Student Engagement: Challenges from a CIO Perspective

In many ways, students are now more actively engaged in learning. On any campus, an informal inventory of the devices that students and other community members are carrying would likely include iPhones, Android devices, and other smartphones, iPads and other tablets, laptops, and netbooks. The question often is, “What are students engaged in learning?”

Today’s learners (both traditional-age students and lifelong learners) are combining knowledge in new and different ways to support their personal learning styles and requirements in an increasingly mobile universe. No longer is the transfer of knowledge structured solely as an information transfer from faculty member to student. Innovation in knowledge acquisition is occurring on a daily basis and is being defined by the learners themselves. This knowledge acquisition is becoming a lifelong skill as learners of all ages need to keep pace with a changing and multi-career landscape.

Sources of knowledge run the gamut from Wikipedia to YouTube, from Facebook to Flickr, from GPS to Skype, from foursquare to Poyn, and from wikis to blogs. Knowledge acquisition is facilitated by crowdsourcing, open source, community source, open APIs (application programming interfaces), and cloud-based services such as Dropbox, Pandora, and Aviary. Yet though the Internet provides limitless resources for learning and knowledge acquisition, it does not provide a context or framework for navigating the array of information. This can be a daunting challenge for some learners.

Many knowledge sources are based on personal reflection and experience. In fact, knowledge sources result from the sharing of works-in-progress on a public basis that encourages engagement and involvement. Blogs, polls, design reviews, and problem-resolution contests are all examples of developing knowledge through experience, reflection, practice, and sharing. Students are participating in the creation of knowledge—not merely absorbing knowledge.

Knowledge about learners is critical to leveraging technologies in support of learning. Brent Muirhead has reported the following as critical to the engagement of learners: interacting with classmates online; reflecting and commenting on observations and ideas; getting constructive response; posing alternative solutions; identifying potential or real problems; exploring new theories and sharing relevant work, research, experiences, and knowledge.1 Clearly, it is not all about the technology.2 Yet work on evolving the appropriate new teaching practices to take advantage of the potential of the new technologies has been sporadic, leading to the consistent questioning of whether or not technology actually makes a difference in learning.

Beyond technology use, does defining this engagement require creativity skills that may be above the skill-set of some learners? Is the ability to self-select devices, applications, and community and to combine them into a personalized learning environment required in today’s world?

Robert Sternberg and his co-authors defined the seven traits of creative people: independence of judgment, self-confidence, attraction to complexity, aesthetic orientation, openness to experience, risk-taking, and self-actualization.3 These traits certainly appear to describe transforming learners. Transforming learners are defined as learners who “prefer loosely structured, flexible mentoring environments that promote challenging goals, discovery, strategies, problem solving, and self-managed learning.”4 Where does that leave the other types of learners? Performing learners may be supported at the outer bounds of the transformative learning experience. Although they “prefer semi-structured environments that stimulate personal value and provide details, tasks, processes, and creative interaction (hands-on),” they do not necessarily value exploration and great effort. However, conforming learners—those who “prefer simple, safe, low-learner control, structured environments that help learners achieve comfortable, low-risk learning goals in a linear fashion”—may be left out of the transformative process.4

Perhaps the differentiation in the types of learners can assist those of us in higher education information technology in understanding our evolving role in the new learning paradigms. How do we and our services remain relevant? What do we, collectively, need to do to adapt and to continue serving future learners and leaders?

We can look to the National Study of Student Engagement (NSSE) for assistance in defining a framework. NSSE identifies five major benchmarks of effective educational practice: level of academic challenge, active and collaborative learning, student-faculty interaction, enriching educational experiences, and supportive campus environments.5 From these benchmarks, Gary Pike and George Kuh have identified seven types of institutions: diverse, but interpersonally fragmented; homogeneous and interpersonally cohesive; intellectually stimulating; interpersonally supportive; high-tech, low-touch; academically challenging and supportive; and collaborative. Students at diverse, but interpersonally fragmented institutions tend to use technology but do not view the institution as supporting their academic or social needs. Peers are not viewed as supportive or encouraging. This sounds like a challenging place to learn. Quite the opposite, students at homogeneous and
interpersonally cohesive institutions view the institution and their peers as supportive. Students at intellectually stimulating institutions are engaged in numerous academic activities and interact frequently (in and out of the classroom) with faculty. They also have tendencies to engage in higher-order thinking and to work with their peers (i.e., collaborative learning). Students at interpersonally supportive institutions experience a lot of diversity and view their campus and peers as supportive. They also have a reasonable amount of contact with faculty. Students at high-tech, low-touch institutions depend on technology to the exclusion of other types of interaction. Individualistic styles with little collaboration and interpersonal engagement rule the day, and the academic challenge is perceived as low. Students at academically challenging and supportive institutions perceive that the faculty set high expectations and emphasize traditional, higher-order thinking. Active and collaborative learning is not required, yet students support one another and feel supported by the campus. Finally, students at collaborative institutions rely highly on their peers for support and learning, with some technology mediation. They have a reasonable amount of contact with faculty as well as with other campus constituencies, all of whom are viewed as supportive.

This categorization of types of institutions provides insights into the current levels of student engagement and, thus, the technologies that are supportive of engagement. For example, Olin College is populated with transforming learners. Olin College emphasizes hands-on, project-based learning where students work in teams from their first day on campus. The students are engaged in discovery, problem-solving, and self-managed learning with the faculty and their peers in a supportive environment. Olin College would be classified as an intellectually stimulating institution with a large amount of faculty-student interaction and collaborative learning. Olin also takes collaboration to the next level through its partnerships with Babson and Wellesley Colleges, providing cross-registration and joint project opportunities for its students.

Applying this categorization to our institution has been helpful in planning the future support of student engagement at Olin. As our students arrive on campus with experience in using cloud services from a consumer perspective, we will continue to engage them (and the faculty) in conversations regarding the services they require to support their academic and social endeavors. And as the technology landscape continues to change at an increasing pace, these ongoing dialogues and interactions with faculty, students, and our External Technology Advisory Board will continue to shape the look and feel of information services at Olin College.

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