Staying Focused on Improvement

Fifteen years ago, I wrote a Leadership column for EDUCAUSE Review about the need for higher education leaders to understand—and focus on—how innovative uses of information technology not only change but also improve the way educational programs are developed, managed, delivered, and evaluated. Video-discs and DVD players, videotape decks, and Internet access in every classroom were a great achievement at that time for most colleges and universities but especially for those like The University of Texas at El Paso. UTEP is located in a low-resourced setting and enrolls a demographic of students who encompass a wide range of ages and ethnicities and who balance work, families, and other priorities with their pursuit of higher education.

Today, that commitment—to make new technologies a priority for our 21st-century student demographic—has remained constant at UTEP, during a period of remarkably fast-moving technological changes. For example, when I wrote for EDUCAUSE Review in 2000, I highlighted a newly constructed classroom building, the Undergraduate Learning Center, that served as a model for incorporating technology into our teaching, research, and service missions. Since then, that building has served as both a laboratory for the use of technology to support teaching and learning and a launching point for distributing technology across the campus. Now, each and every one of our 176 classrooms campus-wide contains effective high-technology features—as expected by today’s students.

Recognizing that technological developments—and the student, faculty, and staff expectations that accompany them—will continue to challenge us, we are already well on our way toward designing the next generation of classrooms focused on operability, simplicity, and learning enhancement. The guiding design principles in this effort are to avoid expensive technological gimmicks and insist on uniformity and interchangeability, ensuring that any faculty member assigned to any classroom will know what resources are available and that any technician called on to repair or service a classroom will be well acquainted with the technology in it.

Since 2000, UTEP’s student population has increased by nearly 9,000, and most of that growth reflects increased Hispanic enrollment: of our 23,000 students, 80 percent are Hispanic. However, neither our mission nor how we incorporate technology to achieve it has changed. Providing access to up-to-date technology continues to be vital to our students: more than 50 percent are the first in their families to attend a university; 84 percent are El Paso County residents; and another 6 percent reside in Juárez, Mexico, just across the border.

Because most UTEP students commute to the campus and hold part- or full-time jobs, we must offer them a combination of face-to-face and online learning options that can accommodate their life demands. And since affordability remains a highly important decision-driver for UTEP students, incorporating technology is vital to providing an efficient and cost-effective education for them, not merely a way of adding bells and whistles. In 2000, we were proud to say that we offered 15 web-based courses. Last year we offered 257 courses fully online, and faculty have incorporated online content into 261 conventional classroom courses in those areas where online instruction proves to be effective.

Enrollees in online courses have primarily been our own students, for whom these courses offer a more flexible and convenient alternative to scheduled, on-campus classes. In 2005, we began offering complete degrees online, particularly at the graduate level and in areas where we had special expertise such as Spanish-English creative writing, nursing, defense studies, and bilingual education. The success of these efforts has led us to expand the number of online degree programs in a compressed six-week-semester format.

Our experience with technology in classrooms led us to rethink how we provide technology in other settings and how we ensure that our students—35 percent of whom are from homes with an annual family income of $20,000 or less—are able to access that technology. The first target of our efforts was the UTEP library. Until 2005, our library was what one might have expected at a large public university: a well-stocked repository providing access to most of the materials that students and scholars needed to be successful, along with a staff that was well prepared to work with a wide variety of users to meet their needs. Like many other libraries at similar institutions, it was also underutilized. People came to check out books or to access periodicals and databases, but with few exceptions, most learning and research activity took place elsewhere on the campus.

The recognition that UTEP students often could not follow traditional university schedules and needed a campus location that would provide both space for study and access to technological services nearly 24/7 led to the transformation of the
library into a “learning commons” model. The library extended its hours, dropped its “no food, no drink” policy, installed an attractive café in its entrance lobby, and created a variety of inviting technology-enhanced spaces for group and individual study. Capitalizing on the increased traffic, a variety of student support activities were moved into the library including tutoring centers, a career-development center, and a military student success center. As a result, the quiet, somewhat secluded ambience often associated with libraries has been replaced with the constant, energetic buzz of hundreds of students interacting with each other face-to-face and through technology in ways that promote the learning process.

UTEP also began making significant investments in wireless connectivity, with a goal of nearly 100 percent interior coverage and as much outdoor campus coverage as was technically possible. Today, we log as many as 8,000 simultaneous devices connected to our Wi-Fi network. For a primarily commuter school, this high level of connectivity continues to be impressive—and a clear sign of things to come.

Surveys indicate that most UTEP students own their own computers. Our initial assumption was that the combination of wireless connectivity and a high percentage of student ownership would render fixed computer facilities obsolete. However, observation of student behavior, surveys, and focus groups indicated that this assumption didn't hold true for UTEP. Although commuter students may in fact own computers, these computers are often fixed desktops located at students' homes or outdated, bulky laptops that students do not want to carry to the campus. To meet their needs, UTEP now provides access to approximately 1,400 computers, some in classrooms and nearly 500 available to any student at any time (the latter have waits at high-demand times). A significant number of these computers offer high-end services and programs rarely available or affordable for students on their own machines.

As UTEP acquired more data and computational capabilities, we began to ask ourselves how we could better use these capabilities to improve student success, contribute to organizational efficiency, and satisfy accountability requirements. Of course, the challenge with analytics is how to move beyond the large volume (i.e., big data) and complex analyses to identify manageable and meaningful data that will actually be used by faculty, staff, and administrators to ensure continuous improvement in operations. At UTEP, as at most other higher education institutions, this means fostering a culture that motivates decision makers at all levels to track progress and modify tactics or strategy as they work to achieve university goals and targets.

Our institutional research group, the Center for Institutional Evaluation, Research and Planning (CIERP), has developed a robust infrastructure of more than 600 web-based tools and dashboards to provide meaningful access to usable data across the campus. These tools have empowered our provost, deans, and other administrators to track specific outcomes and generate targeted initiatives for student success, leading to significant improvements in retention and degrees awarded. In human terms, this has meant that the use of analytics enabled us to help our graduates achieve their dreams of becoming the proud degree recipients they are today.

In looking back at what higher education has accomplished in terms of technology-based educational delivery systems, we have made significant progress. But when it comes to technology, there is always something shiny and new coming along. The key is to stay focused and to make sure that we are using the right technology, targeted toward our institutional goals. For UTEP, that means using advanced technology to expand our mission of access to an excellent education for all students and providing those students with the technology experience that they will need to be competitive on a global level.

Notes
2. Analytics here is the general term that describes the processes and procedures used to analyze data and, more importantly, enable the use of the data to effect change.

Diana S. Natalicio (dnatalicio@utep.edu) is President of The University of Texas at El Paso.
© 2015 Diana S. Natalicio