Technology, Student Engagement, and Learning

The following excerpt is based on an interview conducted by Gerry Bayne, EDUCAUSE multimedia producer. To view videos of the full discussion, go to <http://www.youtube.com/watch?v=bahqUQqJ5xe> and <http://www.youtube.com/watch?v=77brYmCui0w>.

Gerry Bayne: Professionally, how is student engagement changing with technology? Or is student engagement the same despite technology?

Gary Natriello: It’s different in a couple ways. Thirty years ago, when I entered the field, students were engaged, but they were engaged in different ways. A big difference I notice these days is that students are very connected with each other. So their paths and their channels of communication—whether they’re on campus living together or whether they’re commuter students or whether they’re taking classes from a distance—that they’re really in touch with each other. And they’re helping each other out a lot more than they used to. I think that’s a direct result of the new technologies.

Bayne: How is that changing the way they learn?

Eja Kliphuis: I’m not sure it changes the way they learn. Maybe what is changing is that they’re now always connected to each other and to the web, which means that they can look things up and find answers in their peer group. Still, I don’t think they automatically import those new practices into the learning at the college/university level.

Linda Deneen: I like to think that students are more engaged in actively being a part of their education. I certainly remember that when I was in school, my main activity was going to class, taking really good notes, studying my notes afterward, and making sure that I did all my homework. I think students today are more a part of what’s happening in the classroom: they look things up while class is going on; they are involved in online discussions; they use clickers in the classroom to interact with the material in new ways. And I think faculty try to encourage that. They believe their students will learn better if the students are more engaged.

Bayne: What is the role of the teacher now?

Natriello: I think teachers end up being more responsive to students because students are bringing more to the class than they might have brought before. Years ago, there were always one or two students who were very active, but now that the barriers to doing other kinds of research and to going other places and to consulting other resources are lowered, there’s more of a democratizing effect. Students who in the past did not have the time or did not take the time or were not quite as skillful are now able to bring in resources as well.

Deneen: When I was teaching, there was always the one star student, and if you asked a question in class, that would be the student who would answer. I got so frustrated with that model that I started calling on students by name, which they hated, but that was my way of getting everybody engaged instead of just one or two people. Today, teachers who are using online discussion tell me that they hear from students who would normally never speak up in class—because the mode of interaction is different. Those students feel more comfortable writing their thoughts, and taking the time to edit what they’re saying before they post it, than they do sitting in front of a classroom of students while worrying about whether or not their words are going to come out right.

Kliphuis: Are large numbers of faculty in the United States using those discussion boards? In the Netherlands, we do not have as many online courses as in the United States; a blended model is the more usual practice. We see that faculty, when they use a learning management system, start using things like announcements and readers. The next step is putting out assignments for students first or asking the students to contribute online. At our university, this is not yet common among faculty members.

Deneen: I wouldn’t say this is common across all faculty. I think this type of use depends on the discipline. For instance, faculty in our Department of Education are very active in using online discussions, but faculty in the sciences are probably less so.

Natriello: I think there’s been a slow but steady growth in the use of those kinds of discussions over the last five to six years.
Of course, most of our faculty are in education and psychology, but we’ve gotten to the point that people not only are engaged in the discussions and using the discussion boards but also have become connoisseurs of the discussion boards. They have their favorite configurations; they debate which boards work best. But I agree that their use started with standard activities such as posting assignments.

Bayne: Are the discussion boards part of the learning management system? Are faculty using Web 2.0 tools outside of the LMS?

Natriello: In our experience, there is a lot of variation among faculty. Some faculty are using things outside of the LMS and are forming groups on third-party applications. Some are using Ning, and some are using Twitter, and some are using a variety of tools to increase communication. I’d say that’s still a minority of folks, however. The larger group is staying within the confines of the LMS and are using the toolset that’s there. But what I’ve discovered as I’ve been teaching both on campus and online this last year is that students are bringing these tools into class, whether or not the faculty wants to use them. When you give an assignment to students, you may assume that they’re going to use the LMS and some fairly traditional ways of submitting materials. But instead, they go out to a third-party application, which you may not have even heard of, and they’ll say: “Oh, this is a much better way for me to organize my content and materials.” Then, rather than sending the material to you through the LMS, they will invite you to join their group on this third-party application. This has prompted some really interesting discussions. Who is submitting materials to whom? Where is the record of what was achieved? Is it on campus, or is it somewhere else?

Bayne: What are some specific ways that faculty are using technology to engage students in classrooms?

Deneen: For us, clicker technology is a big engagement tool. Scientists and mathematicians like using clickers to check in with students to see whether they’re grasping the material. Sometimes the instructor will ask a question, the students will respond, and then the instructor will say: “OK. Now turn to your neighbor and talk about your answer.” When the question is asked a second time, the answers almost always change to a larger percentage being correct, as a result of those conversations. The other thing that I see happening at our institution is that faculty are trying to move beyond asking the factual multiple-choice type of question: “Did you get this fact down?” They are moving to the higher-level, critical-thinking kinds of questions to see if students have grasped the concepts in the discussion.

Kliphuis: We have quite some practice with the use of video by students. For instance, at teacher training colleges, students are asked to use flip-video cameras to record classroom situations when they are practicing teaching. Afterward, they reflect on the recording, then stream the video and put it into their portfolio.

Bayne: It’s one thing to consume multimedia in a classroom. It’s another thing to create multimedia in the classroom. I wonder about the learning curve.

Kliphuis: I do think there is a point when we need to ask: “Where is the energy of the students?” Is it in learning the concepts of the subject, or is it in making a video? If a technology is requiring too much of the students’ energy, then we need to refocus on the learning.