, Carleton was using Elluminate (now part of Blackboard Collaborate), but Lyons experienced difficulty with adoption and support. “With Elluminate, if something went wrong with the Java install, it would take time to troubleshoot the problem,” he says. “It is a very rich product, but our professors weren’t teaching online courses. They just wanted a tool for online office hours and other meetings, as well as spaces where students could collaborate. They needed something entry-level, reliable, fast, and easy to use.”

Although Carleton had deployed Elluminate three years earlier, Lyons says he could count on one hand the number of faculty members who were actually using it. “We had done training and tutorials, workshops about best practices, and still they baked it at,” he recounts. “It was too much tool for them.”

As soon as Carleton switched to BigBlueButton, the adoption rate “went through the roof,” Lyons says. “We went from three users to 20, then 40. Now we have 100.” Professors use it for online office hours, and it was recently used during a thesis defense when an external adviser was unable to get to a videoconferencing location.

The BigBlueButton solution includes the following features:

- Webcam: Multiple users can share their webcams at the same time. There is no built-in limit to the number of simultaneously active webcams.
- Integrated voice over IP: The students need only speakers and a microphone to participate.
- Presentation: Any PDF or Microsoft Office file can be uploaded, and all participants have a synchronized view, showing the current page, zooms, pans, as well as the presenter’s cursor.
- Desktop sharing
- Mobile: Users with Android-enabled smartphones can fully participate, while anyone with a phone can hear the audio portion.

One of the product’s developers, Fred Dixon, for a captioned version, visit CT on YouTube.

KEY QUESTIONS ABOUT CONFERENCING PRODUCTS

We asked our sources what questions were most important to ask in the evaluation of a web-conferencing system. Here are their responses:

- Is the system easy to use both for participants and IT support staff?
- Does the system actually heighten interactivity?
- Does it have an appropriate feature set? Possibilities include: remote help desk/troubleshooting; webinars; virtual office hours; remote speakers; text chat; live audio and video; whiteboarding; screen sharing; polling; session recording; VoIP.
- How scalable is it?
- Can it be integrated with other university systems (i.e., LDAP, LMS, etc.)?
- Does it use common, well-supported client technology (Flash, HTML5)?
- Does it offer multiple screens and interactivity so anyone in class can take control?
- Does it support mobile devices, or is there a roadmap to add support?
- Is it accessible for disabled students?
- Is it designed specifically for educational settings?
created a company, Blindside Networks, to provide hosting and support. Blindside helps integrate BigBlueButton with Carleton’s Moodle learning management system. Now faculty members can block out times on BigBlueButton themselves from within Moodle without having to go through IT as they had been doing. “We no longer have to be gatekeepers,” concludes Lyons.

Videoconferencing in the Cloud

Students in the University of Pennsylvania’s Wharton Executive MBA program get together in person every other week on a Friday and Saturday, either in San Francisco or Philadelphia. For the rest of the time, though, they need to meet virtually in small groups to work on projects and collaborate on classwork.

Wharton tried several options to connect them. For a while it employed phone bridges with no screen sharing, explains Dan Alig, senior IT director at Wharton. “Other solutions required the users to be on the same platform, either installed on their computers or browser-based, and we found they all created a support need.”

The school then turned to a solution called Blue Jeans, which offers videoconferencing in the cloud so that people can use a host of different tools such as browsers, Skype, and their iPads. Wharton’s videoconferencing effort ties into an initiative that has all the students using iPads. “We wanted them to be able to connect with each other wherever they are and however they want,” Alig says, “and they can share screens.” Use of the product is not confined to students—faculty members are also planning to hold office hours in the Blue Jeans cloud.

Blue Jeans has various licensing models that restrict how many users can be patched in at a time. The Wharton executive MBA program has been piloting the solution for about a year without ever bumping up against any limits. (There are 200 students in the Bay Area and about 250 in Philadelphia.) In Alig’s eyes, the great benefit is that Wharton can connect its students without investing in a traditional videoconferencing system or worrying about ongoing tech support.

Hollywood Squares

The University of North Carolina’s Kenan-Flagler School of Business worked with vendor 2U (previously 2tor) to design its 2NC platform for its online MBA program. Students and faculty refer to the videoconferencing aspect of 2NC as “Hollywood Squares,” since students and the instructor all appear on screen in a grid.

In a blog post about her experience in the program, student Ana-Laura Diaz noted that professors foster classroom discussion by asking for real-world examples. “Chats are often lively and—with small classes—everyone sits in the ‘front row’ and sees everyone else,” she writes. “The synchronous sessions allow for questions and clarifications about concepts.”

With 2NC, professors can assign students to breakout rooms, dividing the class into small groups to discuss and critique classmates’ efforts at persuasive writing. And students can reserve virtual rooms for conversations or take “virtual coffee breaks” together.

All of this has required some adjustment on the part of faculty and students alike. “You raise your hand before speaking,” notes Associate Dean Douglas Shackelford. “Students go back and forth with each other.” The only difference from an in-person classroom, he says, is the intensity. “There is no back row. You are all ‘on’ for one-and-a-half hours.”

David Raths is a freelance writer based in Philadelphia.