Principles for Building Institutional Success with Online Education

Dean Jacqueline Moloney, Ed.D.
Continuing Studies & Corporate Education
University of Massachusetts Lowell

Steven F. Tello, Ed.D.
Associate Director of Distance Learning
Continuing Studies and Corporate
University of Massachusetts Lowell

Book Title:

Distance Learning Administration: Managing the New Frontier

Chapter Title:

Principles for Building Institutional Success with Online Education

Introduction

Over the past ten years, the growth of the Internet and the World Wide Web on the part of students and faculty at institutions of higher education has coincided with the rapid expansion of online distance education programs. A 1998 survey conducted by the National Center for Education Statistics (Lewis, Snow, Farris & Levine, 1999), estimated 54,479 different distance education courses were offered with an enrollment of approximately 1,661,100 students. These figures represent an increase of over 100% from the 1994-95 statistics. Of the 1,680 institutions of higher education in the United States offering distance education courses in 1998, 87% indicated they offered asynchronous, Internet-based online courses while 65% offered two-way interactive video. Clearly, the use of the Internet and World Wide Web is changing the way higher education is provided in this country.

Despite this remarkable growth, many institutions remain unable to embrace the opportunities created by online education and are in danger of falling behind this latest technology trend. Indeed the prospect of introducing online education to a campus can be daunting and legitimate concerns over costs, mission, and efficacy continue to stall progress on campuses eager to participate in this new educational frontier.

Like many colleges, our institution approached the development of online education with a great deal of trepidation and concern. Administrators were concerned about the costly investments needed to jumpstart the program and faculty worried about everything from canabilization of enrollments to intellectual property. These concerns should sound familiar to those of you trying to start programs.

Today, Lowell's Division of Continuing, Corporate and Distance Education (CCDE) offers over 100 courses and approximately 6000 enrollments per year and is part of the University of Massachusetts system-wide effort to provide online education called UMassOnline. Students are able to complete 10 certificates, 3 undergraduate and four graduate degrees completely online. The program has enjoyed a rate of growth of approximately 100% each year since its inception.

The following chapter illustrates a framework for applying four principles for building online education that guided the development of this successful program. The exponential enrollment growth and high level of satisfaction expressed by the students and faculty engaged on our campus offers evidence that these principles have served them well. More importantly, we have found the effectiveness of these principles corroborated by numerous institutions across the country that joined us in pioneering this new frontier.

The principles that guided the development of this program include:

- Use traditional academic structures and faculty to accelerate the development of online education;
- Start small, build incrementally, and think scalability;
- Build learning communities that push the limits of this new technology and celebrate accomplishments along the way;
- Reorient your institutional culture to the reality that this is only the beginning. . .online teaching will continue to evolve, requiring all institutions to experiment with ever-changing applications.

The reader is encouraged to note that we come to these conclusions after observing national models and building our program for five years. In the sections that follow we will show how close attention to these principles guided our work as we developed the various components of our programs including: a) program design, b) faculty development, c) student support, d) technology infrastructure, and e) assessment and quality assurance. First, we will review the principles in light of recent trends in online education that demonstrate the effectiveness of these principles.

Evidence of the Principles' Effectiveness

During the hype of the dot com economy of the 1990's numerous market studies suggested that education was to be the new killer niche for business. As a result, many institutions pursued the for-profit spin-off model in the hopes of generating needed revenues for their campuses. Instead of focusing on the potential to improve access, teaching and learning, these campuses saw online education as a silver bullet that could solve many of their enrollment and fiscal problems (Moloney, 2001).

This model for pursuing the development of online education began to dominate the popular and academic press, as announcements regarding the formation of university-corporate partnerships, subsidiary spin-offs, and private educational ventures were released frequently. The messages were consistent: online education is going to provide lucrative business opportunities and academia is too slow to take advantage of the online wave. In fact, the publication University Business featured cover titles such as: "New British Invasion", highlighting the arrival of the British Open University (Universtiy Business, July/August 1998) and "Are You Scared" of HungryMinds.com. (University Business, March 2000).

The spin-off model pursued by institutions such as New York University, Columbia, University of Maryland and others required enormous upfront investments to build mega programs and name brands. Those who sought this model believed that they had to circumvent traditional academic structures to create a more cost-effective, profitable model for delivering higher education through e-learning. In fact, many of these programs yielded very poor results and colleges across the country lost tens of millions of dollars. This past year the headlines changed and instead of messages threatening the existence of the academy, we read that spin-off after spin-off has closed and campuses that hoped to make millions, lost millions in investments chasing the dot com hype associated with e-learning (Blumenstyk, 2001; Carr, 2001).

At the same time, many traditional universities and colleges pursued online education programs in a manner consistent with their campus missions following the principles outlined above. Working with traditional academic structures and faculties, colleges across the country experimented with online education and built their programs incrementally. Early in our experimentation, we yielded modest financial rewards and tremendous personal rewards as we witnessed our faculty and students benefit from access to this new frontier in education.

In a recent article in the New York Times, Katie Hafner reviewed the demise of the dot com approach to e-learning and quoted George Macomber, the past Chief Executive Officer for the failed NYU.com. His comments are telling, "Along the way it became apparent that a major university that wants to get into online education can do it without forming a separate for-profit online company (Hafner, 2002).

What follows is a description of one institution that followed that model and invested in its own faculty and professionals to build success in online education.

Principles in Action: Program Structure and Design

There are several important questions that campuses must face when developing online programs. These first few questions inevitably revolve around: what unit or department should spearhead the initiative, which courses or programs should go online and, what pedagogical model will be used to deliver the courses by which faculty. While there is no one correct answer to these questions, institutions will be best served by an open dialogue that examines how the development of online education can best serve the mission of the campus.

In many cases, existing technology units or continuing education programs are the best suited to spearhead the development of online education because of their missions and relationship to the campus. The UMass Lowell online program was developed under the auspices of CCDE, a division with a well-established track record for developing and delivering innovative programs. As a self-supporting organization, programs operated by CCDE must generate sufficient revenue to cover program development and delivery costs. This unit had the greatest potential to succeed because of its capacity to provide technical infrastructure and support, and entrepreneurial program development.

Working from the principles outlined above, we began migrating a few courses and students online and gradually expanded the program. Since UMass Lowell had an established market-niche in information technology, we chose to develop our first courses, and then programs, in this area. This proved to be critical decision for us, one

that can fuel or hamper the growth of online education on a campus. By choosing an enrollment rich program, we had immediate success as the courses we offered on the web filled to capacity generating the enthusiasm, confidence and finances we needed to continue.

We purposefully selected courses that would fit into an undergraduate certificate and gradually migrated sufficient courses to offer three degrees online including the Associates and Bachelors in Information Technology and a Bachelor of Liberal Arts. These popular degree options became even more appealing to adult learners when they were moved online. Almost immediately, enrollment in our certificate and degree programs grew in concert with our growth in online education, fueling continued interest and investment in this experimental program.

Traditional Faculty Inform Online Course Design

Pioneering faculty who are on the cutting edge of teaching with technology are also the faculty who will pilot online courses. In our case, we began developing online courses with computer-savvy information technology faculty and students. Our expectation that these faculty (primarily adjunct) would be proficient users of internet technology proved true and these early adopters provided invaluable insights and expedited the development of our program.

However, to scale the program and to ensure its alignment with the university mission, we knew we had to engage more of the traditional, tenured faculty. Yet, like faculties across the country, our faculty had become suspicious of online education because of its association with the spin-off model as described above. To address their concerns, we actively recruited traditional faculty who were openly resistant to online

education. Instead of trying to bypass faculty concerns around academic integrity, we agreed to address them or eliminate the program.

Ironically, we advanced the development of a high quality program more rapidly than many of our dot com counterparts, which were originally established to avoid such faculty criticism. In discussing the failure of one dot com spin-off, NYUonline, A. Frank Mayadas , director of the Alfred P. Sloan Foundation's grant program for online education, suggested NYUonline should have sought more involvement from experienced New York University professors in both the teaching and production of online courses. Instead, many of the courses were taught by adjuncts with less expertise and teaching experience. "It wasn't able to tap the real value of NYU, which is the faculty," Mayadas said, "When I did not see evidence that they had solid faculty involvement, I didn't think they had anything to sell" (Carlson & Carnevale, 2001).

The first set of concerns raised by our faculty revolved around pedagogy in the new online environment. In fact, online education opens up numerous options for course and program design such as self-paced learning and competency-based learning or synchronous or asynchronous formats. Students may enter into a course as a cohort or the course can be on-going, with students entering at anytime.

Not surprisingly, the Lowell faculty chose to structure the online program in a manner consistent with their face to face classes. The courses run in a traditional 15-week semester and class size is limited to 30. Each week course lecture notes are released and students move through the course as a cohort, learning from each other, guided by the instructor. To accommodate student needs for flexibility, most of the course is delivered

in an asynchronous format whereby students and faculty can log onto the course at anytime from anywhere and participate and interact through discussion boards and email. To facilitate the equivalent of seat-time, we have required the faculty to host an online office hour in a synchronous chat room once a week.

While we continue to make improvements, this traditional approach to course and program design has proved successful for our institution and institutions across the country. Faculty and students report at least as much, if not more, interaction in their online courses as in their face to face courses. Preliminary research comparing the two models (face to face and online) suggest that online is as effective as face to face (Russell, 1999).

Once the protocols for course development were established, the Division was able to move more efficiently to scale the development of the program. By following traditional academic structures, the program earned high regard from the faculty as they drew excitement from engaging in the development of this new technology-enhanced pedagogy. Eventually, the traditional faculty became our strongest champions for the program and many now share the success of their online teaching strategies in their enhanced, face to face courses. At each phase, the accomplishments of the program were celebrated and faculty felt intrinsically rewarded by meeting the challenge of online education.

Principles in Action: Faculty Development and Support

A critical linchpin to the success of online programs has to be faculty development and support. Faculty are required to make major paradigm shifts in pedagogy and course design in order to be successful online instructors.

Incentives & and Ownership

Faculty fears around workload issues, intellectual property and course controls can inhibit the growth of online programs if not addressed upfront. We learned that faculty will fight fiercely to protect their right to own the course materials, notes and other elements they contribute to an online course. Control over who teaches their online course once developed is also an issue that prevents faculty from exploring the opportunities presented through online education. Compensation for developing an online course is therefore, inextricably tied to agreements around intellectual property and control over course offerings.

To move this agenda forward, we developed a faculty-friendly policy and recognized faculty for their contributions upfront. We put into practice a pre-existing intellectual property agreement with the faculty that acknowledged faculty ownership of course materials and lecture notes and assured them the same ownership of web-based course materials and lecture notes. The faculty are given a stipend to develop an online course and a stipend for teaching the course. We work with the faculty over the use and reuse of their courses, stipulating that they will allow their course to be taught by someone else if they are unable to meet enrollment demand. We provide a royalty fee each time their course is taught by another instructor. This position expedited our work and as the faculties' trust grew, so did the number of course offerings. By recognizing the need for faculty to have input into the use of their materials through compensation, we went from a position of recruiting faculty to teach online to developing a wait list for training.

Ongoing training and support seminars

Gratefully, support for faculty development and teaching with technology was a long-standing part of our campus culture. Therefore, consistent with the principles outlined above, we built a comprehensive faculty development program in tandem with the development of the online education program.

A three day training program was established initially to familiarize faculty with the technology used for moving their courses online. Faculty attended the workshops on campus in a computer lab and were introduced to learning management systems and methodologies for teaching online. As the program grew, we recognized a need to integrate best pedagogical practices for teaching online as well and the program was expanded to include important presentations around topics such as facilitating group projects online.

As the demand for faculty increased, we expanded the program and now a team of course developers and technical support staff work with the faculty, from training to migration to teaching online. The faculty see these professionals as members of a team organized to support their work (Kendrick, Moloney, Sicama & Tello, 2001). This team now offers a series of modules for teaching online, on the web. Faculty become online students themselves and experience first-hand what it is like to be an online learner as they build their repertoire of online teaching strategies. A four session online module introduces faculty to the basic concepts of teaching online followed, by a series of more advanced modules, often taught by faculty, around more advanced applications and strategies such as how to integrate streamed video into your online course.

Again, faculty who enjoy technical support and appropriate development become willing participants in this new frontier and will work diligently to promote this important opportunity.

Principles in Action: Make Informed Technology Choices

One of the most formidable choices colleges face in the development of online programs is the selection of hardware and software for the delivery of their online program. The process of selecting and supporting the technology infrastructure needed to successfully operate an online program can be intimidating considering the many learning management system (LMS) vendors, course publishers, and other companies who each claim to offer the best solution for your campus. Layered on top of these considerations is the reality that that the LMS industry remains unstable and stories abound regarding LMS vendors that went out of business or raised prices after colleges invested significantly in their products. As a result, one often finds that the selection process itself can delay or derail campus online efforts.

Our approach to selecting the appropriate hardware and software followed the principles outlined earlier in this chapter. The initial technology investment was relatively small, involving use of a web server and list server already owned by the University. However, to expand the program beyond technology savvy faculty and disciplines, we had to provide an easy to use system for both the development and teaching of online courses. We suspected, and later confirmed, that interaction between instructors and students should be available in different formats, to support the different teaching and learning styles of instructors and students. Finally, we wanted an LMS that would be extensible to emerging technologies and standards, but would meet the current limitations

of the typical home user connecting over a dial-up connection. The search for an appropriate LMS was on and we used our campus mission and faculty concerns to help define the search.

Selecting A Learning Management System

Any LMS selected should provide ease of use from both a faculty perspective and student experiences. The ideal LMS should facilitate interaction; provide for easy course development and management; and provide a robust, scalable system that supports 24 hour per day, 7 day per week service. The concept of an LMS was relatively new in 1997, when we began evaluating systems for our growing online program. Despite this, the LMS we selected has stood the test of time and scalability quite well.[1] In addition to the criteria discussed above, our selection process was guided by the following requirements, the LMS:

- would be installed on equipment within our facility;
- was based on an industry standard relational database;
- allowed access to any course or enrollment data through commercial, data query software;
- supported integration with other campus systems through commercially available scripting software;
- allowed substitution of integrated components such as chat, discussion forums and testing tools;
- provided a forms based interface for the development of course materials as well as instructor course management;

- did not require specific software for student access or instructor course development;
- supported the integration of various multimedia and plug-in software modules;
- did not require a perpetual, per seat license fee;
- vendor agreed to meet with us twice a year to discuss upgrades and modifications to the system.

This last point, the willingness of the vendor to work with us in order to improve the utility of the software for our program, has proven critical in supporting the growth of our online program. Consistent with the principles outlined above, we sought a vendor that would respect the experience that our faculty brought to the table to inform the development of new generations of the LMS product.

After careful screening, we found a vendor who expressed a vested interest in working closely with the faculty and online professional team to identify opportunities to upgrade and refine the LMS. Early on, the vendor seeded research funding for faculty to experiment and test refinements in the product and the product's functionality improved greatly as a result. Expanded internship opportunities for our students also added value to this relationship as our students gained experience in exploring this new technology, again complementing the mission of our campus.

In-house or Outsource, that is the Question

While many of the LMS available today offer similar technical features and functionality, several major differences exist regarding the hosting and licensing of the LMS and related services. Such features have a profound impact on the development and growth of online programs. The principal options include: a) licensing the LMS and

operating it on your own equipment, b) allowing the LMS vendor to host your online courses, and c) allowing an LMS reseller to host your courses. We chose to license the LMS and to host it locally at our institution. Since we took an incremental approach to building our online program, we did not have to make a large, initial hardware and software investment. Consistent with starting small and building incrementally, we started our online program with one web/LMS server and one discussion/chat server. As our program grew, we added equipment, bandwidth and staff.

Hosting the LMS locally allowed us to leverage the skills of existing technical staff and student assistants. This local presence of the software and hardware, combined with our close relationship with the LMS vendor, facilitated our integration of the LMS into the student service processes discussed later in this chapter. As our familiarity with the LMS improved, we could better identify the training and skill sets required of current and new technical staff.

The outsourced option is appealing to institutions who do not have an established technical infrastructure or who cannot make the initial hardware, software and staff investments. While the specifics vary between LMS vendors, institutions typically pay an initial development or customization fee, along with a perpetual per student or per course fee. Depending on the vendor, additional services such as faculty training, instructional design, graphic design, or student tutoring may also be purchased. Your institution is responsible for development of faculty and courses while the LMS vendor is responsible for the LMS and accompanying technical infrastructure. While this approach may be financially appealing when launching a new program, the per student charge can become a considerable cost as your program grows. Based on the $150 per student fee charged by

one vendor, a program with 5000 annual student enrollments would pay $750,000 per year, a considerable amount of money which could be invested on-campus.

Our choice to invest locally in technical staff, hardware and software has contributed to an increased acceptance of online education by faculty across our campus. Faculty know who supports their equipment and who to turn to when they need technical assistance. While our LMS and hardware was originally purchased to support a fully online program, over 100 on-campus faculty now use the system to enhance their face-to-face courses. The technical staff who support the LMS now work closely with student service staff in the development of technology-supported work processes that facilitate the exchange of information between students, faculty and staff. Overall, our choice to host the LMS locally has allowed CCDE to expand technology-enhanced education and services throughout the division, increasing student and faculty access to our online learning community.

Principles in Action: Redesign Student Services

Traditionally, our student services unit provided registration, advising, mediation and tutoring support to students on campus within the unit facility. Before we launched our online program, students typically registered for courses by telephone or in person and all administrative processes required an original, student signature. Course schedules, program descriptions, academic policies and other program related materials were printed and snail-mailed to students. Very early in the process it became clear that we had to redesign the culture of our student services division to support online students.

Rather than announcing and implementing a large-scale redesign effort, our initial redesign efforts simply focused on forms and information. We asked the question, “If I

lived on the opposite side of the country, how would I apply to a degree program? Drop a course? Talk to an advisor?" This approach was practical, non-threatening, and allowed student service staff to help develop solutions to the challenges raised by having online students. Technical staff worked closely with student services professionals and faculty to migrate program descriptions, course descriptions, application forms and contact information gradually online, where it could be accessed by both online and on-campus students.

As forms and program information were migrated online, many unit staff began to see the benefits of this shift. Student requests for information could be input over the web directly by students rather than by unit staff. Course and program descriptions could be updated quickly and distributed to faculty, staff and students. Prospective students could access and print information directly from the division website, reducing the need to copy, label and mail thousands of pieces of literature each year. These changes in work processes were introduced slowly, accompanied by technology changes and the support of technical staff. While the initial impetus for changes in how the student services unit operated was the online program, student service staff saw the benefits of providing online access to information for both online and on-campus students. As this redesign evolved, the emphasis became providing access to services for all students: on-campus, online and even our growing corporate on-site student body.

Moving beyond online forms and information, we also recognized the unique needs of online students. Participation in an online course requires that students have a minimal technical aptitude and sense of themselves as a learner. While our initial course offerings were geared toward students interested in the information technology area; our

growth into liberal arts, management and education degree programs meant that not all students were knowledgeable in the use of the Internet, email and the WWW. Program staff developed an online orientation program for students that detailed both technical and pedagogical considerations for students taking online courses.[2]

In addition to the online orientation, technical staff partnered with student service staff to provide face-to-face orientation during each semester's open house/registration period. Both the online and face-to-face orientation provide students with an opportunity to review technical and pedagogical requirements before enrolling in an online course. Most recently, staff have developed an online assessment that allows students to complete a brief online quiz that examines their technical knowledge, learning style and ability to manage time; all factors that appear to contribute to student success in online education. When a student completes the assessment, they are provided with feedback regarding their readiness for taking an online course. If a student appears to not have basic technical or time management skills, they are provided with feedback suggesting entry-level coursework prior to enrolling in an online certificate or degree program.

As our program has grown, we have taken time to celebrate milestones along the way. Our first online certificate graduate, our first online degree graduate and our 1,000th online enrollment each provided an opportunity to pull staff and faculty together to celebrate and thank them for their assistance in achieving these important goals. These celebrations have allowed our faculty, students and staff to share in the growth and success of our online program.

Principles in Action: Program and Course Evaluation

From the outset we established clear benchmarks so that the administration and faculty could assess the viability of the program. First, we established the principle that faculty and student experiences should be rated equal or better than the on-campus experience. Since we had previously established a process for evaluating on-campus courses, faculty and students were supportive of the evaluation process. An online evaluation process was implemented which examined student perspectives regarding the quality of course materials, instruction, student services, and technical services. Student responses are examined at the course level and then shared with faculty at the end of each semester.

The results of the student evaluations are also reviewed at the program level in an effort to identify the strengths and weaknesses of the program. This annual open discussion with online faculty regarding the online students' experiences provides an opportunity to discuss strategies for improving the online program. Several changes implemented as a result of this survey process and discussion include the expansion of technical support hours, the option of using multiple discussion and chat tools by faculty, the development of online faculty training and modification of the LMS.

In addition to examining student perceptions regarding the quality of our online program, we also examine course and program persistence rates each semester. Persistence is a measure of a student's commitment to complete a course or educational program (Cookson, 1988; Fjortoft, 1995). Persistence is considered an attribute of learner success, associated with student satisfaction (Cookson, 1988; Noel, 1985), academic achievement (Anderson, 1985), and goal attainment (Tinto, 1985). From this perspective,

persistence provides an important overall quantitative measure of the effectiveness of an educational program in meeting the individual learning needs of students. The ability to share persistence rates equal to, or better, than on campus courses has assisted in supporting faculty acceptance of our online program.

Another important benchmark has been the percentage of full-time, tenured faculty who have supported the growth and scholarship of our online program. The faculty development programs described above have resulted in a steady increase of the percentage of tenured faculty teaching in our online program to 35% of all instructors. As stated in the principles, the active involvement of these tenured faculty in the development and operation of our online program is considered a critical factor of its success.

While we have developed internal metrics for establishing the quality of our students' online learning experience, colleges and universities must remain cognizant of regional and professional accreditation standards which provide external mechanisms for monitoring the quality of higher education. Accreditation standards for online education programs are still evolving, yet it is clear from regional accreditation guidelines that institutions will have to meet or exceed the accreditation standards currently in place for on-campus programs. This trend means that campuses will need to provide the same levels of assurance currently required of on-campus programs, regarding: a) the quality of the faculty, b) the quality of programs and curricula, c) student advising and support services and d) research and library access. Additionally, online programs will need to ensure that technology is implemented in a secure and robust manner which does not impede or restrict student access to their online course, instructor or fellow students.

Our approach to meeting emerging accreditation guidelines is to pursue the principles outlined above. In this way, appropriate University academic and support departments are responsible for addressing the standards outlined above. The University's academic departments provide oversight of program curriculum, online certificates and degree programs, and the quality of online faculty. Program staff works with department faculty to review professional accreditation guidelines for distance education and to consider the impact of these guidelines on the online program. Likewise, our earlier discussions regarding the provision of student support services and the development of technical infrastructure indicate a collaborative approach between staff of the online education program and these respective units. This collaboration only enhances the accreditation process for online programs.

Challenges for the Future

The statistics and enrollment trends in adult learning all point to the need for accelerated integration of online education into higher education; yet some colleges and many faculty have yet to engage in this important opportunity. To move the agenda forward, colleges and their faculties must work together to overcome some well-grounded fears to chart a strategy that will best suit their campus mission. However, important questions have to be addressed before that process begins.

As the reader can see, the principles adopted in the development of this program enabled the college to accelerate the development of its program. As we have indicated, there are many choices that each institution must face regarding program structure, faculty development and rewards, student services and technology. By identifying a set of guiding principles, it is more likely that a college will make the right choices and avoid

the disastrous results experienced by those who ventured into models unsuited for academia.

One of the strengths of American Higher Education is its relentless pursuit of opportunities that will enhance the educational experiences of our students and faculty. To continue that pursuit requires that we take hold of this new frontier and drive the technology so that we maximize opportunities to improve teaching and learning. We now know that we must engage in online education to fulfill that challenge, yet we recognize that this field is evolving and that we will have to engage in continuous research to establish and promote best practices. In a chapter entitled "Mastering Change" Rosabeth Moss Kanter likens the changes that we face to the croquet game in Alice in Wonderland:

> This is a game in which nothing remains stable for very long. Everything is in constant motion around the players. Alice tries to hit the ball, but the mallet she is using is a flamingo, and just as she is about to hit the ball, the flamingo lifts his head and looks in another direction, which I think is a perfect image for technology . . . (Kanter, 1995).

This quote aptly reflects our experience with online education. Yet, by following traditional academic structures, building incrementally, tapping local expertise and taking a chance on the future, we have had a tremendously rewarding experience. Our faculty are proud of their accomplishments in conquering a cutting edge technology, our students excel in their courses and programs, our program realized modest financial gains in the process; and most importantly, our institution has joined the ranks of those noted traditional universities that are considered leaders in this field. To each of you we wish the same success.

References

Anderson, E. (1985). Forces influencing student persistence and achievement. In R. L. Lee Noel, D. Saluri, & Associates (Eds.), Increasing Student Retention. (pp. 44-61). San Francisco: Jossey-Bass .

Blumenstyk, G. (July 10, 2001) Temple U Shuts Down For-Profit, Chronicle of Higher Education.

Carr, S. (February 10, 2001) Is Anyone Making Money on Distance Education, Colleges Struggle to Figure Out How Much They are Spending on Online Programs, Chronicle of Higher Education.

Carlson, S. and Carnevale, D. (December 2001) Debating the Demise of NYUonline, Did the venture go under because of the changing economy or bad decisions? Chronicle of Higher Education.

Cookson, P. S. (1988). Persistence in distance education: a review. In M. G. Moore (Ed.), Contemporary Issues in American Distance Education. (pp. 192-204). Oxford: Pergamon Press.

Fjortoft, N. F. (1995). Predicting Persistence in Distance Learning Programs. Mid-Western Educational Research Meeting Presentation. Chicago, IL: EDRS. 2001.

Hafner, K. (May 2, 2002). Lessons Learned at Dot-Com U. New York Times. G1, NY:NY.

Kanter, R. M. (1995) *Mastering Change*, Learning Organizations: Developing Cultures for Tomorrow's Workplace ed. Chawla, S. and Renesch, J. Portland Oregan: Productivity Press.

Kendrick, C., Moloney, J., Siccama, C., & Tello, S. (November 17, 2001). It Takes A Village … To Develop an Online Program. Plenary session at 2001 Sloan-C International ALN Conference. Orlando, FL.

Lewis, L., K. Snow, Farris, L. & Levin D. (1999). Distance Education at Postsecondary Education Institutions: 1997-98. Washington, DC: National Center for Education Statistics, U. S. Department of Education.

Moloney, J. (2001). Faculty Victorious: Surviving the Dot Com Threat. Keynote Remarks at Technology and Learning with Technology Conference, Bridgewater State College.

Noel, L. (1985). Increasing student retention: new challenges and potential. In R. L. Lee Noel, Diana Saluri, and Associates (Eds.). Increasing Student Retention. (pp. 1-27). San Francisco: Jossey-Bass.

Russell, T. (1999). The "No Significant Difference Phenomena" Website.[Online]. Available: http://cuda.teleeducation.nb.ca/nosignificantdifference

Tinto, V. (1985). Dropping out and other forms of withdrawal from college. In R. L. Lee Noel, Diana Saluri, and Associates (Eds.). Increasing Student Retention. (pp. 28-43). San Francisco: Jossey-Bass.

[1] The LMS we selected is IntraLearn. Additional information is available online at http://www.intralearn.com.

[2] The online orientation, as well as the previously discussed student service information, is available for review online at http://continuinged.uml.edu/online.