

Technology, Teaching, and Learning at Xavier University of Louisiana

*A Teaching, Learning, and Technology Roundtable Position Paper
March 2000*

Introduction

PURPOSE OF THIS DOCUMENT

This document has a twofold goal.

First, it represents a formal foundation, endorsed by the faculty of Xavier University of Louisiana, for the integration of information technology (IT) into the teaching and learning process at Xavier. The present paper is neither exhaustive in scope, nor prescriptive in terms of specific technologies, nor intended to mandate specific technology policies on campus. Nevertheless, it signals the faculty's intent to incorporate information technology into teaching as appropriate according to the curricula and needs of different departments, and in keeping with Xavier University's mission.

Second, this document is approved by the faculty as a directive to the university to ensure that ample, consistent, and reliable support be provided for the use of information technology in the curriculum (see goal 6 below). Without adequate support and a dependable campus technology infrastructure, the faculty's best efforts to enhance student learning through IT will be frustrated or rendered fruitless altogether. Accordingly, this document should inform IT policy decisions at Xavier, with the goal that faculty be able to participate, with a consistent and effective voice, in IT policy formation and decisions at Xavier University.

INFORMATION TECHNOLOGY IN HIGHER EDUCATION

In 1998, Xavier University of Louisiana began a comprehensive self-study process. The immediate incentive for the self-study has been the need to prepare for an accreditation review by the Southern Association of Colleges and Schools (SACS). However, the university also realizes the need for a thorough analysis of overall institutional effectiveness if it is to continue to succeed in the fulfillment of its mission.

As pointed out in the 1997-98 University Planning Document, “Xavier is [on the one hand] at the pinnacle of its success in fulfilling its mission,” yet on the other hand faces substantial challenges in its efforts to sustain and improve upon that record of success.

One such challenge, which is now faced by virtually every institution of higher learning in the world, is the potential impact of information technology on the teaching and learning process. A wide spectrum of opinions on the consequences of computers for faculty and student life is voiced daily on college campuses across the country. At one extreme, enthusiasts have embraced computers as the most profound revolution in the technology of information since the invention of the printing press half a millennium ago, and assert that computers offer a world of promise to teachers seeking to help their students learn more and learn better. Others counter that the use of computers brings little or no substantial change to the educational process. Still others warn that the new technologies threaten to destroy what has been of value in the college experience by changing the very definition of “college,” by replacing the traditional college with the “virtual university,” by substituting the “information facilitator” for the professor.

INFORMATION TECHNOLOGY AND THE MISSION OF XAVIER UNIVERSITY

The faculty and administration of Xavier recognize that teaching and learning at our university will be profoundly affected by information technology in years to come. Indeed, the impact of computers on courses at Xavier has already been substantial. Electronic classrooms in the library are booked and used during the majority of available class hours during the week, and an ever increasing number of faculty are incorporating Web sites, e-mail assignments, and electronic bulletin board discussion into their courses. While this has been a generally welcome development, it is becoming clear that a guiding vision for the use of information technology needs to be developed, so that this technology will most effectively enhance Xavier’s mission, not contradict it. The teaching and learning process at Xavier has traditionally been shaped by close faculty attentiveness to student educational needs, both inside and out of the classroom. This is an intended consequence of the university Mission Statement’s goal that Xavier aims to prepare “its students to assume roles of leadership and service in society.” Xavier’s faculty remains committed to providing generous individual attention to each student; it would be inappropriate for computer technology to in any way replace or minimize the high level of

teacher-student interaction—a prolonged intellectual encounter—characteristic of teaching and learning at Xavier. Accordingly, the university’s self-study proposal specifically identifies technology as a “major issue that is significant to the enhancement of the University.” A key goal of the self-study is that “the University community will work together to ... develop a shared vision of the role of technology in the teaching and learning process.”

The document set forth here is the result of discussions of the Xavier University Teaching, Learning, and Technology Roundtable (TLTR), and is an attempt to express the shared vision called for in the self-study proposal. Faculty, professional staff, and administrative representatives belong to the TLTR and have participated in its work. In the course of its work, this group has identified several goals for the infusion of technology into the teaching and learning process. Seven of these goals are set forth below. The first three goals focus on the fundamental issue of why considerable student exposure to information technology is necessary in order for Xavier graduates to succeed as leaders in society and in the workplace of the coming century. The remaining four goals present TLTR’s consensus on expanded access to digital educational resources, distance learning at Xavier, the need for institutional support for the adoption of educational technology, and the need for an ongoing technology policy evaluation process.

Information Technology and Education at Xavier: Seven Goals

1. CAREER ENVIRONMENTS AND “COMPUTER CULTURE”

Probably the most obvious reason for infusing technology into the learning process is that students need extensive experience with technology if they are to function in an overwhelmingly technological world. If Xavier graduates are to assume roles of leadership and service in their professions of the twenty-first century, they simply must have a fluency in “computer culture” that will enable them to solve problems, communicate, and collaborate with others in digital environments.* Such fluency does not necessarily mean that students must learn a specifically determined set of software

* Cf. the 1997-98 University Planning Document, Goal 1, Subgoal D.

applications. Though such requirements may be useful, the nature of computer software is changing rapidly, and it would be unwise to mandate a canon of applications which, however advanced today, may be obsolete or unsupported within a few years (or even months!). Rather, *the goal proposed here is that students will, through their experiences of learning with the aid of computers, gain the proficiency and facility needed to excel in a twenty-first century career environment increasingly permeated with, and dependent upon, information technology.*

2. "DIGITAL DISCERNMENT"

Closely related to this general facility with computer culture is the ability to discern. Not all information available via technology is reliable or useful. Rogue Web sites masquerading as legitimate information authorities are legion, and some pieces of information technology (e.g., viruses downloaded from Web-based user groups or transmitted through e-mail) can be downright dangerous. Not all technologies need to be incorporated into a single work environment. Knowing which software program or which piece of hardware to apply to a particular task is an invaluable asset. *Through their exposure to technology in the learning process, Xavier students should acquire the ability to evaluate, objectively and critically, information acquired through technological means and from digital sources.*

3. COLLABORATIVE LEARNING IN DIGITAL ENVIRONMENTS

Information technology presents many challenges, which typically are encountered at the level of the two areas just described. Acquiring fluency in particular computer applications, for example, or solving an information technology problem of any nature, can present formidable difficulties to the novice and expert alike. Distinguishing good information from bad, reliable data from unreliable, superb Web sites from scandalous ones, is likewise not always a simple task. There is, however, a third level of challenge related to these, yet even more profound than they: the possibility that the digital medium itself will affect, modify, enhance, or degrade the learning process itself. In recent years, both educational theory and practice have pointed out the strengths and advantages of active, collaborative learning. In an active learning environment, students ideally play a more engaged and responsible role in their education, since they do not rely

on the professor as a lecturing source of information. Instead (and again ideally), they regard the teacher as a guide and mentor in the learning process. Though such an approach often promises a richer educational experience for teacher and student alike, it is not without risk to both. Some teachers may with good reason hesitate to surrender their positions as authority figures in the classroom. By the same token, it is common enough for some students to feel more secure in a lecture environment demanding little participation of the sort which might leave one vulnerable to perceived ridicule or criticism. Active learning in the traditional face-to-face classroom may in fact hinder the learning process in these cases.

Information technology in education may be poised to make its greatest contribution in the area of collaborative learning. Professor James J. O'Donnell has suggested how.*

... the traditional classroom is ... a place for rehearsing behaviors of use in later life ... In all the places where education is most personal, it creates a space in which students begin to behave as adults, to behave as they will when they have real responsibilities. The focus of such work is to draw the student out of passivity into activity. The best classroom is one in which the student begins to think, speak, write, and act in new ways made possible by that classroom.

That classroom is a potentially frightening place because much of our traditional pedagogy depends on the managed infliction of humiliation. When we call on students to perform, we implicitly threaten them with the risk of embarrassment if they do not perform well ... Here is where electronic media can help innovation. The better communication, the personalization, and the multiplication of spaces, real and virtual, in which to invite the student to perform can all make this model better. The student who now is unable to perform adequately in the face of perceived threat of embarrassment in class is the one who can be given a place to rehearse out of sight of classmates and teacher, and then be invited back into a common space when ready. The common space can become increasingly dramatized and in various constructive ways competitive, while the private work is all done offstage. To link the work that is done offstage to what goes on in the classroom is the true nexus of teaching and the best place to concentrate attention when teaching goes astray.

In O'Donnell's view, technology replaces neither the teacher nor the face-to-face classroom experience. Rather, it enhances the learning process by giving both teacher and

* Excerpt from James J. O'Donnell, *Avatars of the Word: From Papyrus to Cyberspace* (Cambridge: Harvard University Press, 1998), 185-6.

students alternative and less threatening paths of communication and expression. Such a vision is in keeping with Xavier's mission and teaching practice, which continues to value both the classroom experience and individualized faculty attention to student learning as indispensable components of the educational process here. Accordingly, *information technology will be infused into the educational process with the goal of shaping students into life-long collaborative learners who can work with ease and security in many different communication environments.*

4. GREATER ACCESS TO RESOURCES

In addition to the directly student-related goals set forth above, information technology promises to facilitate and enhance the learning process by providing students and teachers access to educational materials they would otherwise be unable to acquire without inconvenience or difficulty. The World Wide Web, as well as e-mail and Usenet discussion forums, are obvious sources of readily obtainable information, though their use often demands a high level of "digital discernment." More dependable and substantive are digital search tools and databases which often can be acquired only by purchase, but which provide the university community with valuable access to high-quality digital information. Xavier campus access to ProQuest, JSTOR, and similar digital resources already illustrates the effectiveness with which information formerly available only to larger or wealthier universities can now be summoned at the fingertips of Xavier students and faculty. *Xavier will continue to acquire, with the aid of grant funding as necessary, digital resources which provide access to information students may profitably use in the course of their study.*

5. DISTANCE LEARNING

In the spring of 1998, the Xavier University TLTR undertook an extensive examination of the desirability and feasibility of distance or distributed learning, understood here as a curriculum delivered exclusively or primarily by computer, video, or other technologies (in contrast to courses enhanced by the use of information technology, but still preserving face-to-face interaction between teachers and students). Discussants agreed that distance learning in the sense of remotely delivered classes, electronic courses, and similar undertakings would probably not in the near future serve the needs of

the majority of Xavier *undergraduates* in the College of Arts and Sciences. In demographic terms, Xavier will in all likelihood continue to draw the “traditional” student, 18 to 22 years of age and living either on campus or in the immediate New Orleans area. Indeed, TLTR during its discussion made the formal recommendation that the handful of TV courses currently listed in Xavier’s course offerings be abolished, in part because those courses were being taken primarily by resident or area undergraduates who had no demonstrable need for a remotely delivered course.

However, TLTR recognizes that *graduate and professional school students* will be well served by distance learning in the sense described above, and faculty in several areas have already expressed an interest in developing appropriate distance learning offerings. College of Pharmacy students completing post-baccalaureate studies or engaged in off-campus internships or other work required for licensure will be greatly assisted by the development of a distance learning program. Likewise, distance learning promises to enhance the educational experience of Xavier Graduate School students in a variety of programs, including the Division of Education and Nurse Anesthesiology. Many of these students already find themselves in a full-time employment situation which leaves them little flexibility for on-campus studies at Xavier. A distance learning program has the potential to make their course of study easier and more efficient. Ultimately, it may suggest ways in which distance learning can serve Xavier undergraduates as well.

Since distance learning directly affects the way the curriculum is delivered, it is essential that the university formulate institutional goals and policies in support of its distance learning initiatives. The Planning Council for Academic Affairs has already recommended (October 1999) that distance learning courses need to be approved through established academic council procedures, for example.

Xavier University will pursue the planning and implementation of distance learning for those academic programs, especially at the graduate level, which would be substantially and appropriately enhanced by distance learning. The university will also develop formal institutional guidelines for distance learning programs offered by Xavier.

6. A CAMPUS ECOLOGY OF SUPPORT FOR TECHNOLOGY

None of the goals described above can be implemented without institutional support in a variety of areas. The greatest immediate obstacle to the incorporation of

information technology into the curriculum is the lack of financial resources necessary to support continuous maintenance and upgrading of both hardware and software. Rapid changes in computer technology, combined with the relatively short life spans of most machines and applications, have meant that institutions across the nation have been forced to commit themselves to serious fiscal burdens if they desire to maintain a useful information technology infrastructure. Computers can no longer be thought of in terms of equipment which, once purchased, will function effectively for an extended period of years. Rather, a far-sighted fiscal approach to technology expenses must see these costs in fluid, ongoing terms, much as personnel costs are regarded.

Also, if information technology is to function properly and dependably on a daily basis, comprehensive support services must continue to be provided through the university's Information Technology Center. To fulfill its task, ITC in turn must receive ample fiscal, institutional, and personnel support.

Finally, in relation to the faculty who will bear the primary responsibility for infusing technology into the teaching and learning process, strong and active institutional support is indispensable. If faculty are to take a leading role in the development of educational technology at Xavier, they must be convinced that this technology, with its steep learning curve, will make a substantial and positive difference for their students. Few faculty have the time or inclination to become computer programmers or advanced Web site designers, nor should they be expected to. Teachers contemplating the adoption of technology in their courses should have the personnel support, and where necessary the training, release time, or stipend support, to encourage them to devote their creative energies to the development of truly educational technology for their students. The time investment required of faculty incorporating new technologies is often daunting, and should not be underestimated by colleagues or administration. "When faculty become the hub of most online class communication, their time can be almost fully consumed ..."* Furthermore, faculty should have a clear idea of how their incorporation of technology into teaching will be assessed and rewarded in the tenure and promotion process.

* Judith V. Boettcher, "Cyber Course Size: Pedagogy and Politics," *Syllabus* 12:8 (April 1999),

Accordingly, *the faculty, professional staff, and administration of Xavier University will work towards a common purpose of building up financial, institutional, and academic support for the integration of technology into the teaching and learning process.*

7. THE NEED FOR CONTINUOUS EVALUATION

If it fulfills its intended purpose, this document is only a beginning for what should become an ongoing assessment of the role of technology in education at Xavier University. Such an evaluation should become an institutionalized process, whereby emerging technologies, which will surely continue to develop at a dizzying pace and at times unpredictably, will be adopted and supported at Xavier if they enhance the educational mission of the university. This assessment process should involve the articulation of standards, in keeping with the university's mission, to determine which technologies should be adopted, and which should be discarded. Such a process is a complex one, and must involve many members of the university community; TLTR alone is not in a position to design and implement such a comprehensive evaluation plan, though it is the logical place for discussions about such assessment to begin. *Appropriate members of the university community, including faculty and administrative representatives along with ITC, will work together to develop a clearly articulated plan for the continuous assessment and evaluation of the use of educational technology at Xavier.*

Conclusion

Some of the goals described in the narrative above may remain constant for decades to come; others may be soon be rendered obsolete or superfluous as technologies change and as the very concept of a college education comes under increasing scrutiny. The last and seventh goal is intended to institutionalize the process whereby the university community can most effectively decide how the vision proposed here should be revised and improved year after year. However, the integration of information technology into the curriculum will certainly remain an issue of vital importance for Xavier University as it strives to fulfill its mission in the twenty-first century. The

university will remain committed to the overriding goal of providing its graduates with the best possible preparation to lead and serve in whatever vocations they pursue.