Distance Learning— Expectations and Challenges:

The University of Maine Experience

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Introduction

Higher educational institutions in the United States are undergoing fundamental transformation with respect to the influence and impact new and emerging technologies are having on both instructional and administrative functions related to their institutional missions. No longer do colleges and universities rely solely on traditional enrollment management strategies for admissions and retention practices. In fact, over the past decade, growth in continuing education and academic outreach activities has become an important element in enrollment management programs.

Because the technology revolution redefined campus borders, interstate and global recruitment of students to academic courses and programs becomes a major opportunity and challenge facing institutions of higher education. As emphasized in the recent W.K. Kellogg-supported Commission for a Nation of Lifelong Learners Report, the new tools of technology offer faculty, students and colleges ways to shift from class-

room-based, labor-intensive and contact hour credit models to those that are learner centered, location independent and outcomes based (1997).

Students can select from innumerable choices of courses offered globally (via satellite, television, compressed video, the Internet, the World Wide Web, and multiple combinations thereof) by non-profit and for-profit entities. Colleges and universities must decide what if any role to play in the global market of delivering educational "course wares" through the myriad opportunities afforded by distance learning options, both synchronous and asynchronous. The challenge of university outreach, as suggested by O'Looney, is how to ensure that the values of free inquiry, and the practices of scholarship and the scientific method are provided adequate room and protection in the emerging situation where there is less distinction between the University and the larger world (1997).

Society expects that institutions of higher education will be players in the delivery of distance education; however the challenge is to determine to what extent these institutions will play in the competitive distance learning market. Verduin (1991) established a very useful classification system of institutions of higher education and the types of distance education delivery systems they represent. Empire State College and Thomas Edison College are examples of one category of institution considered to be distance delivery campuses in their entirety. Another category represented by Stephens College and Nova University reflects significant distance education programming and field-based activities. Most distance education providers in the United States are conventional universities offering distance education through extension, independent study, or continuing education units. Telecommunications consortia have played a large part in the development of distance education in the United States. Most states are now involved in telecommunication systems development which links university campuses, public school systems, technical college campuses, and state agencies.

One of the most extensive distance education experiments, the Western Governors University, brings together institutions of higher education and corporate training entities, as a private corporation to deliver education and training to a major region of the United States. While some colleges and universities have clearly emerged as leaders in the distance education frontier, the more conventional institutions will need to identify their appropriate niche within the broad and global delivery system especially if they are to capitalize on their institution's strengths and showcase their very best programs.

Over the past decade, the University of Maine has dealt with issues of demand, competition, growth, technology infrastructure, multimedia

classrooms, finite resources, quality assurance, varying degrees of faculty interest and participation, and limited capacity within some existing distance instructional formats. In addition, as part of a seven-campus public university system, the University of Maine has addressed issues of politics and unstable funding as campuses exercise institutional prerogatives to advance their individual and distinct missions.

Distance Education Activities
at the University of Maine

It has been within the last decade that new and emerging technologies have presented new opportunities and new challenges as the University of Maine becomes a player in the distance education field. For over thirty years, the University has provided live on-site instruction at numerous centers and sites geographically dispersed throughout the state. For example, between 1987 and 1993 a total of 600 live, off-campus courses were delivered, e.g. at Centers for Educational Excellence; MBA courses at selected business and industrial sites; marine-related and oceanographic courses at UM research centers; international travel study courses; public secondary schools and in numerous state agencies.

In 1989 the Education Network of Maine (ENM) was established at the University of Maine at Augusta, the University of Maine System's two-year community college. Supported by substantial federal and state funding, and grants from the Annenberg Foundation, a state-of-the-art system of eight community centers and 85 sites (public secondary schools), connected by an ITFS and fiber optic infrastructure to the seven campuses of the University of Maine System and selected vocational technical colleges and private companies, ENM grew to offer courses statewide on four channels simultaneously from 7 a.m.-9:45 p.m. each day. UMA also developed student support services at the eight centers to respond to the local student services needs. Courses offered over the ENM originated primarily from the UMA campus. As part of this initial effort the University of Maine established two originating classrooms and one large studio facility and began offering 6 courses that first year.

A decade later, the Education Network of Maine has become administratively disassociated from the University of Maine at Augusta and was re-established as the University of Maine System Network for Education and Technology Services (UNET) under the aegis and direct responsibility of the Vice Chancellor for Academic Affairs. This change resulted from several factors: a system-wide review of campus missions; faculty opposition to the Chancellor and Board of Trustees' plan to create the eighth or "virtual" campus of UMS and coincidentally to seek

accreditation from the regional accrediting agency (NEACS); increasing political pressure to operate the network as a UMS utility rather than by the administration of the two-year campus; recommendations from a UMS Task Force on Telecommunications and Technology; and the need to address an aging infrastructure in need of improved maintenance and escalating operational costs.

Although not all UM's distance education programming is conducted through UNET, the majority of television and compressed video synchronous courses are negotiated for delivery with UNET's administration and a system-wide advisory committee. UMaine conducts approximately 20 percent of the UNET programming with an upper division baccalaureate and graduate level niche. For example, during FY98 more than 100 courses were offered throughout the state with approximately 1600 students enrolled in distance locations. The majority of distance teaching is done as overload to regular faculty teaching loads and faculty are remunerated on a percentage of their academic year base salary (8 percent) in addition to an overload rate by rank, as well as a $500 planning grant. The University of Maine established a Distance Education Advisory Committee composed of representative faculty of the University's colleges, library, instructional technology and continuing education divisions. It serves to develop policy statements regarding distance education, conducts a grant program, and addresses issues of technical support for faculty and students.

Distance Learning Delivery Options
Offered by the University of Maine

The distance learning technologies employed by the faculty of the University of Maine include every major technology available to distance course developers, Web-course designers, faculty and students, i.e. ITFS Television, compressed video (video conferencing), Web-based, computer conferencing, telephone conferencing, videotape, and various combinations of these, including synchronous and asynchronous virtual classrooms.

Interactive Television (ITFS) is the option most used by UNET today for distance learning delivery. Students can access University of Maine System courses from over 100 sites and centers. This is a one-way video system with an audio call in to an 800 number in the studio classroom. Students can see the instructor and students in the broadcast classroom on a television. The broadcast classroom students and the instructor can hear but not see the students participating at the distant centers and sites. There are four 800 telephone lines into the broadcast classroom.

Additionally, a telephone conference bridge is available for small group discussion allowing students alone at a site to call and conference with students at other sites. Compressed Video allows interaction with two-way video and two-way audio. Multiple sites may participate in the videoconference. Voice-only participants can also join via telephone connection. Each compressed video studio seats ten students. The audio and video interactivity combine to make this technology ideally suited for upper level undergraduate and graduate seminars. The classrooms include computer interface devices with software such as Netscape, WebCT, First Class Intranet Client for Web course creation, course management and computer conferencing.

Most courses using Internet (World Wide Web and computer conferencing) and computer-mediated communications in learning involve a major component of student to student interaction as well as student to teacher and teacher to student interaction. Most communication is asynchronous and paperless; that is, students and teacher communicate electronically logging into their computers at their mutual convenience.

Other distance education delivery modes include combination of videotape, teleconferencing and print materials, or other mixtures of the above technologies, including campus conferencing.

Selected Successful Distance Education Efforts

The University of Maine has had many and varied innovations and other successes in distance learning. In 1993, UM introduced the idea to combine broadcast time sharing and campus conferencing when it offered three upper level undergraduate courses dividing up the 7-9:45 p.m. Wednesday slots that semester on the Education Network of Maine. Known as the "Art of Detection," this project brought together history, political science and English professors under the theme of mystery to produce The Historian as Detective, The Politics of Deception, and the Literature of Suspense using ITFS interactive television plus two Saturday conferences on the Orono campus. The Art of Detection project won national recognition by the University Continuing Education Association Franscon Award in 1995. The UM/UNET collaboration continues to produce time sharing partners, such as the four year old College of Education Special Education project which also requires distance and local students to attend two or three Saturday conferences on campus. The tendency to time-share is expected to grow with the faculty's acceptance of computer mediated communication as an alternative to mandatory seat time in a classroom. Evidence suggests this phenomenon

is occurring. For example in the 1998 Spring Semester, faculty, students and instructional designer tools like First Class Intranet Client and WebCT are embedded in 250 courses. In another UM/UNET collaboration, the Department of Modern Language and Classics is offering a Certificate in Classical Studies which is achievable entirely online. The first Latin I course offered online attracted 64 students statewide—a remarkable feat. Certainly registrations in this project have far exceeded its expectation and demonstrate the program's statewide need. In Maine where the population is approximately one million, many Maine people are "home bound", crave education at many different levels, and in this case are being increasingly stimulated by the classics.

The Department of Survey Engineering gained the distinction of offering the first UM asynchronous credit course on the World Wide Web. Using a zero cost, exclusively Web-based marketing strategy, and a rolling admission policy, Writing Effective Property Descriptions, an application of WebCT course management software, had enrolled over 50 students throughout the U.S. in just its first five months on the Web Server. Students can register, begin, take an exam, and complete the course any day they wish. The University is currently developing a Web-based Certificate in Survey Engineering Program in response to the growing national need for professional development opportunities for professional land surveyors.

Perhaps the most technologically sophisticated class offered thus far by the University of Maine was History of Women and Work, a senior level, writing-intensive seminar, with multi-site video conferencing, asynchronous computer conferencing and Web-based course management using the UNET compressed video system, First Class Intranet Client and WebCT. Student evaluations revealed that almost half the students identified this class as one of the best ever, and the professor agreed that indeed it was her best class ever.

An important by-product of these successes has been the increase in the number of faculty interested in distance learning and teaching. In four years UM faculty have proceeded from offering six distance learning courses per year, to over 100 in 1998. The Distance Education Advisory Committee, an arm of the Continuing Education and Lifelong Learning Divisions, is entrusted with the distance education torch. The DEAC has chosen to focus on policy, grants, and technical support for faculty and students. To achieve progress in these three areas will prove difficult. It will require leadership, vision, creativity, energy, sustained funding and a contagious desire to break down myths about the perceived inferiority of distance education and the sacrosanct importance of seat time in a classroom.

Collaborative Efforts

The Continuing Education Division has facilitated collaborative distance learning efforts among faculty, professional staff and administrators in the University of Maine System. Having collaborated with the Education Network of Maine, New England Land Grant Universities, State University of New York at Plattsburg, Penn State University, and University of New Brunswick, the distance learning activity at the University of Maine campus at Orono has nearly doubled in the past two years. These efforts include an RN to BSN Completion Program, offered in cooperation with the University of Southern Maine and the University of Maine at Fort Kent, guest lecture appearances by history faculty from University of Maine at Farmington and the University of Southern Maine, team-teaching/course-trading arrangements with Worcester Polytechnic Institute and the University of New Brunswick departments of electrical and computer engineering, civil engineering and English, interdisciplinary rural healthcare courses in cooperation with private institutions like University of New England and Hudson College, and a faculty development project co-sponsored by the New England Land Grant Council of Presidents.

Distance learning courses leading to the masters in electrical and computer engineering are now available by videoconference from the Orono campus to Fairchild and National Semi-Conductor in South Portland, Maine. Plans are developing to create a certificate in survey engineering in collaboration with faculty at the University of New Mexico.

There are many examples of distance learning collaboration involving the Division of Lifelong Learning and other UM academic units. The Bachelor of University Studies is a University-wide program, administrated by the Continuing Education Division, to give adult part-time students the flexibility to design their own program of study with the guidance and approval of the University Studies Steering Committee. The Master of Arts in Liberal Studies is awarded by the Graduate School, in cooperation with the Continuing Education Division which offers two MALS seminars per semester. Both of these programs are designed for campus and distance students with courses routinely being offered throughout the year via UNET option. The recently created Certificate in Marine Studies illustrates how an interdisciplinary program with courses provided through the departments of history, English, women studies, anthropology, geology, biology, and political science, emerges from existing courses and delivers them to distance learners eager to learn more about Maine.

Expectations

While some distance education programming had been ad hoc and based primarily on faculty curiosity and interest in new instructional pedagogies, much distance education has been systems-driven in response to the professional development needs to various groups. For example, professional association memberships requiring programs for licensure, certification, and registration requirements; business and industry employees in need of skill development and professional training or re-training; and state constituencies in response to offering specific college and university-based degree or certificate programs. These groups expect colleges and universities to respond quickly and flexibly. Often such expectations are not met because of the disinterest demonstrated by a department of the inability for a department or college to commit faculty either on a one-time basis or a wholesale commitment of faculty for the delivery of a degree. The societal expectations are for increased accessibility to course offerings and to faculty at a reasonable cost, yet many of the conventional campuses are unwilling or unable to respond. The dilemma for institutions like UM is that competition will enter the State by various electronic models. If the University of Maine doesn't respond by delivering, some other institution, consortium, or partnership will.

Distance learning faculty expect extra incentives, like promotion, more overload money, release time, planning grants, technical, clerical, and instructional design support. They deserve a "center" for teaching excellence in higher education, incorporating faculty development programs or instructional protocols in distance teaching and how to incorporate Internet and Web-based elements into the mix of instructional and telecommunication strategies. Like the larger community, faculty members need assurances of quality control at least comparable to that of the traditional classroom. Faculty members also have the right to expect an institutional commitment e.g., recognition of distance teaching for promotion and tenure considerations, and adequate financial and technical support.

Students expect the same level of quality in distance education courses as in the traditional classrooms; they expect colleges and universities to act like service industries providing customer-friendly services with flexible and convenient delivery. Students expect access to faculty and interaction among students as part of the learning community, something traditional campuses have argued is the key to success; they expect the availability of Internet dial-in access; and

students expect financial aid programs to support their distance education course work.

Finally, units responsible for administering distance education programs must accept administrative responsibility for instructional integrity and legal issues (e.g., access for handicapped students and professors). Distance education units must demonstrate responsible fiscal management, i.e. tuition and fee revenues should exceed the costs for production and delivery; quality programs reflect the quality of the traditional academy. Distance education administrators, professionals and faculty members expect a shared university governance model with faculty playing a strategic role in policy development and program evaluation. Distance learning administrators must be mindful to ensure programs or courses meet the standards and criteria of regional accrediting agencies.

Challenges

There are numerous questions facing schools like the University of Maine that sit at a crossroad in the history of education. How does the University react to competition from other profit and nonprofit colleges and universities? How does the University visualize the impact of financial constraints on the University's technology infrastructure? How do distance education entrepreneurs build faculty development programs that stress distance teaching and learning? How can distance education facilitate more brainstorming and experimentation at the intersection of the learning, information and technology revolutions? How do educators encourage faculty to hurdle campus barriers to alternative learning design? What issues require local campus control? What University of Maine System needs override needs of the University of Maine, one of seven sister institutions? How can certificate and degree program designers dissolve the off-campus/on-campus dichotomy and foster a dynamic continuum? How do distance education administrators co-operate on-campus and off-campus and help create a situation of easy and affordable Internet access for all students, faculty, and staff? These questions embody the quality, access, and control issues for which the University must plan, anticipate, measure, then adjust or correct to survive in the distance learning global economy.

Of all the challenges facing colleges and universities entering the distance education arena, the major one is to satisfy the learning and teaching needs of distance students and those of the faculty. Approximately 70 percent of UM distance students are women who for reasons of family and work cannot travel to campus for courses, and therefore

rely on academic programs offered through distance approaches. The challenge to the future of distance and computer mediated education at the University of Maine is to overcome pockets of resistance to offering distance courses leading to certificate programs, bachelors and masters degrees. Some fear that advocates of Internet-enhanced asynchronous learning and teaching now threaten seat time in class and therefore the traditional role of faculty and traditional definitions of the classroom.

The Division of Lifelong Learning's challenge is to convince faculty to think more about how students learn than how faculty members research and teach, and to construct courses and programs reflecting this paradigm shift.

The challenges of technical support for professors and students, funding for faculty developing distance programs, talent, policy, authority, responsibility, and finance will drive the distance learning agenda at the University of Maine. The challenges posed by multiculturalism in the worldwide higher education market will test the University's ability to recruit internationally recognized professors and negotiate with global partners in program design. The marriage of internationalism and technology can bring a powerful, worldwide perspective to a university education, and highlight the university as an international center for distance learning and teaching. Finally, University educators must challenge themselves and each other to open the doors of higher learning to students from all ends of the planet within or outside university walls. Distance educators must remember commitments to the information-, communication-, technology-, and bandwidth-poor.

Students can now register for a University of Maine course on the Web. College admissions offices recruit and "manage enrollment" on the Web. Data collection, analysis and reporting all happen in Web space, readily available to anyone in the world with a password. More and more learning shifts out of the "formal" classroom. It now spills into art galleries, museums, libraries, recreation departments, theaters, concert halls, community buildings, and virtual space on the Internet. In the United States alone, over 62 million Americans or 30 percent of the population over the age of 16, say they use the Internet—32 percent higher than in 1997 (Leonard 1997).

Conclusions and Global Implications

The University of Maine has a 140-year heritage of academic outreach and continuing education for adult learners and organizations willing to invest in education for their employees. The University's Division of Lifelong Learning is a provider of programs designed with the

flexibility required of, and provided by, the information and communication revolutions. Much of this flexibility is associated with distance learning and the acceptance, by college and university professors, of television, asynchronous learning and computer mediated communications. Distance learning and the World Wide Web now cause higher education experts like O'Looney to predict a future with little distinction between the university and the rest of the world.

The challenge for lifelong learners is to dissolve the dichotomy and deconstruct the wall between community and university. Distance Learning and the Internet make this challenge achievable given the prerequisite investment in instructional and technical support for professors and students. The American education system is so inbred with passive learning, it is extremely difficult for professors and students to break the pattern and shift to a different paradigm. However, the new instructional technologies, enhanced with the expansion of the Internet, can tool the learning revolution that can help drive this shift. The future of a university, and the role of continuing and distance learning within that institution, could rest on how the institution addresses its own expectations juxtaposed with those of society, its specific responses to the challenges presented, and the extent to which collaborative partnerships are developed in response.

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