Leveraging Technology for Higher Education Challenges

Information technology continues to have a major impact on the evolution of higher education, constantly creating new opportunities and challenges for all aspects of the institution. In the “IT Matters” department of EDUCAUSE Review, EDUCAUSE asks representatives of major stakeholder communities to reflect on how IT developments have changed their world and may continue to do so in the future and also on what those changes mean for their relationship with the higher education IT organization. In the following column, EDUCAUSE talks with Molly Corbett Broad, President of the American Council on Education (ACE).

Impact: How has information technology made the greatest impact, from a president’s perspective?

Certain parts of the traditional American college/university experience endure: the ivy-covered columns, the libraries with their warrens of study carrels. What's different today is that all students arrive on campus expecting a fast and reliable wi-fi network, whether they’re in the dormitory, the classroom, the library, or the dining hall.

And the students themselves are different. The typical college student these days is increasingly likely to be a working mother attending a local community college in order to advance her career, or a student veteran using post-9/11 GI Bill benefits and credit gained from his or her military experiences to attend a state university. The percentage increase of students age 25 and older has been greater in recent years (2000–2011) than the percentage increase of younger, more “traditional” students, according to federal education statistics. In addition, more than 31 million postsecondary students were taking at least one online course during the fall 2012 term, 6.1 percent more than the previous year. That growth rate was actually the lowest in a decade, but it still represents over 400,000 additional students taking at least one online course. Because these students have so many obligations that traditional students do not have, the higher education experience for them is web-based rather than campus-based—and we are adapting.

The numbers back this up: The 2013 Survey of Online Learning, conducted by the Babson Survey Research Group, found that 7.1 million postsecondary students were taking at least one online course during the fall 2012 term, 6.1 percent more than the previous year. That growth rate was actually the lowest in a decade, but it still represents over 400,000 additional students taking at least one online course. This is an ongoing sea change in the way we deliver knowledge.

Need: What do presidents need most from information technology?

U.S. higher education institutions have diverse missions and academic cultures, but most presidents are looking to ramp up their use of technology to do a better job in meeting the needs of all these nontraditional students.

We’ve seen some great examples, such as the recent arrangement between Arizona State University and Starbucks—the Starbucks College Achievement Plan (http://starbucks.asu.edu)—to help Starbucks employees pay for an online degree. This will help thousands of adult workers complete their degrees and demonstrates the large role that technology will and must play in helping us reach ambitious national attainment goals.

Meanwhile, some institutions are exploring other innovative waters: adopting competency-based education programs that use direct assessment methods to emphasize mastery and learning rather than seat time and the credit hour; and digital badges that allow prospective students to demonstrate their knowledge and skills and apply them toward postsecondary credentials.

Direction: Where do presidents see information technology headed?

The way we leverage information technology to support our missions has become a game-changer for higher education. Technology-enhanced education is becoming available in abundant supply, and in the future, it will be even better integrated as part of the academic environment. We are, of course, experimenting on a number of fronts.

For example, MOOCs may not be quite the disruption that some thought possible a year ago, but there is no question that these types of courses have helped extend the reach of some institutions and professors to learners around the country and the globe.

Meanwhile, a wide array of technology-based strategies—from big data analytics to cognitive learning science and artificial intelligence—can support senior campus leaders in better understanding how to improve student learning. Candace Thille, a senior research fellow at Stanford University and the founding director of the Open Learning Initiative at Carnegie Mellon University, is conducting research that focuses on applying results from the learning sciences to the design, implementation, and evaluation of open web-based learning environments.

Technology can also help efforts to improve institutional productivity and demonstrate accountability. The University of Texas System designed a Productivity Dashboard (https://data.utsystem.edu) with web-based applications for providing and analyzing institutional data across a variety of metrics, all with the goal of helping to support better decision making by senior leaders.

Even with internationalization, information technology
is playing a role. Earlier this year, ACE and the Center for Collaborative Online International Learning (COIL) of the State University of New York (SUNY) collaborated on an awards program recognizing institutions that had used information technology to better connect their students with the world. The inaugural recipients—Great Lakes College Association, Mount Holyoke College, and SUNY Cortland—demonstrated how IT solutions can make a vast difference in enabling students, some of whom might never be able to afford to go abroad, gain an experience in global cultures. Mount Holyoke, for instance, used video-conferencing to connect with international partners in courses and enhance its students' understanding of global issues from different perspectives, of foreign languages and cultures and of career opportunities.¹

Connection: What key message do you have for the higher education IT community?

We are in a rapidly changing environment in the use of digital technologies to achieve deeper learning and easier access to data and knowledge. Given the growing diversity of students of differing ages, educational goals, and current responsibilities, we must develop alternative learning pathways to higher education in order to serve their needs. With support from the IT community, various forms of digital and blended learning strategies hold great promise for doing just that. In accommodating these older, part-time students, we must not compromise our commitment to the highest quality in both teaching and learning. For traditional college-age students, there can be no better experience than one in which professors share their extraordinary knowledge, provide advising and support as students learn to communicate ideas, show how to apply those concepts in the real world, and undertake research that advances an academic discipline and develops a global understanding.

The academy should position itself as the master convener—of ideas, of stakeholders—that brings together the right people to ask the right questions and pursue viable solutions with absolute rigor. Technology is one tool for ensuring that colleges and universities continue to demonstrate their ability to evolve to meet new needs and provide leadership to communities, regions, and the nation to address the big challenges—including how best to educate our citizens.

Notes

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