



Planning for Emerging Technologies in Higher Education

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Overview

Effective technology planning in higher education requires vision, cooperation, collaboration, and funding. Universities struggle with the concept and often just address acquisition of hardware and software as its primary benchmark for success. Typically, the IT side of operations is often the primary focus and input from the academic side about use of technology is minimal.

To better ensure that the technology needs of the faculty were being met, Eastern Illinois University established the Center for Academic Technology Support (CATS) in 2001 to serve as a campus resource for faculty and the academic departments. The mission of CATS (<http://cats.eiu.edu>) is to provide comprehensive services in the design, development, implementation, and evaluation of technology-enhanced materials and other resources in support of academic courses and programs. CATS also promotes and supports research and development of creative, innovative, and effective uses of established and emerging technologies by the university community.

Through the leadership and technological expertise provided by the CATS staff and others on campus during the past six years, Eastern Illinois University has been steadfastly moving forward through a process to gather input from students, faculty, staff, and administrators about the use of technology. New technologies have been researched and then provided to campus constituents as part of the formative evaluation process. As a result, a technology planning model has been evolving that addresses the technical, academic, and human infrastructures with short- and long-term goals in mind.

Comprehensive Technology Planning Committee

The first phase of that model included establishment of the Comprehensive Technology Planning Committee (CTPC) in 2003. During its 18-month existence, the 24 members of the CTPC facilitated opportunities for individuals to discuss the importance of technology relative to the mission of EIU and define its presence as part of the decision-making process for support of campus projects and initiatives. As a result of that process, it was also clear that the "total student learning experience" should be the focus of all efforts, but especially where technology is involved.

The resulting CTPC Report outlined 7 action items and 30 recommendations to address campus technology needs and issues in four areas: (1) Technology Infrastructure, (2) Educational Training & Professional Development, (3) Academic Curricula & Degree Programs, and (4) Management, Administration & Support Services. That report has been updated annually (<http://cats.eiu.edu/ctpc>) and its dashboard of technology-related items have served as the foundation document to monitor and chart institutional progress for use of technology.

Progress Along the Way

Since publication of the first CTPC Report in 2004, campus constituents have continued to explore various technologies to determine how they could be best utilized for teaching, research, service, advising, and other academic purposes. The Center for Academic Technology Support (CATS) has provided technical and financial support across campus for matters related to the use of technology.

For example, the TEAM Planning, Implementation, and Evaluation (PIE) Grants have provided a mechanism for the colleges to fund faculty-led projects that promote the use of new and emerging technologies. The projects are funded with the understanding that they will benefit the faculty member and students, as well as be part of the departmental and college technology plans. In addition, TEAM Professional Development Grants were made available to faculty to support their attendance conferences and workshops to learn about more technology.

The CATS staff has also developed an extensive training program for faculty, staff, and graduate assistants called TECnet, which stands for “Technology Enhancement on Campus through Networking, Education, and Training.” A network of volunteer professionals from the colleges and other departments on campus work together to help others increase their knowledge and enhance their skills to effectively integrate technology into the academic programs. Each week 10 to 12 workshops are provided free-of-charge to participants who want to learn more about hardware and software (<http://cats.eiu.edu/training/training.php>). The schedule is adjusted to accommodate requests for new and emerging technologies of interest or being used on campus.

This past year, the “Tech Bytes” series was developed by the CATS staff to help faculty explore the integration of technology in classroom instruction to enhance teaching and learning. The monthly seminars provide access to information about a variety of topics of interest to the academic community. Another new program called the “Online Course Development Institute (OCDI)” was also established to provide faculty a professional development opportunity to learn about best practices in quality online course development. Each semester 12 faculty members are enrolled in an online course through the OCDI (<http://ww.eiu.edu/~OCDI>) and go through the process to learn more about online instruction and tools available from the instructor and student perspectives.

The CATS staff also provide expertise and services to support nearly 300 projects on campus each year that involve technology in some way. Examples include use of

student response systems, creation of websites, video production, e-portfolios, videoconferencing, newsletters, podcasting, webconferencing, graphic design, multimedia presentations, database development, online surveys, and much more.

With support from CATS, the Academic Technology Advisory Committee (ATAC), Media Services, Facilities Planning & Management, and Information Technology Services (ITS), a five-year strategy was also implemented over the past five years to upgrade classroom facilities on campus. As a result of that plan, all 214 learning environments are now categorized as Technology-Enhanced Classrooms (TECs). Each TEC houses an instructor podium with computer and monitor, audio system with speakers, VCR/DVD player, Internet and network connection, wireless access, and a ceiling-mounted projector with screen. In response to faculty requests, additional equipment like interactive whiteboards, document cameras, and student response systems have been installed in the TECs through funding from CATS and the colleges.

Responses from the Colleges

Efforts have been underway the past two years to identify critical elements for technology planning in each of the four colleges (Arts & Humanities, Business & Applied Sciences, Education & Professional Studies, and Sciences). The Office of Academic Affairs hosted an administrative retreat to help establish a baseline of activities and also brought an external consultant to campus to meet with deans, department chairs and directors. With approval of the consultant, those sessions were recorded and shared with faculty, staff, and students.

As a result, each college was then asked to address three primary questions related to technology literacy, the academic vision of technology use, and technology expectations for the current and future workforce. Common questions were provided to serve as prompts to initiate the conversations. As a sample, here are the summary responses from the Lumpkin College of Business & Applied Sciences (LCBAS):

1. What does it mean to be “technology literate” in the 21st century?

There was significant diversity of opinions of the faculty in LCBAS as well as the eight committee members on the three common questions. Therefore, it was inconclusive to determine what it means to be “technology literate” in the 21st century. However, committee members were in consensus that it is important for faculty to understand the appropriate pedagogical approaches to effectively use technology to achieve learning goals for their specific program areas. It is not required to use all technology but appropriate technology, as well as technology within the realms of the faculty comfort level.

It is expected that the faculty stay current on technological use within their fields and educate students on proper use of this technology. The University needs to be a leader in technology use in the disciplines.

2. What is the “academic vision of technology use” in the departments and colleges at EIU?

The increased availability of technology in the classrooms would make it significantly easier for faculty to use. While advanced technology may not be required in all classrooms at this time, a survey of faculty to determine specific technology needs would assist in placing these technologies in one classroom in each college. Classes that required these technologies could be appropriately scheduled in that room.

The committee members were in agreement that all classes can not be taught online. It was suggested that many courses can be taught effectively online but not all courses.

3. What are the technology literacy expectations of our staff, faculty, and students to be effective and productive employees in the workforce (now and in the future)?

Training for faculty and staff will continue to be a key in the use of technology on campus. There is a need to further investigate using various training methods in addition to face-to-face, i.e. online tutorials, brown bag lunches. It was determined that the basic skills in technology are appropriately addressed; however, there appears to be a lack of training available in higher level learning skills.

With the increased use of technology, the concern for proper ethical practices in using technology will increase. There will be a need for education with students, as well as faculty, in this area.

Although each college has its unique needs and issues, common themes have surfaced in response to these questions and follow-up discussions. Areas of emphasis include instruction and learning (face-to-face and online), curriculum and program development, training, hardware and software needs, technical support, professional development, wireless capability on-campus to support laptops and other initiatives, student response systems, course management systems, web development, classroom infrastructure, and many more. Currently a proactive approach is underway in each college to get more feedback from constituents (faculty, staff, students, alumni, advisory boards, etc.) to help set goals, priorities, and direction in the technology planning process.

The Next Step

Discussions will continue during the Fall 2008 semester as each college continues to develop and refine its own technology plan. Information from those plans will be consolidated into one comprehensive document later that provides further direction for the institution in terms of its academic technology planning efforts. The goal is to complete that process by the early part of the Spring 2009 semester so the entire campus will have time to review the document and provide feedback, comments, and suggestions. The anticipated end-product will be a plan that reflects a coordinated effort which addresses identified academic needs and promotes better use of technology, now and in the future.