Online Learning for Tech-Savvy Students

The growth of mobile devices—especially tablets and smartphones—means that students will increasingly expect online learning to be available on their technology of choice. Organizations providing online learning will need to adapt their teaching methods to accommodate the way students like to learn and feel that they learn best—and the way that is most convenient for them.

According to a 2012 United Nations Scientific and Cultural Organization (UNESCO) study, there are just short of 6 billion mobile phone subscriptions worldwide as of 2012, and, for every three people who access the Internet, two do so from a mobile device (be it a tablet computer, smartphone, or Wi-Fi-enabled laptop). With the ubiquity and rapidly-evolving functionality of those devices, UNESCO is “enthusiastic about their potential to improve and facilitate learning, particularly in communities where educational opportunities are scarce.”

And simply put—students want to use those devices for learning. They are the so-called “digital natives” who grew up socializing, buying, and banking online.

The Educause Center for Applied Research (ECAR) surveyed undergraduate students about their attitudes toward online learning and interaction, and the data is compelling. ECAR surveyed 10,000+ undergraduate students, chiefly in US institutions, between February and April 2012. Among the findings are these:

- 74 percent of students have already taken a course with online components, suggesting that online study is already fairly mainstream.
- 70 percent of students feel they learn more in a blended-modality environment that uses both online and offline methods.
- 54 percent say they are more actively involved in courses that use technology, and 57 percent wish their instructors used more open educational resources.
- 55 percent wish their instructors used more simulations or educational games.

Source: Educause Center for Applied Research

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Simply put, learning has changed, and instruction must change to meet the learner. “Higher education is beginning to recognize that the 18th and 19th century pedagogies aren’t going to be adequate to address needs of today’s learners. So the challenge is, how do you deal with this environment?” said Dr. Paul E. Resta, Director of the Learning Technology Center at the University of Texas at Austin. Resta chairs the UNESCO Working Group on E-Learning for Teacher Development, which is focused upon adapting K-12 education to emerging technology.

Moreover, students feel that online interaction fosters better relationships with instructors, which have been historically limited to many-to-one interactions in the classroom and one-to-one interactions once or twice a week during an instructor’s designated office hours. When asked how they wished their professors would communicate with them, 53% of students said that they would prefer more face-to-face interaction. Also coming in with a 53% request rate was increased use of online collaboration tools built into the learning management system. The remaining requested methods were all digital including email, text messaging, instant messaging, online chatting, social study groups, voice-over-Internet Protocol (VoIP) like Skype, and Facebook. In last place: the phone conversation.

Thus, a majority of students say online learning enhances offline learning significantly and want more online collaboration with instructors.

Platforms and Devices

Learning institutions and corporate trainers will find themselves facing the same dilemma that faces business: adapting to myriad platforms, environments, and devices. For example, ECAR found that when it comes to smartphones, students are fairly evenly split between the Apple iPhone and Android phones (44 percent versus 46 percent). Generally, younger learners prefer Apple, while graduate-level and business learners favor Android. But it’s likely that any institution will need to accommodate both platforms.

This presents several challenges. Should an institution wish to use applications (“apps”) to deliver instruction, they must create two apps, one for each smartphone platform, and more apps optimized for Apple versus Windows-based laptops and tablets. Further, should they wish to...
deliver video instruction or interactive elements, the Adobe Flash technology that supports animation, video, and interactivity on Windows-based webpages is not supported on Apple devices, so alternate presentation methods may need to be designed for these platforms. (Flash is sunsetting in favor of more universal standards, but no universal standards yet exist.)

Finally, what is the best learning device? ECAR found that as of spring 2012, about nine in ten students own a laptop computer, and six in ten own a smartphone, while a one-third minority owns desktop computers. A minority 15 percent of students owns tablets, but that number is only likely to increase, if increases in tablet ownership in the general population can be used as an indicator. According to the Pew Internet and American Life Project⁵, tablet ownership in the general US population nearly doubled around Christmas 2011, from 10 percent to about 19 percent, while Nielsen data⁶ reveals that, as of late 2012, 39 percent of Americans are interested in purchasing a tablet computer in the next six months. Based on this increased demand, educators are gearing up to adapt to these devices with their touchpads and tiny screens.

Not so fast, advises Dartmouth Professor Joshua Kim, who tested the iPad Mini as a learning device and concluded that “A tablet should be a supplement to a laptop for learning, not a replacement.”⁵ Its 7.9-inch screen and lack of a keyboard makes it marvelous for consuming course content; but the laptop with its full keyboard is the clear choice for communication and collaboration.

So, learners are keen to use mobile devices, and institutions are attempting to meet them; but educators must make informed choices as to how they deliver that learning for its best effect.

The Blended-Learning Transition

The students are, alas, more ready for mobile and web-based learning than are the universities and corporate learning institutions. But institutions like Dartmouth College, the University of Texas at Austin and the University of Maryland are leading the way and finding some best practices.


Chief among those practices is to **accept these technologies as a tool of learning** rather than as a hindrance, advises Dr. Jason Farman, author of *Mobile Interface Theory: Embodied Space and Locative Media*. Farman is an Assistant Professor of American Studies at the University of Maryland, College Park. “Many instructors assume these are devices of distraction rather than engagement,” he said. “I heard from a high school teacher at a talk I delivered who said he requires his students when they walk into class to turn off their ringers and set their phones on a table. ‘I know they’ll Facebook or text one another.’ I told him we can take these technologies and co-opt them, use them for engagement with the material. That’s the huge shift in ways we need to think about the devices.”

Second is to **ensure that the product is worthy of the institution.** Dr. Joshua Kim is the Director of Learning and Technology for the Master of Health Care Delivery Science program at Dartmouth College. Kim helped craft a joint 18-month program between Dartmouth’s business and medical schools geared for business leaders in healthcare. The program uses in-person and online learning to help bring working leaders in the field to the classroom. It was the college’s first blended program, and as Kim describes, “Dartmouth cannot erode the brand” with a slapdash, jury-rigged online program. “It’s been quite amazing to build the resources and team necessary to deliver high quality, and mobile learning is part of that design.” While online learning has been touted as a solution to institutional financial woes, curriculum developers should keep the institution’s standards and goals in mind when allocating resources to the development of online programs and courses.

As antithetical as it seems, these institutions typically **embrace social media** as a tool to enhance learning, rather than as a distraction. Social media is what digital natives use to form communities and weigh in with opinions. Farman describes a 75-minute class that he teaches with 66 students. He requires the students to make one tweet during the class (more if they choose), making an observation about the topic, providing a relevant article, or talking with other students in the class. “I still encourage them to raise their hands, but it would be absolutely impossible to hear every one of them in that traditional way.”

“And there are many students who don’t want to do that—they feel uncomfortable speaking up in front of 60 or 80 students.” By the end of the lecture, Farman finds that the students have had a deeper engagement with the subject than if they had simply listened. “And looking at the Twitter feed is a great way as a faculty member to recognize what needs discussion, and what did they not get? Or did

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**Best Practices for Transitioning to Blended Learning**

1. **Accept technology as a tool of learning**
2. **Ensure product is worthy of the institution**
3. **Embrace social media**
4. **Choose a point of entry**
5. **Do not expect instructors to design online programs**
6. **Choose robust LMS**
they miss what I thought was important, and not addressed in the Twitter feed? Which topics need to be pushed further?”

Most universities choose a point of entry into blended learning, rather than attempt to retrofit their course catalogues to online and mobile platforms. Like Dartmouth, they choose a new program to build from the ground up. Barring that, Kim advises beginning with a higher-yield course, like a large freshman introductory course.

That said, they do not expect the instructors to design the online programs. Rather, they build a team to support those instructors, or seek outside expertise. The teams typically include online instructional designers, programmers who can build apps, and interactive developers. As Resta describes, instructors without support or additional training in the optimal delivery of online content are likely to simply shovel a course online with perhaps a talking-head style video, “And that doesn’t take advantage of the affordances that a web-based environment can provide to give a whole different kind of experiential learning.” The University of Texas at Austin created an IDEA Studio to provide technology integration support to the faculty of its College of Education. The IDEA studio treats the instructors as clients, guiding them through the apps and technological tools (such as video and online discussion groups) that might enhance a given course.

Finally, these institutions choose robust learning management systems (LMSs) to support online learning. Established LMSs such as Blackboard have the greatest penetration and are adding features to facilitate blended learning. Open-source systems, such as Moodle and Canvas, also offer this functionality. Some schools that have turned to these open source tools praise the sharing of best practices in the user-communities for these systems.

Overall, learning institutions are treating online and blended learning as evolutionary, rather than revolutionary. They are proceeding with forethought, using the web-based and mobile platforms because they fulfill the real and otherwise unmet needs of the modern classroom rather than because students merely like using them.

Easing the Transition

At MindEdge Learning, we’ve been fielding questions about blended learning, mobile devices, and meeting student expectations. We recognize that a number of issues are raised by the increasing use of technology in education. How best to bridge the gap between current practice and future needs? What tools for engaging students are most effective? How flexible is a given LMS for blended or mobile learning? How can courses be reconfigured to make them adaptable for mobile use? How can this be done without “dumbing down” the content or losing its richness?

MindEdge Learning has made a series of internal changes that allow us to better meet these new technological challenges. Our new Online College Courses are designed for compatibility with iPad
and tablet computers. We’ve built mobile apps for iPhone, Android, and Chrome for courses that run on our LearningEdge platform. We’ve also added a virtual classroom feature and other communication tools. The idea has been to look at online learning from the student’s perspective and make sure our courses meet the needs of the increasingly mobile learner.