



Center for Education Policy

**ENSURING QUALITY IN
ONLINE HIGHER EDUCATION COURSES**

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About the Center for Education Policy

The Center for Education Policy, in the UMass Amherst School of Education, was created to put the University's research capacity to work on important education policy issues in Massachusetts, other New England states, and beyond. The Center conducts studies, convenes conferences, and evaluates programs on topics relating to K-12 education reform and K-16 educational alignment and transitions. Policymakers interested in expert assistance, and faculty and graduate students interested in conducting education policy studies, are encouraged to contact the Center for Education Policy.

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EXECUTIVE SUMMARY

This report summarizes the current state of postsecondary online education in terms of (1) what the research literature has to offer in terms of effective practices and (2) what UMass and other higher education institutions are doing to ensure online course quality.

What is Online Education?

Since 1995, online technologies using the World Wide Web have become widely used throughout higher education. Their use has allowed both synchronous (same-time) and asynchronous (not time-dependent) communication among students and between faculty and students, as well as multimedia and online access of research and support services. Online education includes the following key features:

1. **Computer-mediated classrooms**;
2. **Separation in time between communications**; and
3. **Availability of services, such as advising, registration, and library services, online**.

Online courses are basically collections of Web pages that can include the following elements: course introduction; objectives; pre-assessment quizzes; reading list; online lectures; assessments, including exams, papers, journals, and evaluations of participation in threaded discussions and chatrooms; and technical and navigational information. Online components are not relegated just to distance learning but may also be used in enhancing traditional classroom courses.

Size and Scope of Online Education

Statistics on the size and scope of online education are necessarily dated, given the rapid growth of the field. These are some of the latest numbers available:

- Enrollment in for-credit distance education (online, video, etc.) courses has grown rapidly, from 754,000 in 1994-95, to 1,344,000 in 1997-98, to 2,876,000 in 2000-01.
- More than 1.6 million students took online courses in 2002; nearly 600,000 of them took all their classes in cyberspace. More than one-third of higher education institutions offer online courses, and 97 percent of public universities do.
- UMass Online enrollments grew from 11,239 in FY 2003 to 14,787 in FY2004, an increase of 32%. Revenues rose from \$9.1 million to \$12.7 million in the same period, up 39%. Other institutions averaged an increase of 27.64% and 9.67%, respectively.
- As of March 2004, UMass Online offered 37 graduate and undergraduate programs online – including more than 300 courses – through the continuing education departments at UMass Amherst, Boston, Dartmouth, and Lowell. At Amherst, 58% of students are enrolled in graduate courses and 42% in undergraduate courses. Throughout the UMass system, the ratio is reversed, with 33% in graduate and 66% in undergraduate courses.

Key Issues in Online Education. A review of the literature reveals a variety of themes:

Unbundling of faculty roles. Universities are disaggregating faculty instructional activities and assigning them to distinct professionals. Distance education teams include instructors/facilitators, instructional designers, technologists, and administrators.

New partners. Degree-granting institutions are turning to corporations for technology that adapts existing instructional support operations to an online environment and creating collaborative partnerships with other colleges and universities as well as companies, to share technology and deliver courses.

New providers of higher education “pick low-hanging fruit.” For-profit institutions are the fastest-growing sector in education. There is some concern that for-profits “pick the low-hanging fruit” by offering the more marketable courses, e.g., business, computer science, etc., and leave the “heavy lifting” type of courses to traditional academe.

Different types of learners. Rather than replacing traditional higher-education institutions, distance education is allowing them to serve a new set of students who otherwise would not be able to participate. Successful distance learners tend to be self-sufficient, autonomous, and self-directed adults. On the other hand, students who are normally reserved and shy in classrooms may be likely to participate more actively in computer-mediated education .

The importance of creating community/interaction online. Perhaps the most important and difficult aspect of teaching online is creating a sense of belonging and community among the students taking the online course, to avoid student disengagement and higher dropout rates. Many distance educators maintain that their programs are successful because of the technologies that they use to let each student interact one-on-one with faculty members and fellow classmates.

The importance of user support. Faculty need help with translating their content expertise and course goals into the new medium, as well as with quickly solving any technical glitches that can interrupt course delivery. And students need an infrastructure of technology and technical support that they can rely on at all hours.

“The 24-hour professor.” Online courses require increased preparation time and timely responses to students who can interact any time of day or night. Some research indicates that online teaching actually takes greater frequency of work from faculty, but about the same amount of total time as conventional teaching.

Experience affects faculty perception of value of online instruction. Faculty who have taught online courses have a more positive view of this instructional method than those who have not.

Student readiness for online learning. Experienced faculty stress the importance of good advance information about rigor and time requirements. Institutions have begun asking students to complete self-assessments of their “fit” with online learning prior to registering.

Cheating. The lack of face-to-face contact in online education leads to concerns about academic misconduct. Proponents suggest a variety of ways of countering this, including de-emphasizing exams in favor of a portfolio of class activities.

Questions about retention. Studies on course retention rates are inconclusive, but anecdotal evidence and studies by individual institutions suggest that course-completion and program-retention rates are generally lower in distance-education courses.

Blurring of distinction between “traditional” and “distance” learning. In addition to all-online courses for distance learners, many on-campus courses include online elements.

Greater emphasis on student achievement/learning outcomes. Because online education makes traditional process measures of quality more difficult, it faces more pressure to show outcome measures. A consortium of regional accreditation commissions has developed guidelines in response to this issue.

Cost, quality, and access are linked. Despite the fact that the higher education community tends to treat quality, access, and cost as three separate and distinct issues, they are very much intertwined. Because these three issues are so inextricably linked, there may be ways to address all of them simultaneously by using information technology.

“No significant difference” versus maximizing the potential of the medium. Most studies that compare the achievement of learners in distance education with those in traditional classrooms find no significant difference. Proponents argue that innovative online programs can provide quality superior to traditional classrooms by linking faculty with instructional design teams, improving quality-control processes, linking course support structures to the courses themselves, and offering truly individualized learning.

Lack of quantitative, longitudinal research. Much more research needs to be done to establish a solid base of information on what works in online education and what does not.

What Frameworks Have Emerged for Enhancing/Assessing Quality in Online Education Programs?

An Overall Design and Evaluation Framework: “24 Benchmarks for Success in Internet-Based Higher Education.” The Institute for Higher Education has identified a set of 24 benchmarks, clustered in seven categories, which it finds to be essential to the success of an Internet-based distance education program at any institution:

- **Institutional Support:** a documented technology plan; reliable technology; a centralized system.
- **Course Development:** standards and learning outcomes guide course design and technology; periodic review of instructional materials; courses require analysis, synthesis, and evaluation.

- **Teaching/Learning:** student interaction facilitated in a variety of ways; timely and constructive feedback; instruction in proper research methods.
- **Course Structure:** pre-program assessment of self-motivation and technology assets; clear summary of course objectives and learning outcomes; student access to library resources; mutual agreement on student assignment and faculty response times.
- **Student Support:** information on programs and support services; hands-on training and information; access to technical support; quick and accurate answers to questions.
- **Faculty Support:** technical assistance in course development; help and assessment in transitioning from classroom teaching to online instruction; continued training and assistance; written resources on student use of electronically-accessed data.
- **Evaluation and Assessment:** process uses several methods and specific standards; data on enrollment, costs, and successful practices used; learning outcomes reviewed regularly.

Key Evaluation Areas: “Five Pillars of Quality Online Education.” Based on its experience in the online learning field, the Sloan Consortium has identified a framework of five broad areas in which to evaluate the quality of online learning networks: (1) Learning Effectiveness, (2) Student Satisfaction, (3) Faculty Satisfaction, (4) Cost-effectiveness, and (5) Access.

Specific Evaluation Measures: “Guidelines for the Evaluation of Electronically Offered Degree and Certificate Programs.” The Council of Regional Accrediting Commissions has developed a detailed list of quality criteria for online education programs. The Evaluation and Assessment section suggests the following evaluation measures:

- Evaluations of student performance;
- Review of student work and archive of student activities;
- Results from students’ routine end-of-course and -program evaluations;
- Student surveys of overall satisfaction; surveys reflecting student cost trade-offs;
- Faculty surveys, peer reviews of programs, and discussion groups;
- Documentation concerning access provided to students not previously served, through a combination of enrollment records and student surveys;
- Usage records concerning use of library and learning resources, and instructor assignments that require such usage;
- Assessment of students’ fundamental skills in communication, comprehension, and analysis;
- Documentation of the institution’s analyses that relate costs to goals of the program.

How Are Other Institutions Evaluating Quality?

Participant responses in the Sloan Consortium’s Spring 2004 Online Research Workshop, including people from more than 130 institutions, provide some insights into the various ways institutions are assessing online education quality. Approximately 20% of respondents indicate that assessment is not done, left up to individual instructors, done sporadically or inconsistently, or that formal assessment programs are in research and development stages. Others mention a variety of mechanisms for ensuring and assessing quality:

Course Development: Instruction design standards; course shell approach or common course outline; suggested assessment portfolios; review of courses by faculty peers or instructional designers; outside curriculum consultants; new courses subjected to more formal evaluation process; course revision every three years.

Student and Faculty Orientation: Internet readiness survey of students; orientations for students and faculty new to online teaching; “Learning about Online Learning” message board; faculty handbooks (See Appendix for a good example, available online).

Student Satisfaction: Surveys/course evaluations, sometimes several times per semester; aggregate complaint logs; first-time online learner surveys; reasons for selecting online coursework; surveys of alumni and their employers.

Faculty Satisfaction: Surveys on academic and technology aspects; aggregate complaint logs.

Other Effectiveness Measures: Retention/withdrawal rates; GPA and pass/fail rates; enrollment trends; pre/post tests of student knowledge; comparison of student learning outcomes in online and conventional courses; student success in future courses; use of standardized tests or board certification to compare online vs. face-to-face quality.

Institutional Processes: Curriculum evaluation team/continuous improvement team; using annual evaluations of instructors to generate best-practice and faculty-support lists; individual faculty meetings with instructional designer; group faculty discussions/committees identify best practices and areas for improvement; analysis of courses/strategies yielding best student learning outcomes; institutional research studies of student/faculty perceptions; comparison to other institutions re: enrollments, cost, attrition, etc.; external evaluations; use of aggregate institution and state data for planning purposes.

Respondents also mentioned several concerns: very low course-evaluation return rates; easier to measure satisfaction than impact/outcomes; outcomes measures are difficult for all of higher education—very long-term; and how to ensure enrolled student is actually the one taking a test

Quality Issues Raised in UMass Interviews. The author conducted interviews with 10 participants in online education at UMass. The following themes and issues emerged.

- High-quality students, who would otherwise not come to UMass.
- Need for clearer orientation of students to the demands of online learning.
- Student services—orientation, registration, advising, library services, technical support, bill payment, grades, and other records—important to maintain and improve.
- It is possible to be more “academically intimate” online.
- It is also possible for the professor to “disappear” in cyberspace.
- Some courses involving laboratory experiences, hands-on human contact, or complex social interaction should not be delivered solely online.

- Unclear whether class size is an issue—student satisfaction and retention data could be useful in determining this; general support for limiting class size of first-time online instructors to approximately 20 students.
- Online “cheating” is not completely resolved as an issue.
- Online teaching offers more involvement, less flexibility.
- Varied perceptions of impact on faculty workload—more objective, mechanical material might be less work than more qualitative, discussion-focused courses.
- Exploding demand raises questions about where instructors will come from.
- Use of adjunct faculty has been limited to date—57 regular faculty, 6 adjuncts, and 6 for whom no record of status is available in Fall 03 and Spring 04 graduate courses.
- Faculty teaching as overload versus regular load varies.
- Difficult to evaluate course quality with current processes—student course evaluations, retention data, enrollment trends, and faculty satisfaction surveys should be used; turnover in Continuing Education platform limitations have made using course evaluations somewhat problematic.
- Need to help students assess their readiness for online learning up-front.
- The technical platform for online learning delivery is a quality issue, particularly for graduate courses requiring large amounts of online discussion; desire for Graduate School advocacy about this.
- Continuing Education’s instability and capacity is a quality issue.
- Lack of instructional design support for online faculty identified.
- Some see a need for an additional layer of approval for online courses; others see monitoring course evaluations and retention rates as sufficient.
- Research project suggested, to compare courses offered in multiple formats.

Potential Areas for Future Work

- **Create a campus-wide committee on online learning, consisting primarily of faculty and staff with experience in online teaching.** The growth of the demand and the significance of the issues raised are significant enough for sustained attention. This committee could have a number of different potential charges, including evaluating future technology choices, organizing instructional design assistance for new online instructors, overseeing how-to materials, improving course and program evaluation processes, developing research projects on online education, and recommending policy changes to the Graduate Council and Faculty Senate.
- **Institutionalize data collection for evaluation purposes.** At a minimum, course evaluations, retention data, enrollment trends, and faculty satisfaction surveys should be utilized. To do this just for online courses might seem discriminatory to instructors teaching primarily online; these quality measures could be applied equally to all classes.

- **Address the platform issue.** This appears to have a major impact on the quality of graduate education, and the Graduate School may want to weigh in, if it hasn't already. A one-size-fits-all solution that works for the majority of UMass courses may could still unacceptably compromise the needs of qualitative, discussion-oriented graduate courses.
- **Build Continuing Education's capacity to support the growth and quality of online learning.** The success of online education depends on Continuing Education's ability to adequately support it.
- **Address the lack of instructional design support.** The Center for Teaching conducted some early workshops in this area—perhaps it would be a logical location for this. Continuing Education capacity could also be built in this area.
- **Consider adding another layer of review for online courses.** This could be presented either in a regulatory manner, as part of the formal course review process, or in a more technical-assistance sense, through the additional instructional design support mentioned above.
- **Develop a research project to compare online, hybrid, and classroom versions of the same course.** As suggested by an interviewee, the same School of Management course is offered in three different formats—classroom, online, and a hybrid using both modalities. It is likely that a funder could be interested in an in-depth research project to compare curriculum, interaction, and outcomes of these three classes.

ENSURING QUALITY IN ONLINE HIGHER EDUCATION COURSES

A Research Project by the Center for Education Policy School of Education – University of Massachusetts Amherst

Like many other postsecondary institutions, the University of Massachusetts has made a significant investment in online delivery of college courses. This delivery method has the potential to expand educational access for busy professionals, individuals with significant family demands, and others for whom online education may be more convenient than on-campus education.

However, this new educational delivery system presents a number of challenges to traditional University methods of assuring high-quality instruction. University administrators, the Graduate Council, faculty, and others concerned with maintaining the value of a UMass education want to ensure that online courses maintain high quality standards and high levels of participant satisfaction. Since a number of other institutions have been grappling with similar issues, John Mullin, the UMass Vice Chancellor for University Outreach, has requested a study of the current state of quality control for online higher education courses.

This report summarizes the current state of the field in terms of (1) what the research literature has to offer in terms of effective practices and (2) what UMass and other higher education institutions are doing to ensure online course quality. It begins by defining online education and outlining the major characteristics and issues facing this burgeoning field. This is followed by a more explicit focus on ways of ensuring quality in online programs. An extensive bibliography is also included.

What is Online Education?

Online education is the latest manifestation of distance learning, which has evolved continually since correspondence schools developed in the late 19th century.¹ Correspondence schools were sometimes private for-profit businesses and sometimes extension units of publicly funded universities. Both types of providers have continued to provide distance education as educational delivery technologies progressed from printed materials to radio in the 1930s, television in the 1950s, and video-conferencing and disk/CD-based computer packages in the 1980s.

Since 1995, online technologies using the World Wide Web have become widely used throughout higher education. Their use has allowed both synchronous (same-time) and asynchronous (not time-dependent) communication among students and between faculty and students, as well as multimedia and online access of research and support services. Judith Eaton, of the Council for Higher Education Accreditation, identifies the following key features of online education:

¹ This section is derived largely from National Science Foundation (2002), Moore, et al. (2003) and Eaton (2001).

4. **Computer-mediated classrooms:** faculty and students engage with each other through keyboards and monitors, relying heavily on the written word rather than face-to-face exchange;
5. **Separation in time between communications:** teachers and students depend on asynchronous modes of communication, rather like e-mail exchanges; and
6. **Availability of services online:** student services such as advising, registration, and library services are integrated with the online teaching environment.

UMass's Gary Moore describes online courses as being essentially a series of linked Web pages which may include a variety of components for each section of the course. As he notes, online components are not relegated just to distance learning but may also be used in enhancing traditional classroom courses. Online courses can include the following elements:

- **Introduction:** a brief overview of what material/issues, etc. will be covered;
- **Objectives:** a preview of the learning objectives;
- **Pre-assessment quizzes:** help students determine their needs for mastering content;
- **Reading list:** list of textbook and journal readings, links to readings on the Web, lectures, instructor notes;
- **Lectures, instructor notes, overviews:** can include text, videos, PowerPoint presentations, graphs and images, and audio narration;
- **Assignments/exercises:** papers, calculations, projects (group and individual), journal entries, threaded discussion participation, exams, quizzes, online chatroom participation;
- **Multimedia materials:** graphics, tables, audio, video, PowerPoint;
- **Groups:** clusters of students for discussion, projects, etc., via threaded discussions, chatrooms, or email listserves.
- **Threaded discussion questions:** open-ended questions for asynchronous discussion that ask for critical thinking, analysis, and evaluation; can be monitored and graded on quantity and quality;
- **Chatroom assignments:** opportunities for synchronous communication to help build community;
- **Assessments:** timed and secured multiple choice, T/F, short answer, matching, fill-in-the-blank, and essay exams which can include automatic feedback for students and computerized scoring of objective questions; students evaluated on responses in threaded discussions and chatrooms; online journal entries; papers graded online or via email; and
- **Technical and navigational information:** how to use the technology, timing of various course elements, where to get information and help, etc.

Size and Scope of Online Education

As Judith Eaton of the American Council on Education puts it, “Studying distance learning is somewhat like chasing quicksilver: the pace of change in the field is so rapid—both because of changes in technology and in the organizational arrangements for delivering it—that establishing a solid base of information will be a never-ending task” (Eaton, 2002). Statistics on the size and scope of online education are necessarily dated, given the rapid growth of the field. These are some of the latest numbers available:

- The National Center for Education Statistics reported last year that enrollment in for-credit distance education (online, video, etc.) courses has grown rapidly, from 754,000 in 1994-95, to 1,344,000 in 1997-98, to 2,876,000 in 2000-01. (NCES, 2003)
- The Sloan Consortium reported last year that more than 1.6 million students took online courses in 2002; nearly 600,000 of them took all their classes in cyberspace. More than one-third of higher education institutions offer online courses, and 97 percent of public universities do. (Schwartz, 2004)
- UMass Online enrollments across all campuses grew from 11,239 in FY 2003 to 14,787 in FY2004, an increase of 32%. Revenues rose from \$9.1 million to \$12.7 million in the same period, up 39%. These increases outpaced the average of 71 colleges with distance education program surveyed by Primary Research group. That survey found an average increase of 27.64% in enrollments and 9.67% in revenues. (Wilson, 2004)
- As of March 2004, UMass Online offered 37 graduate and undergraduate programs online – including more than 300 courses – through the continuing education departments at UMass Amherst, Boston, Dartmouth, and Lowell. At Amherst, 58% of students are enrolled in graduate courses and 42% in undergraduate courses. Throughout the UMass system, the ratio is reversed, with 33% in graduate and 66% in undergraduate courses. (Wilson 2004)

The table below shows how online course offerings have grown over the past two years at the Amherst campus.

Table 1 – Trends in Online Course Enrollment, Winter 2003-Summer 2004

	Graduate Courses	Undergraduate Courses
Winter 2003	1	14
Spring 2003	18	32
Summer 2003	18	38
Fall 2003	30	40
Winter 2004	3	20
Spring 2004	39	48
Summer 2004	25	79

Source: Registrar, Division of Continuing Education

The table below indicates the distribution of online graduate courses by school/department, and the enrollment in each, in the current academic year.

Table 2: Graduate Online Courses Offered, Fall 2003 – Summer 2004

Term	Session	Subject	Catalog	Descr	Tot Enrl
Fall03	C1	BIOST&EP	540	Intro Biostatistics	39
Fall03	C1	BIOST&EP	630	Prin Of Epidemiology	28
Fall03	C1	BIOST&EP	632	Applied Epidemiology	6
Fall03	C1	COM-HLTH	601	Princ Of Com Hlth Ed	21
Fall03	C1	COM-HLTH	620	Prin Pub Hlth Prac	30
Fall03	C1	ENTOMOL	671	Using Insct In Clsrm	4
Fall03	U1	ENTOMOL	671	Using Insct In Clsrm	2
Fall03	C1	ENV-HLTH	565	Env Hlth Practices	43
Fall03	U1	LANDARCH	592A	S-Plants In Ldsce	7
Fall03	U1	LANDARCH	592A	S-Plants In Ldsce	7
Fall03	C1	NURSING	603	Theortcl Cmp Nrs Sci	11
Fall03	C1	NURSING	630	Res Meth In Nursing	7
Fall03	C1	NURSING	634	Mth Com/Sc HI Assess	3
Fall03	U1	NURSING	603	Theortcl Cmp Nrs Sci	4
Fall03	U1	NURSING	630	Res Meth In Nursing	6
Fall03	C1	PUBHLTH	690C	Hlth Care Mgt	20
Fall03	C1	PUBHLTH	690E	Pub HI Emergeny Mgmt	13
Fall03	C1	PUBHLTH	690P	US Health Policy	18
Fall03	C1	PUBHLTH	691S	Sem-PHP Capstone Exp	5
Fall03	C1	SCH-MGMT	630	Acctg Decision Makng	50
Fall03	C1	SCH-MGMT	631	Mngrl Acctg & Contrl	48
Fall03	C1	SCH-MGMT	632	Info Mgt In New Econ	49
Fall03	C1	SCH-MGMT	640	Fin Analys&Decisions	34
Fall03	C1	SCH-MGMT	650	Bus Data Analysis	44
Fall03	C1	SCH-MGMT	670	Prod-Operations Mgt	38
Fall03	C1	SCH-MGMT	680	Organizatnl Behavior	60
Fall03	C1	SCH-MGMT	697O	ST-Personal & Corporate Values	52
Fall03	C1	SCH-MGMT	783	Business&Its Envrnmt	44
Fall03	CD1	SCH-MGMT	770	Mgt Thry&Human Res	50
Fall03	CD1	SCH-MGMT	797G	ST-Managing Chng & Cont Imprv	20

Term	Session	Subject	Catalog	Descr	Tot Enrl
Spr04	C1	BIOLOGY	697G	ST-Under the Connecticut	7
Spr04	C1	BIOST&EP	540	Intro Biostatistics	33
Spr04	C1	BIOST&EP	630	Prin Of Epidemiology	39
Spr04	C1	COM-HLTH	601	Princ Of Com Hlth Ed	44
Spr04	C1	COM-HLTH	620	Prin Pub Hlth Prac	32
Spr04	C1	COM-HLTH	624	Rsrch Meth In Pub Hl	19
Spr04	C1	COM-HLTH	628	Fin Mgt HI Institutn	20
Spr04	C1	COM-HLTH	704	Health Prog Planning	21
Spr04	C1	COMP-LIT	591M	S-Medicl Interp&Tran	21
Spr04	CH1	COMP-LIT	591M	S-Medicl Interp&Tran	0
Spr04	C1	EDUC	615N	W/E:Inv Sci Classrms	23
Spr04	C1	EDUC	615N	W/E:Inv Sci Classrms	23
Spr04	U1	EDUC	615D	W/E: Current Research Educ Tec	5
Spr04	U1	EDUC	692M	S-Use Tec Slv Prb Sc	6
Spr04	C1	ENV-HLTH	565	Env Hlth Practices	31
Spr04	C1	FOREST	597M	ST-Managerial Economics	0
Spr04	C1	FOREST	597T	ST- Timber Harvesting	5
Spr04	U1	FOREST	597T	ST- Timber Harvesting	9
Spr04	C1	NURSING	635	Commnty Hlth Nrsg I	4
Spr04	C1	NURSING	640	Comm Hlth Assessment	6
Spr04	U1	NURSING	640	Comm Hlth Assessment	6
Spr04	U1	NURSING	645	HI Care Sys&Nurs Prc	14
Spr04	C1	NUTRITN	597D	ST-Nutrn & Health in Sci Clsrm	18
Spr04	C1	PUBHLTH	691S	Sem-PHP Capstone Exp	13
Spr04	C1	SCH-MGMT	597A	St:Cntmp Iss Acctg	1
Spr04	C1	SCH-MGMT	630	Acctg Decision Makng	55
Spr04	C1	SCH-MGMT	631	Mngrl Acctg & Contrl	38
Spr04	C1	SCH-MGMT	632	Info Mgt In New Econ	48
Spr04	C1	SCH-MGMT	640	Fin Analys&Decisions	36
Spr04	C1	SCH-MGMT	650	Bus Data Analysis	51
Spr04	C1	SCH-MGMT	660	Marketing Management	48
Spr04	C1	SCH-MGMT	670	Prod-Operations Mgt	26
Spr04	C1	SCH-MGMT	680	Organizatnl Behavior	54
Spr04	C1	SCH-MGMT	689	Organ Plan&Strategy	16
Spr04	C1	SCH-MGMT	697Q	ST-Services Marketng Managemnt	30
Spr04	C1	SCH-MGMT	770	Mgt Thry&Human Res	41
Spr04	C1	SCH-MGMT	783	Business<s Envrnmt	51
Spr04	CD1	SCH-MGMT	697Z	ST-Creating A High-Perfmnc Org	20
Spr04	C1	W&FCNSV	597O	ST-Watershed Sc&Mgt	0

Term	Session	Subject	Catalog	Descr	Tot Enrl
Sum04	CS1	COM-HLTH	726	Hlth Ec&Reimbursemnt	25
Sum04	CS1	COM-HLTH	780	Pub Health Law	43
Sum04	CS2	COM-HLTH	525	Ethical Iss In Pubhl	45
Sum04	CS2	COM-HLTH	780	Pub Health Law	0
Sum04	CS2	EDUC	615FF	Differentiated Instruction	6
Sum04	CD1	NURSING	597F	ST-Holistic Nrsg&Comp Alt Modl	0
Sum04	CS1	NURSING	605	Adv Hlth Assessment	0
Sum04	CS1	NURSING	610	Phc:Ch,Adlscnt,Yg Ad	0
Sum04	CS1	NURSING	616	Adv Pathphys&Pharmcl	0
Sum04	CS1	NURSING	698Q	Prac: Prim Care Chld	0
Sum04	CS1	PUBHLTH	691S	Sem-PHP Capstone Exp	4
Sum04	CD1	SCH-MGMT	630	Acctg Decision Makng	0
Sum04	CD1	SCH-MGMT	631	Mngrl Acctg & Contrl	0
Sum04	CD1	SCH-MGMT	632	Info Mgt In New Econ	0
Sum04	CD1	SCH-MGMT	640	Fin Analys&Decisions	0
Sum04	CD1	SCH-MGMT	650	Bus Data Analysis	0
Sum04	CD1	SCH-MGMT	660	Marketing Management	0
Sum04	CD1	SCH-MGMT	670	Prod-Operations Mgt	0
Sum04	CD1	SCH-MGMT	680	Organizatnl Behavior	0
Sum04	CD1	SCH-MGMT	689	Organ Plan&Strategy	0
Sum04	CD1	SCH-MGMT	697SS	ST-Sport Marketing	1
Sum04	CD1	SCH-MGMT	770	Mgt Thry&Human Res	1
Sum04	CD1	SCH-MGMT	770	Mgt Thry&Human Res	1
Sum04	CD1	SCH-MGMT	783	Business&Its Envrnmt	0
Sum04	CD1	SCH-MGMT	797J	ST-Business Forecasting	0

Source: Registrar, Division of Continuing Education

Key Issues in Online Education

A review of the literature reveals a variety of themes of relevance to a discussion of quality online education. A selection of these are summarized briefly below.

Unbundling of faculty roles. “Rather than incorporating the responsibility for all technology- and competency-based functions into a single concept of ‘faculty member,’ universities are disaggregating faculty instructional activities and [assigning] them to distinct professionals” (Paulson, 2002, p. 124). Doing this involves a “deliberate division of labor among the faculty, creating new kinds of instructional staff, or deploying nontenure-track instructional staff...in new ways” (Paulson, 2002, p. 126). Distance education teams include instructors/facilitators, instructional designers, technologists, and administrators (Miller, 2001; Williams, 2003). The role of faculty members in distance education requires “some specialized skills and strategies. Distance education instructors must plan ahead, be highly organized, and communicate with learners in new ways. They need to be accessible to students [and] work in teams when appropriate” (PSU, 1998, p. 4). [Summary from Howell, et al., 2003]

New partners. “A diverse array of partnerships between degree-granting institutions and corporations is emerging to provide online services in support of distance learning...Typically, these involve degree-granting institutions turning to corporations for technology that adapts existing and familiar instructional support operations to an online environment” (Eaton, 2001). In addition, higher education institutions are creating collaborative partnerships with other colleges and universities as well as companies, to share technology and deliver courses (Carnevale, 2000b; Dunn, 2000; NSF, 2002). However, partnerships present “obstacles as well as benefits. Winning accreditation, providing student services, setting tuition, figuring out finances, and transferring course credits are among the thorny issues that administrators find themselves struggling to face collectively” (Carnevale, 2000a; quoted in Howell et al., 2003).

New providers of higher education “pick low-hanging fruit.” “For-profit institutions are the fastest-growing sector in education” (Gallagher, 2003; Pond, 2003). Currently, only 4 to 5% of all higher education students are enrolled with for-profit providers, but 33% of all online students are enrolled with these same providers (Gallagher, 2003). As Bates (2000) has observed, this phenomenon could have a drastic impact on higher education: the private sector will concentrate on those areas where profits are most easily made, such as business programs and information technology courses. However, it will leave those areas that cannot pay their way, such as many arts and social science programs, and possibly health science because of the high cost, to the public sector. With the loss of the cross-subsidy, the higher education sector would be in even more financial trouble (p. 6; see also Anderson, 2001). Berge (2000) describes for-profits’ practice as “picking the low-hanging fruit” by offering the more marketable courses, e.g., business, computer science, etc., and leaving the “heavy lifting” type of courses to traditional academe. [Summary from Howell, et al., 2003]

Different types of learners. “Distance education is not replacing traditional higher-education institutions. It’s allowing these traditional higher-education institutions to make their courses and faculty expertise available to a whole new set of students who otherwise would not be able

to participate for whatever reason—because of time or cost constraints or geographical and location constraints.” (John Bailey, U.S. Education Department, in Kiernan, 2003).

“Research about learners has produced what might seem to be paradoxical results. On the one hand, successful distance learners tend to be self-sufficient, autonomous, and self-directed adults (Biner and Dean, 1997; Gibson, ed., 1998; Guglielmino and Guglielmino, 2001; Ozen, 2000). On the other hand, students who are normally reserved and shy in classrooms are likely to participate more actively in computer-mediated education because they have time to think about what they express (Hillman, 1999).” [Summary from NSF, 2003]

The importance of creating community/interaction online. The National Education Association makes the point that the most important and difficult aspect of teaching online is not using technology. Instead, it is creating a sense of belonging and community among the students taking the online course. “Otherwise, you’re going to get student disengagement and higher dropout rates, says Rachel Hendrickson, NEA higher education coordinator (Carnevale and Olsen, 2003). Chickering and Ehrmann (1996) identify seven areas of good classroom practice that must be replicated online: contact between student and faculty, reciprocity and cooperation among students, active learning techniques, prompt feedback, effective time on task, high expectations, and respect for diverse talents and learning styles.

However, many distance educators maintain that their programs are successful because of the technologies that they use to let each student interact one-on-one with faculty members and fellow classmates. “Face-to-face is not the gold standard that it’s held up to be,” says Chris Dede, professor of learning technologies at Harvard Graduate School of Education. “Many people find their voice in distance media in a way that they don’t in face-to-face sessions” (Young, 2002).

The importance of user support. While students and faculty are familiar with the “interface” of classroom instruction, asynchronous online communication requires a certain level of computer savvy from both students and faculty. And without face-to-face proximity, the computer interface is the lifeline of the online class. Faculty need help with translating their content expertise and course goals into the new medium, as well as with quickly solving any technical glitches that can interrupt course delivery. And “perhaps most important for the success of online colleges is an infrastructure of technology and technical support that students can rely on at all hours” (Carnevale and Olsen, 2003), to reduce both the isolation of students and the burden on faculty of resolving technical questions.

“The 24-hour professor.” The time demands of online education on faculty are different from conventional courses, both in terms of increased preparation time and the need to deal with distance learners who can interact any time of day or night and expect responses (NSF, 2002). “Although critics of distance education have worried that virtual classrooms mean less contact between professors and students, many professors say the opposite is true” (Young, 2002c). Researcher DiBiase found that online teaching actually takes about the same amount of time as conventional teaching, but that faculty work on online courses far more frequently (Young, 2002c). However, a survey of administrators and faculty involved in distance education by Lee (2002) found that faculty did not perceive current rewards and incentives to be sufficient for the

heavier workloads distance teaching required (Reeves, 2003). Advocates suggest a variety of course-design techniques for managing this challenge, including clear expectations about feedback, partially automated grading of objective exercises, and use of student peer-assessment for some course aspects.

Experience affects faculty perception of value of online instruction. Faculty who have taught online courses have a more positive view of this instructional method than those who have not (Lindner, 2002). Carr (2000c) found that 72% of those who had taught distance-learning courses were favorable, compared with 51% of those who had not taught at a distance. [Summarized in Howell et al., 2003] An American Federation of Teachers (2000) survey was even more positive, finding that 85% of 200 practitioners surveyed would teach by distance education again.

Student readiness for online learning. As noted above, successful distance learners tend to be self-sufficient, autonomous, and self-directed adults. They also tend to be good readers, since the medium is primarily text-based, and they need to have a certain level of comfort with computer technology and networks. Finally, experienced faculty stress the importance of students receiving good advance information, so that they don't begin distance education courses under a false impression that they are easier and less time-consuming than traditional courses (American Federation of Teachers, 2000). A number of institutions have begun asking students to complete self-assessments of their "fit" with online learning prior to registering. (For a sample self-assessment from University of Maryland University College, see Appendix).

Cheating. The lack of face-to-face contact in online education leads to concerns about how to ensure that students are in fact producing the work that they submit. Proponents such as Moore (2003) suggest a variety of ways of countering this challenge, including timed access to exams, randomizing the order of test questions for each student, open-book tests with enough complexity to require familiarity with materials beforehand, regional centers for proctored test-taking, specific sub-elements to essay questions that make advance essay-writing unproductive, and grading based on a portfolio of class activities, including threaded discussions, journals, searching and critiquing websites, and various individual and group projects.

Questions about retention. "Studies comparing online course retention rates with traditional courses are inconclusive....A Chronicle of Higher Education article in 2000 reported that 'no national statistics exist yet about how many students complete distance programs or courses, but anecdotal evidence and studies by individual institutions suggest that course-completion and program-retention rates are generally lower in distance-education courses than in their face-to-face counterparts'" (Brady, 2001, p. 352; quoted in Howell et al., 2003).

Blurring of distinction between "traditional" and "distance" learning. In addition to all-online courses for distance learners, many on-campus courses include online elements, such as course web-pages with syllabuses, assignments, and even threaded discussion sections online. Graham Spanier, president of Pennsylvania State University, calls the convergence of online and resident instruction, "the single-greatest unrecognized trend in higher education today" (Young, 2002).

Greater emphasis on student achievement/learning outcomes. Because online makes traditional process measures of quality more difficult, it faces more pressure to show outcome measures. “Traditionally, most accrediting bodies have used input-based measures to assess quality education. These measures often included faculty-to-student ratios, library holdings, and faculty credentials. Distance-delivered courses have posed a dilemma for accreditors and administrators alike, since input measures are more difficult to assess in the new environment” (Bishop & Spake, 2003). A consortium of regional accreditation commissions has developed “Guidelines for the Evaluation of Electronically Offered Degree and Certificate Programs” in response to this issue. These are addressed in more detail in the section on frameworks for enhancing/assessing online education quality that follows.

Cost, quality, and access are linked. “Despite the fact that the higher education community tends to treat quality, access, and cost as three separate and distinct issues, they are very much intertwined. It is now widely recognized, for example, that higher education’s historical approach to increasing quality—adding more faculty, more facilities, more resources—has simultaneously increased costs. We also know that access will be affected if the cost of higher education continues to rise. So too does a one-size-fits-all definition of academic quality limit access for students who bring diverse preparation, abilities, and interests to each learning experience. Conversely, because these three issues are so inextricably linked, there may be ways to address all of them simultaneously by using information technology” (Twigg, 2001).

“No significant difference” versus maximizing the potential of the medium. “Most studies that compare the achievement of learners in distance education (online and previous methods) with those in traditional classroom learning environments show that there is no significant difference (Kuntz, 1999; Moore and Thompson, 1997; Russell, 1999). Some studies do find a positive advantage for distance learners (Day, Raven, and Newman, 1998; Navarro and Shoemaker, 2000). However, Phipps and Merisotis (1999) argue that much of this body of research is suspect, since many studies did not control for extraneous variables, and the validity and reliability of many of the instruments used to measure student outcomes and attitudes are questionable. As a result, they urge that the findings be approached skeptically.” [Summarized in NSF, 2003]

Twigg (2001) argues that innovative online programs can provide quality superior to traditional classrooms by linking faculty with instructional design teams, improving quality-control processes, and linking course support structures to the courses themselves. Other features can include initial and continuous assessment, instant feedback, individualized study plans, interactive learning materials and activities, and appropriate and varied kinds of human interaction as needed.

Lack of quantitative, longitudinal research. Judith Eaton (2002) suggests that much more research needs to be done to establish a solid base of information on what works in online education and what does not. She lists the following areas as needing more research:

- Demographic characteristics of online versus conventional students;
- Matriculation, enrollment, and progression patterns for online students;
- Characteristics, compensation, and workload patterns of online faculty.
- Characteristics of curriculum/course designers;

- Corporate status of distance learning providers;
- Arrangements for provision of degrees/certificates in consortia of providers;
- Tuitions/fees paid by students and the percentage of program revenues they support;
- Cost of distance learning versus conventional programs; and
- How learning goals are set and measured in online programs, and whether there is more capacity for such measurements in the online format.

What Frameworks Have Emerged for Enhancing/Assessing Quality in Online Education Programs?

An examination of the literature on distance learning turns up three major frameworks for ensuring the quality of online education programs. The first, from the Institute for Higher Education Quality, provides a useful overall quality framework for design and evaluation of online education courses and programs. The second, from the Sloan Consortium, and the third, from the Council of Regional Accrediting Commissions, present more specific indicators for assessing the quality of online education offerings.

An Overall Design and Evaluation Framework: Institute for Higher Education Quality’s “24 Benchmarks for Success in Internet-Based Higher Education. The National Education Association and Blackboard, Inc., a widely used platform provider for online education, commissioned the Institute for Higher Education Quality to evaluate a variety of guidelines or benchmarks that had been previously promoted for ensuring quality distance learning by a variety of organizations.² Through literature review and site visits to six leading institutions³ in online learning, the Institute identified a set of 24 quality benchmarks, clustered in seven categories, which it finds to be essential to the success of an Internet-based distance education program at any institution:

Institutional Support

- A documented technology plan that includes electronic security measures (i.e., password protection, encryption, back-up systems) is in place and operational to ensure both quality standards and the integrity and validity of information.
- The reliability of the technology delivery system is as failsafe as possible.
- A centralized system provides support for building and maintaining the distance education infrastructure.

² These organizations include the American Council on Education, the National Education Association, the Global Alliance for Transnational Education, the Southern Regional Electronic Campus, the Commission on Higher Education of the Middle States Association of Colleges and Schools, and the Western Cooperative for Educational Telecommunications, among others.

³ Brevard Community College (FL), Regents College (NY), University of Illinois at Urbana-Champaign, University of Maryland University College, Utah State University, and Weber State University (UT).

Course Development

- Guidelines regarding minimum standards are used for course development, design, and delivery, while learning outcomes—not the availability of existing technology—determine the technology being used to deliver course content.
- Instructional materials are reviewed periodically to ensure they meet program standards.
- Courses are designed to require students to engage themselves in analysis, synthesis, and evaluation as part of their course and program requirements.

Teaching/Learning

- Student interaction with faculty and other students is an essential characteristic and is facilitated through a variety of ways, including voicemail and/or email.
- Feedback to student assignments and questions is constructive and provided in a timely manner.
- Students are instructed in the proper methods of effective research, including assessment of the validity of resources.

Course Structure

- Before starting an online program, students are advised about the program to determine (1) if they possess the self-motivation and commitment to learn at a distance and (2) if they have access to the minimal technology required by the course design.
- Students are provided with supplemental course information that outlines course objectives, concepts, and ideas, and learning outcomes for each course are summarized in a clearly written, straightforward statement.
- Students have access to sufficient library resources that may include a “virtual library” accessible through the World Wide Web.
- Faculty and students agree upon expectations regarding times for student assignment completion and faculty response.

Student Support

- Students receive information about programs, including admission requirements, tuition and fees, books and supplies, technical and proctoring requirements, and student support services.
- Students are provided with hands-on training and information to aid them in securing material through electronic databases, interlibrary loans, government archives, news services, and other sources.
- Throughout the duration of the course/program, students have access to technical assistance, including detailed instructions regarding the electronic media used, practice sessions prior to the beginning of the course, and convenient access to technical support staff.
- Questions directed to student service personnel are answered accurately and quickly, with a structured system in place to address student complaints.

Faculty Support

- Technical assistance in course development is available to faculty, who are encouraged to use it.
- Faculty members are assisted in the transition from classroom teaching to online instruction and are assessed during the process.
- Instructor training and assistance, including peer mentoring, continues through the progression of the online course.
- Faculty members are provided with written resources to deal with issues arising from student use of electronically-accessed data.

Evaluation and Assessment

- The program's educational effectiveness and teaching/learning process is assessed through an evaluation process that uses several methods and applies specific standards.
- Data on enrollment, costs, and successful/innovative uses of technology are used to evaluate program effectiveness.
- Intended learning outcomes are reviewed regularly to ensure clarity, utility, and appropriateness.

Key Evaluation Areas: Sloan Consortium's "Five Pillars of Quality Online Education."

The Sloan Consortium (Sloan-C), sponsored by the Alfred P. Sloan Foundation, is a consortium of accredited higher education providers and organizations that provide equipment, tools, and infrastructure support for these providers. Sloan-C maintains a catalog of degree and certificate programs; publishes a newsletter, the *Journal of Asynchronous Learning Networks*, and annual volumes of applied research studies; and conducts research, surveys, and forums to inform academic, government, and private-sector audiences.

Based on its experience in the field, Sloan-C has identified a framework of five broad categories—the "Five Pillars"—for assessing the quality of online learning networks:

1. **Learning Effectiveness.** The course or program should be at least equivalent in quality to face-to-face courses offered at the same institution. The learning resources in online courses generally include the same ones to be found in the institution's traditional face-to-face courses—learning media (books, notes, software, CD-ROMs, and so on); faculty who teach the class and are available outside of class; and learners who interact with the faculty and interact with each other. Because of technology, online courses are usually enhanced by resources available over the Internet and/or designed for computer presentation. Metrics include: faculty perception; outcomes assessments; career, scholastic and professional achievement surveys and records; feedback from employers; and institutionally sustained, evidence-based, participatory inquiry into how well online programs achieve learning objectives.
2. **Student Satisfaction.** In addition to high-quality learning outcomes, students should be satisfied with services and support. The goal is that all students who complete a course express satisfaction with course rigor and fairness, with professor and peer interaction, and with support services. As consumers, students are satisfied when provider services—learning resources, academic and administrative services, technology and infrastructure

support—are responsive, timely, and personalized. Graduation and retention rates are good indicators of student satisfaction, in addition to survey instruments that ask students whether they would take another online course or recommend the course to friends.

3. **Faculty Satisfaction.** Faculty satisfaction is enhanced when the institution supports faculty members with a robust and well-maintained technical infrastructure, training in online instructional skills, and ongoing technical and administrative assistance. Faculty members also expect to be included in the governance and quality assurance of online programs, especially as these relate to curricular decisions and development of policies of particular importance to the online environment (such as intellectual property, copyright, royalties, collaborative design and delivery). Faculty satisfaction is closely related to an institutional reward system that recognizes the rigor and value of online teaching. Satisfaction increases when workload assignments/assessments reflect the greater time commitment in developing and teaching online courses and when online teaching is valued on par with face-to-face teaching in promotion and tenure decisions. A final institutional factor—crucial to recruiting, retaining, and expanding a dedicated online faculty—is commitment to ongoing study of and enhancement of the online faculty experience.
4. **Cost-effectiveness.** The goal is to control costs so that tuition is affordable yet sufficient to meet development and maintenance costs—and to provide a return on investment in startup and infrastructure. Metrics may compare the costs and benefits of delivery modes by discipline and educational level; faculty salary and workload; capital, physical plant and maintenance investments; equipment and communications technology costs; scalability options; and/or various learning processes and outcomes, such as satisfaction levels and retention rates. These types of comparisons enable institutions to: develop better strategic plans for market demand and capture; achieve capacity enrollment; develop brand recognition; and secure long-term loyalty among current and prospective constituents.
5. **Access.** Access starts with enabling prospective learners to become aware of available opportunities through effective marketing, branding, and basic program information. It continues with providing program access (for example, quantity and variety of available program options, clear program information), seamless access to courses (for example, readiness assessment, intuitive navigability), and appropriate learning resources. Access includes three areas of support: academic (such as tutoring, advising, and library); administrative (such as financial aid, and disability support); and technical (such as hardware reliability and uptime, and help desk). Effective practices for measuring increasing accessibility may analyze and apply the results of student and provider surveys, narrative or case study description, focus groups, or other means of measuring access. Larger-scale access implementation may also result from mission-based strategic planning in a variety of institutional areas.

Specific Evaluation Measures: Council of Regional Accrediting Commissions’ “Guidelines for the Evaluation of Electronically Offered Degree and Certificate Programs.” Perhaps the most detailed list of quality criteria for online education programs is found in these guidelines, produced in 2001 by the eight regional accrediting commissions⁴ in response to the emergence of technologically mediated distance learning. These guidelines are meant to assist institutions in planning distance education activities and to provide a self-assessment framework for those already involved. The guidelines are divided into five separate components, each of which addresses a particular area of institutional activity relevant to distance education.

The guidelines are included in their entirety in the Appendix to this report. A section addressing program effectiveness, from the Evaluation and Assessment component of the guidelines, is presented below.

Evaluation and Assessment. Both the assessment of student achievement and evaluation of the overall program take on added importance as new techniques evolve. For example, in asynchronous programs the element of seat time is essentially removed from the equation. For these reasons, the institution conducts sustained, evidence-based and participatory inquiry as to whether distance learning programs are achieving objectives. The results of such inquiry are used to guide curriculum design and delivery, pedagogy, and educational processes, and may affect future policy and budgets perhaps have implications for the institution’s roles and mission....

5d. Overall program effectiveness is determined by such measures as:

- The extent to which student learning matches intended outcomes, including for degree programs both the goals of general education and the objectives of the major.
- The extent to which student intent is met.
- Student retention rates, including variations over time.
- Student satisfaction, as measured by regular surveys.
- Faculty satisfaction, as measured by regular surveys and by formal and informal peer review processes.
- The extent to which access is provided to students not previously served.
- Measures of the extent to which library and learning resources are used appropriately by the program’s students.
- Measures of student competence in fundamental skills such as communication, comprehension, and analysis.
- Cost effectiveness of the program to its students, as compared to campus-based alternatives.

⁴ Commission on Higher Education, Middle States Association of Colleges and Schools; Commission on Institutions of Higher Education, New England Association of Schools and Colleges; Commission on Technical and Career Institutions, New England Association of Schools and Colleges; Commission on Institutions of Higher Education, North Central Association of Colleges and Schools; Commission on Colleges, The Northwest Association of Schools and Colleges; Commission on Colleges, Southern Association of Colleges and Schools; Accrediting Commission for Community and Junior Colleges, Western Association of Schools and Colleges; Accrediting Commission for Senior Colleges and Universities, Western Association of Schools and Colleges.

Although not all of these measures will be applicable equally at every institution, appropriate evidence is generally available through:

- Evaluations of student performance.
- Review of student work and archive of student activities, if maintained, in the course of program reviews.
- Results from students' routine end-of-course and -program evaluations.
- Student surveys of overall satisfaction with the experience of electronically offered programs; surveys reflecting student cost trade-offs experienced as they pursued the program.
- Faculty surveys, peer reviews of programs, and discussion groups.
- Documentation concerning access provided to students not previously served, through a combination of enrollment records and student surveys.
- Usage records concerning use of library and learning resources, and instructor assignments that require such usage.
- Assessment of students' fundamental skills in communication, comprehension, and analysis. How have the institution's usual measures of these skills been adapted to assess distant students?
- Documentation of the institution's analyses that relate costs to goals of the program.

How Are Other Institutions Evaluating Quality?

In order to get a better sense of how other institutions are addressing quality issues in online education, the author enrolled in the Sloan Consortium's Spring 2004 Online Research Workshop. People from more than 130 institutions and 11 countries joined the workshop to explore and develop responses to several challenge questions, including, "what indicators should institutions use to determine the quality of courses and programs?" Approximately 57% of participants responded to a Sloan-C survey on assessment practices, and the summary⁵ of these responses, while informal and qualitative, provides some insights into the various ways institutions are (or are not) assessing online education quality.

Approximately 20% of respondents indicate that assessment is not done, left up to individual instructors, done sporadically or inconsistently, or that formal assessment programs are in research and development stages. The remaining respondents mention a variety of mechanisms for ensuring and assessing quality. These are roughly grouped below.

Course Development

- Instruction design standards
- Course shell approach, or common course outline, which instructors build upon
- Suggested assessment portfolios for instructors to use in assessing student learning
- Faculty peer review—design, content, and instructional strategies
- Course review during development stage, involving an instructional designer, another instructor, or both
- Outside consultants re: curricular issues
- New courses subjected to more formal evaluation process, based on standards and course goals
- Course revision every three years

Student and Faculty Orientation

- Internet readiness survey of students at the beginning of each course
- Orientations for students and faculty new to online teaching
- "Learning about Online Learning" message board, with prompts on key areas
- Faculty handbooks (See Appendix for a good example, available online)

Student Satisfaction

- Student satisfaction surveys/course evaluations –academic aspects
- Student satisfaction surveys/course evaluations –technology aspects
- Multiple student satisfaction surveys per semester
- Complaint logs that aggregate student complaints
- First-time online learner surveys
- Reasons for selecting online coursework
- Surveys of alumni and their employers on relevance and effectiveness of programs

⁵ "Synthesis of Sloan-C Online Research Workshop Survey on Assessment" [document on website] (2004). Sloan Consortium. Downloaded from <http://sloan-c.uml.edu/> in April, 2004.

Faculty Satisfaction

- Faculty satisfaction surveys – academic aspects
- Faculty satisfaction surveys – technology aspects
- Faculty satisfaction survey once per year
- Complaint logs that aggregate faculty complaints

Other Effectiveness Measures

- Retention/withdrawal rates vs. face-to-face courses
- GPA and pass/fail rates in online vs. face-to-face courses
- Enrollment trends
- Pre- and post-tests of student knowledge, with student gains as effectiveness measure
- Identification of student learning outcomes at course, program, and degree levels
- Comparison of student learning outcomes in online and conventional courses
- Success of online students in future courses
- Use of standardized tests or board certification, where possible, to compare online vs. face-to-face quality

Institutional Processes

- Curriculum evaluation team/continuous improvement team to oversee course/program assessment and feedback
- Annual evaluations of instructors, generating both best-practice and faculty-support lists
- Individual faculty meetings with instructional designer or other online support staff
- Group faculty discussions/committees identify best practices and areas for improvement
- Analysis of characteristics of courses/strategies yielding greatest student learning outcomes
- Institutional research studies of student and faculty perceptions
- Comparison to other institutions re: enrollments, cost, attrition, etc.
- External evaluations
- Use of aggregate institution and state data for planning purposes

Respondents also mentioned several concerns about quality evaluation. These include:

- Very low return rates on course evaluations—overemphasis of very satisfied and very dissatisfied perspectives
- Easier to measure satisfaction than impact/outcomes
- Outcomes measures are difficult for all of higher education – the best measures are very long-term, and we don't know a valid way to implement them
- How to ensure enrolled student is actually the one taking a test

Quality Issues Raised in UMass Interviews

In addition to the literature review and participation in the Sloan-C Online Research Workshop, the author conducted interviews with 10 participants in online education at UMass. Interviewees included faculty/staff in the UMass Amherst schools of Management, Nursing, and Public Health, and administrators in the UMass Amherst Division of Continuing Education and UMass Online (see Appendix for list of interviewees). Interviews consisted of a series of open-ended questions regarding graduate online course quality, the course approval process, and assessment of student learning (see Appendix for interview protocol). While this process was qualitative and impressionistic, the following themes and issues emerged.

High-quality students, who would otherwise not come to UMass. Participating faculty and staff generally felt that the students in their graduate online courses were as good as or, in many cases, better than the students in their traditional courses. Several programs are attracting physicians, nurses, and other mid-career professionals who bring both intellect and experience to their courses. They also bring high expectations for quality programs/courses. Generally, graduate level students are participating in online programs because their work and family responsibilities make them unable to leave their current employment for on-campus programs,

Need for clearer orientation of students to the demands of online learning. Several interviewees mentioned the need to ensure students understand what will be demanded of them. One interviewee expressed interest in self-assessments of readiness for online learning, such as that found at the University of Maryland's University College (see Appendix). Another said that some students appear to think that online coursework will not take as much time as an on-campus course; in fact, it may take more time, even though that time is more flexibly distributed.

Student services important to maintain and improve. Because students are taking courses from remote locations, all aspects of student services—orientation, registration, advising, library services, technical support, bill payment, grades, and other records—need to be accessible from off-campus. One interviewee spoke of an online student who was told he had to come to campus to get a campus ID in order to access the library. “But I’m in Taiwan!” he replied. Additional self-assessment and orientation materials online, as well as continuous improvement of online access to student services, were mentioned.

It is possible to be more “academically intimate” online. A number of interviewees spoke about knowing their students better online than in the face-to-face classroom. As one faculty member put it, “I only meet them online, but I meet all of them. In the classroom, sometimes people can fall through the cracks.” Another found the quality of conversation in online threaded discussions to be superior to classroom discussion. “They only answer when they’re prepared, they’ve done the reading, maybe they’ve drafted a response. They have more time to think about it.”

It is also possible for the professor to “disappear” in cyberspace. “When we see a problem, it’s when the faculty member seems to disappear,” said one interviewee. Several noted that online teaching requires a different type of attention than a traditional course: faculty must work

to provide timely feedback on assignments and a regular presence via emails and threaded discussions.

Some courses should not be delivered solely online. Several interviewees identified courses involving laboratory experiences, hands-on human contact, or complex social interaction as being difficult or impossible to deliver effectively in a fully online format. It was suggested that some of these could be offered in “hybrid” formats, combining online and campus-based elements. It was also suggested by two interviewees that interest in delivering fully online programs could lead to pressure for faculty to teach courses online that were likely to be less successful than their conventional counterparts. At the very least, such courses would require significant instructional design assistance.

Unclear whether class size is an issue. Because faculty receive additional pay for teaching more students (beyond a minimum threshold), and because of the need for timely feedback for each student in online learning, there is a potential conflict between the interests of faculty and their students regarding class size. Interviews yielded a wide variety of opinions on this topic. Some suggested capping course sizes at a certain level—25 or so—and requiring faculty to take a graduate assistant for each increment of 25 beyond that level. Others felt that with proper management, larger courses could be accommodated without sacrificing quality. This is an area where student satisfaction and retention data could be useful in settling the disagreement. There appeared to be more unanimous support for limiting the class size of first-time online instructors to approximately 20 students.

Online “cheating” is not completely resolved as an issue. Several interviewees admitted that they do not know for certain whether exams are completed by the person taking the course. One found the technology for giving online exams problematic and turned to emailing take-home exams to students. Others responded that cheating is a problem in traditional classrooms as well, and that grading a portfolio of work, with less emphasis on summative exams, enabled instructors to get a better sense of students’ abilities and voices, and made academic misconduct easier to spot. One interviewee noted the importance of varying assignments from year to year, to make cheating more difficult.

More involvement, less flexibility. Two interviewees noted that online learning involves trading off some desirable aspects of traditional teaching for others. Online teaching requires planning in advance that somewhat reduces the instructor’s ability to adapt as he or she goes along. “The online medium lets students get more involved,” noted one interviewee, “but the lack of direct interpersonal cues—body language, desperate looks—gives you less of the feedback you would normally use to calibrate your lessons. It’s not hopeless online, but you have to stay almost constantly involved in it.”

Varied perceptions of impact on faculty workload, perhaps due to different types of courses. Interviewees varied on whether online teaching was more work. They generally agreed that the distribution of work is different in online courses, with student questions, assignments, and discussions needing more constant attention/feedback, but some felt that the overall workload was about the same as face-to-face, while others felt that it was greater. One interviewee speculated that courses in different disciplines would require different amounts of

faculty work online; more objective, mechanical material might be less work than more qualitative, discussion-focused courses.

Exploding demand raises questions about where instructors will come from. The rapidly growing demand for some online courses/programs, coinciding with budget-induced early retirements, has created challenges in meeting that demand with current faculty. The additional revenues from online offerings have enabled some hiring of new faculty, and additional capacity has been generated through regular faculty teaching courses on overload and through the use of adjunct faculty.

Use of adjunct faculty has been limited to date. An analysis by a staffer in the Provost's office of faculty teaching the 69 graduate courses offered in Fall 2003 and Spring 2004 shows that use of adjunct faculty is fairly limited at this point: 57 regular faculty, 6 adjuncts, and 6 for whom no record of status is available (may be adjunct or faculty from other UMass campuses). Several interviewees noted that adjunct faculty have to be approved as qualified to teach at the graduate level, in terms of terminal degree, experience, and publications. However, other interviewees suggested that the percentage of adjunct faculty teaching in a program should be limited, because adjuncts have less attachment to the program, do not contribute to faculty tasks such as academic advising, and are more difficult to mentor regarding quality course delivery.

Faculty teaching as overload versus regular load varies. By contract, online teaching is voluntary for UMass faculty. According to interviewees, the majority of regular faculty teaching online courses at UMass Amherst do so as overload courses, for which they receive additional compensation based on enrollment. However, some courses are taught as part of a regular courseload by faculty who prefer that arrangement. Interviewee opinions varied about whether teaching online courses as an overload significantly affected other faculty roles, such as research or family life. One interviewee indicated that the Provost's office has created an incentive to teach online courses as an overload, because courses taught through Continuing Education (as all online courses are) do not count the same in a regular workload as other courses. This may be an area requiring clarification.

Difficult to evaluate course quality with current processes. Based on the literature review and interviews, there are several types of quality indicators that would be useful in determining the quality of UMass Amherst graduate online programs, including student course evaluations, retention data, enrollment trends, and faculty satisfaction surveys. However, interviewees indicated that there are significant problems in accessing this information. Turnover in the Continuing Education Department and the limitations of the online platform appear to have made using course evaluations somewhat problematic; several interviewees reported significant delays, as well as receiving stacks of individual evaluations rather than usefully aggregated data that includes means and variances.

Questions about the response rates on course evaluations also surfaced, though whether this is due to lack of visibility on the course delivery platform or lack of emphasis by instructors is unclear. It was also suggested that more attention should be paid to helping students assess their readiness for online learning up-front, so that retention measures will reflect course dynamics

rather than ill-prepared applicants. UMass Online is planning to institute a self-assessment of this type in the fall.

One interviewee noted that, in addition to course evaluations and enrollment/retention, some department/program heads have begun gaining instructor-level access to their department/program's online courses, to assess content, threaded discussions, and the quality of interaction. They can view both current and past courses. This type of access is permitted in the Massachusetts Society of Professors' Memorandum of Understanding on Distance Learning (2003), with the consent of the instructor.

The technical platform for online learning delivery is a quality issue. The platform for delivery of online courses has been a contentious issue. Some instructors have already changed platforms once—from E-College to Prometheus—and now UMass Online is in the process of choosing another platform, which will cause further disruption. However, it may be worth the disruption if a better platform is chosen.

Choice of platform matters greatly in advanced graduate courses, particularly in its ability to enable faculty to efficiently manage threaded discussions. Several interviewees said that the current platform, Prometheus, works well for perhaps 90% of online courses, but burdens faculty who are teaching advanced, discussion-based courses. If the new platform does not address this problem, a number of advanced graduate online courses will be threatened due to faculty and student dissatisfaction.

The choice between a corporate-owned platform and an in-house platform serviced by UMass Online is also seen as a quality issue, because taking a platform “in-house” effectively reduces upgrades and support capacity for that platform. As one interviewee explained, a proprietary platform receives multiple revenue streams from various clients; it has to stay current in the field, and it is also able to offer more technical support staff than an in-house UMass Online system supported by one revenue stream. Several interviewees urged the graduate school to advocate for these platform considerations, which appear to disproportionately affect graduate course quality.

Continuing Education's instability is a quality issue. Several interviewees identified instability/turnover and capacity issues in the Division of Continuing Education, which supports online courses on campus, as an obstacle to improving the quality of online graduate education. As one interviewee put it, “This is a \$12 million business—it's a big operation. The campus should work to ensure its continuity.”

Lack of instructional design support for online faculty identified. As mentioned in the issues section above, online course delivery “unbundles” the faculty role into at least three components: instructor/facilitator, instructional designer, and technologist. Technical support (getting materials onto the platform, registering students, troubleshooting technical problems, etc.) is offered through Continuing Education during regular office hours; a telephone contractor hired by UMass Online provides troubleshooting support at other times. However, several interviewees stated that we do not have instructional design support (help designing a course to be effective in the online medium) on the Amherst campus.

Continuing education currently has two people handling the technical needs of the entire campus. It was suggested that this capacity could be increased, to enable them to move beyond “putting out fires” and help with instructional design. A variety of other instructional design support strategies were proposed, including mentoring by experienced online instructors, brown-bag discussions of what works, and structured workshops. The Center for Teaching, Continuing Education, and UMass Online were mentioned as potential organizers of this support, in addition to informal mentoring and discussion networks that have begun in some schools/departments.

Other UMass campuses provide instructional design support through various models: the Medical School uses an experienced online instructor as a mentor, to help with instructional and web design for new courses; Lowell has faculty take an online course in instructional design before they teach an online course; and Dartmouth explicitly starts with instructional design, encouraging instructors to look at each component of a course, identify and test the best way of teaching that component on line, and then assemble the course.

Opinions vary on need for additional layer of approval for online courses. The current process for approving online courses (see Appendix) is exactly the same as that for approving other courses: new courses would proceed through the usual school/department, Faculty Senate, and Graduate Council Subcommittee on Academic Standards processes for experimental and regular courses. However, the Graduate Council has never approved a “new” online course—all of the current online courses were adapted from already-approved traditional courses, and the move online has been treated as being similar to a change in delivery format from a lecture to a seminar.

Opinions varied on this policy. Several interviewees felt that the campus should have an additional layer of approval for teaching a course online, due to the importance of creating a learning community online and the different tools and skills that requires from faculty. It was suggested that a review committee of experienced instructors with high student satisfaction ratings could guide this additional review process. It was also suggested that a checklist based on the “24 Benchmarks” described earlier in this report could be used by this review committee, to ensure adequate attention to design and syllabus issues and mechanisms for class interaction and student assessment.

Others felt that the standard review process was probably sufficient, as long as course evaluations and retention rates are monitored for quality problems. One interviewee wondered who exactly would be on an online review committee, and thought that the differences in personalities and approaches between different disciplines might make such a review process unnecessarily difficult. Another suggested that a campus online learning committee could provide instructional development support without serving as a formal approval committee. Others suggested that current, informal methods of sharing best practices, including mentoring relationships and monthly meetings about online teaching, were largely handling the transition of courses from traditional formats.

Research project suggested, to compare quality of online and traditional courses. One of the UMass interviewees noted the potential for UMass to contribute to the research base by

comparing several classes of the same School of Management course that is offered in three different formats—classroom, online, and a hybrid using both modalities.

Potential Areas for Future Work

Based upon the issues and resources identified in this paper, UMass Amherst may wish to consider the following areas of potential future work.

- **Create a campus-wide committee on online learning, consisting primarily of faculty and staff with experience in online teaching.** The growth of the demand and the significance of the issues raised are significant enough for sustained attention. This committee could have a number of different potential charges, including evaluating future technology choices, organizing instructional design assistance for new online instructors, overseeing how-to materials, improving course and program evaluation processes, developing research projects on online education, and recommending policy changes to the Graduate Council and Faculty Senate.
- **Institutionalize data collection for evaluation purposes.** At a minimum, course evaluations, retention data, enrollment trends, and faculty satisfaction surveys should be utilized. To do this just for online courses might seem discriminatory to instructors teaching primarily online; these quality measures could be applied equally to all classes.
- **Address the platform issue.** This appears to have a major impact on the quality of graduate education, and the Graduate School may want to weigh in, if it hasn't already. A one-size-fits-all solution that works for the majority of UMass courses may still unacceptably compromise the needs of qualitative, discussion-oriented graduate courses.
- **Build Continuing Education's capacity to support the growth and quality of online learning.** The success of online education depends on Continuing Education's ability to adequately support it.
- **Address the lack of instructional design support.** The Center for Teaching conducted some early workshops in this area—perhaps it would be a logical location for this. Continuing Education capacity could also be built in this area.
- **Consider adding another layer of review for online courses.** This could be presented either in a regulatory manner, as part of the formal course review process, or in a more technical-assistance sense, through the additional instructional design support mentioned above.
- **Develop a research project to compare online, hybrid, and classroom versions of the same course.** As suggested by an interviewee, the same School of Management course is offered in three different formats—classroom, online, and a hybrid using both modalities. It is likely that a funder could be interested in an in-depth research project to compare curriculum, interaction, and outcomes of these three classes.

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Appendices

Appendix 1 – List of UMass Faculty and Staff Interviewed

Eric Berkowitz – Professor, School of Management

Tony Butterfield – PhD Program Director, School of Management

Marta Calas – Associate Professor, School of Management

Dorothy Gilbert – Associate Professor, School of Nursing

Laura Howard – Associate Director, Division of Continuing Education

Mary Beth Lizek – Program Coordinator, Public Health Practice Online MPH Program

Andrea Lydon – Lecturer, Division of Continuing Education

Barbara Macaulay – Chief Academic Officer, UMass Online

Gary Moore – Professor Emeritus, Environmental Health Sciences

Robert Nakosteen – Associate Professor, School of Management

Appendix 2 – Protocol for UMass Interviews

What is your experience with online education? Have you taught, approved courses, etc.?

Do you feel that course quality is the same or different in regular versus online graduate courses? Why/how?

How similar or different is the course approval process for regular versus online graduate courses?

How do you [should we] assess student learning in online courses? Is this approach different from that which you use in your regular classes? If so, how is it different?

What do you think UMass needs to do to ensure quality online course offerings?

Are there other issues about online graduate courses, in addition to course quality, that UMass should be addressing?

What other people and resources should I be consulting to get a good picture of this topic?

Appendix 3 – Course Approval Procedures, UMass Amherst

A. REGULAR COURSES

[Note: A semester day is defined as any calendar day between the first day of the semester and last day of the semester.]

1. Faculty members shall propose new courses to the department undergraduate curriculum committee (for courses numbered 001- 499) or graduate curriculum committee (for courses numbered 600-999), or both for courses numbered 500-599. The faculty member should provide all information requested on [Form B](#) or [Form C](#). After the proposal has been approved by the established departmental procedures (e.g., curriculum committee or entire faculty) the committee chair or equivalent shall sign the signature sheet ([Form A](#)) and forward it and the course proposal ([Form B](#) or [Form C](#)) to the department head/chair for his or her review.

2. Within 15 calendar days of receiving the course proposal, the department head/chair will review it, and if he/she approves it, shall sign the signature sheet and send it along with 10 copies of the proposal to the school/college curriculum committee. The department head/chair shall forward one copy of the proposed course description to the Faculty Senate Office. The Secretary of the Faculty Senate shall cause the proposed course description to be published in the Campus Chronicle. The description shall be in the same form as it is expected to appear in the University Catalog: Department, number, title, instructor, description, credits and prerequisites [if none so indicated]. The description is not to exceed 30 words.

3. Within 30 semester days of publication in the Campus Chronicle, any faculty member with questions or objections concerning any aspect of the proposed course shall submit them to the Secretary of the Faculty Senate. Questions or objections received by the Secretary shall be promptly forwarded to the proposer and to all signatories. Publication in the Chronicle is the only official notice required of every course proposal and the only opportunity for any faculty to object. Thereafter, the only opportunity for an objection is that available to a Faculty Senator on the floor of the Senate after the course has been moved for approval. School/college curriculum committees or Senate councils may, however, request comments for good cause from a specified department(s) during their review of the proposal.

4. Within 30 semester days of receiving the course proposal from the department head/chair, the school/college curriculum committee shall review it. If the committee approves the proposal, the committee chair shall sign the signature sheet and promptly forward it along with the proposal to the dean of the school/college. If the proposal is distributed to the committee fewer than 30 days prior to the end of the semester, the course shall be placed on the agenda of a curriculum committee meeting to be held no later than 45 days from the first day of the following semester.

5. Within 5 calendar days of receiving the proposal, the dean of the school/college shall review it. If the dean approves the course, he/she shall sign the signature sheet and send it along with 10 copies of the proposal plus any copies of addenda to the Secretary of the Faculty Senate for review.

6. Upon receipt of the signature sheet and proposal from the dean of the school or college, the Secretary of the Faculty Senate will review the proposal to ensure that it conforms to the requirements of committee and council review. The Secretary shall expeditiously forward an adequate number of copies of the course proposal to the appropriate Senate Council(s), (Academic Matters Council, for courses numbered 001-499; Graduate Council, for courses numbered 600-999; both councils for courses numbered 500-599).

7. The Senate council(s) shall review the course proposal, and shall approve, disapprove, or request substantive revisions in the proposal within 45 semester days of distribution to the appropriate subcommittee(s). If the proposal is distributed to the subcommittee fewer than 45 days prior to the end of the semester, the course shall be placed on the agenda of a council meeting to be held no later than 60 semester days from the first day of the following semester. If revisions are needed, the council(s) shall take no further action on the proposal until the required information is submitted. Upon receipt of the information requested, the council(s) shall act within 30 semester days.

8. Signature sheets of courses approved by the Academic Matters Council shall be signed by the chair of the Council and submitted with the proposal to the Secretary of the Faculty Senate. Signature sheets of courses approved by the Graduate Council, shall be signed by the chair of the Council and submitted with the proposal to the Dean of the Graduate School, who shall review the proposal and approve or disapprove it within 14 semester days. If he/she approves the course, the Dean shall sign the signature sheet and forward it and the proposal to the Faculty Senate Office. The Secretary of the Faculty Senate shall cause the courses so approved to be placed on the agenda with an appropriate motion.

9. The Faculty Senate shall vote on the course proposal. If the course is approved, the Secretary of the Faculty Senate shall sign the signature sheet and promptly forward it and the proposal to the Provost or designee.

10. If, subsequent to debate on the Senate floor, a course is referred back to the appropriate council(s), the council(s) in question must consider the specific objection(s) raised at the next scheduled meeting of the council(s) and determine the proper course of action (e.g., consultation with the proposer or re-submission to the Faculty Senate).

11. The Provost or his/her designee shall review the proposal and if he/she approves the proposal shall sign the signature sheet and notify the proposer, the department head/chair, the dean of the school/college, the Secretary of the Faculty Senate, the Dean of the Graduate School (when appropriate) and the Scheduling Office that the course may be offered.

B. EXPERIMENTAL COURSES

Basic Application Procedures

1. Each department is authorized to offer courses on an experimental basis following an abbreviated approval process, and proposers of permanent courses are encouraged to offer the courses on an experimental basis prior to and/or during the review process for permanent

approval. An experimental course is given an X90-alpha number (that is, a number 190, 290, 390, etc., with an alphabetic extension), a series reserved for experimental courses only. Following approval, an experimental course may be taught only three times.

2. Using [Form D](#), the proposer must have the course approved by the department curriculum committee, the department head/chair and the school or college dean. The Dean of the Graduate School must also approve courses numbered 590 and above.

3. Upon approval at the dean's level, the course proposal shall be sent to the Faculty Senate Office. After approval by the Secretary of the Faculty Senate, the proposal shall be forwarded to the Provost's Office for approval and scheduling.

C. MINOR CHANGES IN COURSES

Basic Application Procedures

1. There are occasions when departments find it necessary to change the number assigned to a course, such as when a revision of the major makes it logical to group a number of courses in a certain series; or to ensure that the numeric order of the courses reflects the order in which students are expected to complete them; or when incremental changes in methodology and content make the level for which it was originally proposed inappropriate; or when several departments undertake a coordinated effort to use a common set of numbers for related courses. There are also circumstances which make desirable a modification in the name of a course, such as when the terminology of a discipline changes, or when the evolution of the course over time makes the original title inappropriate and any credit changes for up to one credit. Occasionally, changes in the number and title are simultaneously required.

In regard to the splitting of courses the Secretary of the Faculty Senate, in conjunction with the Rules Committee, will decide whether the split constitutes a minor or a major course change.

2. Minor changes may be approved without review by any curriculum committee or council. Requests for approval to change the title or number of a course or to designate a course as pass/fail require the approval of the department head, the dean of the school or college, the Dean of the Graduate School (for courses numbered 500-999), the Secretary of the Faculty Senate, and the Provost or designee. There is no official form associated with such requests, but all such requests should be incorporated into or accompanied by a memorandum explaining why the change is appropriate. If any of the signatories whose approval is required believes that the change requested represents a departure from the original course so significant as to warrant review by a curriculum committee and/or council, he or she may stipulate that the course be reviewed by one or more of the curriculum committees or councils that would be involved in the full review process; or the signatory may disapprove the change requested and require that a full course proposal be submitted.

The purpose of the minor course change procedure is to allow flexibility in and development of the curriculum as disciplines and methodologies evolve, but not to circumvent the approval procedures for new courses.

Appendix 4 - Self-assessment from University of Maryland University College's (UMUC) online orientation to distance education.

Is Distance Education at UMUC for me?

The following self-assessment will help you decide whether distance education is the right choice for you. The results of your evaluation will be displayed for you as soon as you complete the quiz and click on the submit button.

[Scale: Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree]

1. When I read a textbook chapter, I am able to maintain good concentration and know what steps to take to remember what I need to know.
2. When I read or when I take notes or when I listen to material, I am aware of whether or not I understand the material. If I do not understand, I know what to do to improve my comprehension.
3. I have strategies for how to get the most from the study materials for my course – text book, study guide, syllabus, etc.
4. I feel I have the self-discipline needed to learn without face-to-face interaction with my instructor and classmates.
5. I am willing to dedicate the same amount of time and effort to a distance education course that I would to a classroom-based course.
6. I have the time-management skills that would enable me to balance distance education coursework with my professional and personal responsibilities.
7. I have strong reading and writing skills (in English).
8. I feel comfortable expressing my ideas, comments and questions in writing.
9. I have successfully expressed myself in complex conversations using e-mail or chat rooms.
10. I am experienced using a Web browser such as Netscape Navigator or Microsoft Internet Explorer.
11. I am comfortable with downloading software from the Internet and installing it on my computer.
12. I have ready access to the Internet and an up-to-date computer.

* questions 1-3 adapted from Dallas Community College's quiz "Is Distance Learning Right for Me?" at http://ollie.dcccd.edu/Fast_Facts/

Source: http://www.umuc.edu/distance/de_orien/

Appendix 5 – Online Handbook for Distance Learning Instructors, Institute for Distance & Distributed Learning, Virginia Tech – Source: <http://www.iddl.vt.edu/instructors/>

Guidelines for Distance Learning Instructors at Virginia Tech

In order to ensure Virginia Tech standards of quality, IDDL asks distance learning instructors to follow a set of course development guidelines. Additionally, in order to make sure IDDL provides necessary support (e.g., course timetable listings, enrollment, technical assistance) to both students and instructors, we ask those planning new courses to contact IDDL as soon as possible.

Virginia Tech is well known for high academic standards and instructional excellence. To ensure that our distance courses meet these rigorous standards of excellence IDDL asks instructors to meet the following guidelines:

- **The quality and quantity of work for distance and on-campus courses should be comparable.**

Courses offered by Virginia Tech are rigorous. Regardless of delivery mechanism or modality, similar courses will be comparable in the quality (grading standards and course objectives) and quantity of student effort required (similar time to complete assignments).

- **Instructors should attend at least one distance learning orientation session.**

These sessions will familiarize you with technology options, train you to use the technology, and discuss effective instructional practice in the distance environment. IDDL offers numerous workshops or individual training can be scheduled by contacting Mark Raby (mark.raby@vt.edu, 540-231-6079).

- **Instructors should clearly communicate specific course objectives to their students.**

Clearly stated course objectives enable students to read what they will be expected to do as a result of the instruction before they begin the course.

- **Instructors should make a course syllabus available to students.**

The syllabus lists all class meeting times, graded work, tests, texts, and required student behaviors. The syllabus enables distance learners to determine if they will have the resources: mental, temporal, and monetary, to succeed. View a [list of details](#) IDDL recommends for syllabi.

- **Interactive videoconferencing instructors should have an accompanying website for all IVC courses.**

A website is an integral part of the instructional environment of an interactive

videoconference class and ensures minimal confusion by maximizing opportunities for communication.

- **Faculty should communicate with their distance students with reasonable frequency.**

Communication with students is an integral part of the distance learning experience. Faculty should commit to a program of communication that, while not placing undue demands on their time, keeps the students informed and motivated.

- **Courses should be evaluated by students using Virginia Tech's standard distance learning instructor/course evaluation forms.**

As with any course at Virginia Tech, upon completion of the course students are required to evaluate the course and the instructor using standard assessments. IDDL makes online and IVC evaluation forms available to all students.

Course Development Checklist

Course Topic and General Purposes

- Does the course match the description in participating college's catalog (graduate or undergraduate)?
- Is the course comparable to the on-campus in-class section?

Student Characteristics

- Have distance learner student profiles been reviewed?
- Have different student learning styles been accounted for?
- Have prerequisite course knowledge and experience been identified?

Performance Objectives

- Do performance objectives meet course goals?
- Do performance objectives require varying levels of knowledge?
- Are performance objectives clear and concise?
- Are performance objectives measurable?

Course Content

- Is the course content equivalent to the on-campus section?
- Does the content cover all material identified in the performance objectives?
- Is the course content accurate and current?

Teaching/Learning Activities and Resources

- Is the presentation of material provided in a clear and understandable method?
- Are different methods of presenting material used to compensate for different learning styles?
- Does course material presentation provide orientation to other activities?

- Does course material presentation provide enrichment opportunities for students?
- Is there opportunity for ample student/instructor interaction?
- Is there opportunity for learning through doing, collaborative learning or other types of activities?
- Is there a logical sequence of study which allows the student to move through the course independently within the required time frame?
- Are there motivation points built into the course?
- Are instructional resources appropriate to the course and content?
- Are instructional resources easily available to students?

Evaluation

- Do evaluation instruments measure student accomplishment of performance objectives?
- Are there ample opportunities for students to be evaluated?
- Are the students provided with ample opportunities for feedback?
- Does the timing of the feedback provide enough time for student improvement?
- Are a variety of assessment methods used to evaluate student performance?
- Are the students provided an opportunity to evaluate the instruction and course?

Considerations for Teaching in a Distance Learning Environment

Your goals as an instructor will not change in the distance environment. How you accomplish them will. Your students still have the same basic needs as before (plus one or two more), but you must decide how to meet these needs without necessarily meeting your students face to face. Successful distance instructors develop effective strategies in the following areas:

- Expectations
Make sure you clearly state what you expect from your students and what they can expect from you. Then make sure you live up to those expectations.
- Communication
Successful communication requires more thought and planning than it does in a face-to-face course. Make sure you don't take it for granted.
- Student Support
Make sure your students are aware of the university resources available to them.
- Decreasing the Distance
Your students may feel isolated and detached from the course. It is up to you to keep them part of the learning environment.
- Student Profiles
Your students may fall into a different demographic or philosophical category than the ones you usually teach.

Profiles of Distance Learning Students

Distance learners may be a little different from the typical 18-25 year old full-time students that attend a regular college campus. It is important that instructors consider that their students' concerns may differ from those of students in their face-to-face classes.

Typical Distance Learners, Type I:

- are older
- have outside commitments, such as families or a full-time jobs
- need a flexible academic schedule
- want a relative educational experience
- are taking courses in order to get a promotion in their present job or to train for a new career

Typical Distance Learners, Type II:

- are on-campus, Virginia Tech students
- are taking face-to-face classes concurrent with distance learning ones
- may think that distance learning courses are easier than face-to-face courses
- may be taking a distance learning course so that they can travel or work full-time (this is especially true in the summer)

In order to be successful, distance learners need:

- good time-management skills
- good problem solving abilities (e.g., someone might not be there if the computer locks up)
- to be independent learners with a great deal of self-motivation
- to be able to take the initiative (e.g., they'll ask when they don't understand)
- able to understand expectations

Your students, of course, may or may not possess these characteristics. And unfortunately, it may be more difficult for you to determine whether they possess them or not. The best way to overcome this obstacle is to make sure you let your students know, up-front, what they can expect from your course and what kind of student you expect them to be. In the past, some instructors have found it useful to have students read and sign an 'expectations form' that clearly states items such as the amount of reading required to keep up, the level of participation expected, or the standards by which they will be graded.

Communicating with Distance Learning Students

Because you are not physically with your students, the need for communication is accentuated. Your students have a need to hear from you and to have you listen to them, just as you need to receive and give feedback. Students who feel disconnected due to a lack of instructor communication tend to achieve less and express dissatisfaction with the course. Conversely, some instructors spend so much time e-mailing students they become overwhelmed and are able to accomplish little else. Successful instructors develop effective, efficient communication strategies based on the following guidelines.

Delegate. Don't spend time answering questions that others can answer. Connect students early to the support structure already in place to help them.

Set expectations. Tell your students at the beginning of the course how long they can expect to wait before you respond. This eliminates multiple e-mails from students who suspect you aren't receiving messages from them.

Be proactive. Much of the e-mail in a distance course is generated because of confusion. Clearly define your expectations. What is expected, when it is due, what technical or program support is available and how they get help. Repeat yourself. Place this information in numerous locations. There is very little penalty for redundancy but, if you are not clear with your students, they will contact you with much greater frequency.

Be clear about grades. Obviously, much student communication concerns grades and grading. Make student grades accessible and tell them when they will be available before you do anything that affects grades. Answer up front and repeatedly what you will grade, how you will grade, and when you will notify them or make their grades available to them.

Spam 'em. If one person has a question about the course, chances are other people have the same question. E-mail everyone the response so you don't end up responding multiple times to the same question. Again, there's no penalty for redundancy.

Managing Student Expectations

Students know that in order to succeed they must be able to meet your expectations for them. In the distance environment it becomes increasingly critical that you identify your course objectives in very clear terms. What will the student be expected to do to demonstrate mastery of your objectives? When will they be required to do this? Because of the physical distance separating you from your students, their need to clearly understand what it is you want will be accentuated. To meet this need:

- **Clearly communicate your objectives to your students** (e.g., "By the end of the second week of class, you should be able to resolve three dimensional vectors into a single vector and communicate the magnitude and direction of the resultant using standard notation.")
 - Make your objectives measurable. Language such as "The student will understand..." or "Students will appreciate..." does little to help your students understand what is expected of them. Instead, give them a gauge to determine whether they've actually understood or appreciated.
 - Refer to these objectives repeatedly (e.g., in the syllabus, in the homework assignments, during practice tests and assignments, and during synchronous instruction).
 - Provide multiple examples and non-examples of correct objective completion. (e.g., "Here it is done correctly while over here a common mistake has been made.")
- **Provide ample practice opportunities** with feedback from you before requiring them to demonstrate mastery of the objective. The nature of the practice does much to communicate your expectations to your students "Oh. It's important to be able to do this."
- **Provide sample test questions** (questions should have approximately the same level of difficulty as the real test questions) with feedback from you. If your students are ambiguous about what it is you wish them to learn, these should clarify your expectations.
- **Post assignments and due dates in multiple static locations.** Make sure the assignments are clearly defined and due dates are specific. Tell them up-front what will happen if they fail to meet deadlines. (Many distance learning students assume that deadlines are more flexible than those imposed in a face-to-face class. If you are serious about deadlines, make sure you state your expectation clearly.)

Decreasing the Distance

Due to the physical distance separating learners and instructor, emotional distance may pose a serious threat to the distance learning environment. Certain personality types are strongly motivated by the presence of others and need to feel part of a learning community. Towards this end the distance instructor may easily reinforce a sense of community by:

- Designing activities requiring student collaboration
(e.g., required weekly or daily postings to chatrooms, group projects)
- Making use of synchronous communication when geographically possible
(e.g., field trips, one or two video sessions, telephone calls, local study groups)
- E-mailing students frequently and responding within a reasonable time
(e.g., circulating interesting emails from one student amongst the entire group)
- Requiring student input concerning classroom logistics
- Using threaded discussions
- Attempting humor (the mere attempt is often sufficient)
- Exchanging personal information unrelated to class objectives

University Support for Distance Learning Students

Distance learners are often unaware of the very tangible support system in place to help them and can become easily frustrated. Here are some things you can do as the instructor:

- Post your contact information in multiple places and communicate to your students that you are available. If there are restrictions on your availability, state these clearly. Tell your students how long they will need to wait before expecting to hear from you. E-mail this information to the class in order to reinforce the notion that you are aware of their need to hear from you.
- E-mail your students repeatedly, as a group, especially in the first few weeks, to establish a communicative learning environment.
- Provide clear instructions to your students concerning course procedures before they ask. ("Do we have a web site? How do I access it?")
- Provide easy access to links, e-mail addresses, and phone numbers to support staff.
- Structure opportunities for your students to ask for help.
- More ideas.

Virginia Tech's Support Options

This is a partial list of available services. For a detailed list, see [VTOonline](#).

VTOonline: VTOonline is Virginia Tech's student gateway to distance learning. In addition to an online catalog of courses and programs, it contains a student orientation, lists of available resources and services, online registration, and many frequently asked questions. We strongly suggest that you visit VTOonline before your course begins and that you feel free to link directly to any of its pages from your course website.

University Library: Distance Learning students have access to online databases, journals, e-reserve, and interlibrary loan materials. A specific distance learning librarian is assigned to support them. [Details](#).

4-Help: 4-Help will assist with the hardware and software problems of any Virginia Tech student, regardless of location.

Online Writing Center: Students can access a self-help writing database or get online tutoring from writing experts.

University Bookstore: Students cannot order books online, but they can have bookstore materials shipped anywhere in the world by contacting textbooks@bookstore.vt.edu or 540-231-5991 x150.

Delivering an Online Course: What You Need to Know

Planning for an online class should begin several months before the course is scheduled to take place. It takes time to plan, build, and test the course website. It also takes time to coordinate with a server that can host your site or your course materials. Adding components such as video or audio streaming, CentraOne, or other tools (e.g., chatrooms or online assessment) requires advance planning and possible training sessions.

IDDL posts information about all distance learning courses on VTOonline. The VTOonline catalog makes it easy for students to learn about and register for online courses. If you are planning to teach a new online course, you'll need to contribute details about your course to the VTOonline Manager. In Oct (spring) or March (summer and fall), you'll receive an email requesting these details.

The semester before you teach the class (or earlier):

1. Schedule to attend an orientation to online teaching workshop to learn about the resources and technologies available to distance learning instructors.
2. Sign up for an account with a hosting server for your course materials. Blackboard is a fully-supported, online course management tool used by many instructors on campus.
3. Select the tools you would like to use to communicate with your students.
4. Read about some items you should consider when teaching students online.
5. Browse the VTOonline website to see how it can help provide support for your students. You may want to link to some of its pages from your course site.
6. Build and test the online course website and materials. IDDL offers some suggestions for effective websites.
7. Make sure you are familiar with the technology you are asking students to use and the support services that go along with it. Your students will most likely have technical problems, and they will come to you first.

Right before the course starts:

Send an email to everyone on your student roster that contains:

- Instructions on how to find the course website (eg, Blackboard portal: <http://www.learn.vt.edu>).
- When the course will actually start
- The course syllabus or a link to it (some syllabus suggestions)

- A statement of how students should contact you and how long they should be expected to wait for a response (1 day? 3 days?)
- A request that students respond to your email so you can confirm you are using their correct email address
- Instructions on how to download any necessary software (eg, VTOnline: <http://www.vto.vt.edu/players.php>)
- Instructions on how to find course materials, such as URLs to those online and a suggestion of where to find printed materials (eg, University Bookstore: <http://www.vto.vt.edu/textbooks.php>).
Note: data show that locating course materials is one of the biggest problems distance learning students encounter.
- A list of Virginia Tech support services available to students (eg, VTOnline: <http://www.vto.vt.edu/resources.php>)

During the Course:

- Follow up with students you haven't heard from in awhile. They may be having technical problems.
- Spam your students with information. In an online environment, announcements and reminders can't come too often.

DRAFT: Proctoring for Distance and Distributed Learning

Overview

To address the testing needs of a growing number of Virginia Tech students participating in distance and distributed learning offerings, the Institute for Distance and Distributed Learning has adopted a scalable and flexible proctoring model. This model is applicable to most any distance learning scenario and has been integrated with the IDDL program delivery pilot that utilizes Distance Learning Instructors (DLIs) to provide extensible and economically viable distance learning programs and courses.

This proctoring document is a direct result of faculty requests and the concern from some faculty about academic integrity in online courses. The procedure is one of many alternatives for learning assessment in online courses. It is voluntary for faculty and is not meant to be employed in every online course or to be used in a manner conflicting with the Virginia Tech Graduate Honor Code or Undergraduate Honor Code.

This document outlines the relationship between the DLI instructor, Proctor and Instructor of Record, the criteria and procedures for proctor approval, mechanisms for students requesting proctors and related forms.

Student Proctoring Requests

If proctoring is implemented in a distance or distributed learning course, students have the option of taking tests or completing projects by a variety of methods:

1. at testing centers (e.g., commercial or institutional),
2. through an approved test proctor (*recommended*),
3. through a Distance Learning Instructor (DLI), or
4. at Virginia Tech campus locations or extension centers (*contact information forthcoming*).

Proctors must be selected by a date established by the students course instructor (DLI) and/or Instructor of Record. A proctor can be a faculty member, administrator, or other professional staff member of a school or college, an employee of a commercial testing center, an educational counselor, a library staff member, a member of the clergy, or a supervisor at work. A proctor cannot be a family member or a co-worker. The student's DLI or Instructor of Record must approve requests for proctored tests and the individual proctor. The course instructor will reserve the right to contact a student's requested proctor and to reject requests for a specific proctor for any reason.

Students will be able to request proctor approval in two ways:

1. students may submit a completed online Student Proctor Request form and have their

- selected proctor fill out a corresponding online Proctor Agreement Form, or
2. students may print the online Student Proctor Request form (.PDF Format) and submit the completed form, along with the proctor's signature, to the course instructor.

DL Instructor Responsibilities

Within the framework of IDDL's course management pilot, a responsibility of the Distance Learning Instructor will be to handle the administration of tests for students requesting a proctor. A DLI will be requested to submit a proctoring agreement form to the Institute for Distance and Distributed Learning prior to the semester's commencement. IDDL will retain a copy of this agreement and provide the original to the appropriate Instructor of Record. The criteria listed below will be used by the DLI for approving a proctor and the procedures will be used for administering tests to students through a proctor. A DLI Proctoring agreement must be submitted each semester of instruction.

Proctor Responsibilities

Proctors will be requested to provide straightforward information regarding their relationship with the student and accurate contact information via a Proctor Agreement Form. Proctors will be responsible for providing an appropriate testing environment, keeping tests secure prior to and after test taking and must also agree to destroy electronic or original copies of tests (e.g., if test was faxed to instructor) upon notification by the course instructor of the test being received. While taking the exam, students are not permitted to leave the testing area until the test has been completed. Both the student and proctor will be required to sign the verification form sent with the test(s). A proctor is not required to monitor the test taking, but is required to promptly return both taken and/or untaken tests to the course instructor. Proctors should be able to answer any questions on test taking procedures, not questions on test content.

Criteria for Approving a Proctor

1. Proctor relationship to student fits the following guidelines:
 - o faculty member, administrator, or other professional staff member of a school, or college
 - o employee of a commercial testing center
 - o educational counselor
 - o library staff member
 - o member of the clergy
 - o student supervisor at work
2. No previous complaints/concerns regarding proctor.
3. No previous complaints/concerns regarding student.
4. Request received within the required time frame or change of student status warrants late request.
5. In cases of questionable requests, the proposed proctor is contacted by the DLI to confirm

relationship to student. Instructor of Record input is sought.

Procedures for Administering Tests Through a Proctor

1. All requests will be confirmed for students within 72 hours of the receipt by DLI.
2. Instructor of Record will be notified of proctor requests approvals and declines. IDDL will be notified of proctor declines.
3. DLIs will send all tests to the proctors at one time via email, fax and/or postal service as determined by the DLI and IOR. Additional information sent should include a letter and instructions, as well as a test/assignment receipt form and return information. (Students requesting proctored tests must provide the proctor with postage and envelopes necessary for return of paper tests.)
4. Returned tests will be graded and recorded by the DLI according to IOR specifications.
5. Problems or concerns related to proctoring will be shared with the IOR for determination of action and with IDDL for evaluation and improvement of proctoring process.

Expanded Proctoring Procedures for DLI

Summary of Steps:

1. Student submits the proctor request form to DLI.
2. DLI goes through steps to approve or disapprove the proctor requested based on approved criteria outlined in the DLI Proctoring Agreement Form.
3. Material is sent to the proctor by DLI.
4. Completed tests are returned to DLI.
5. DLI notifies proctor and student within 72 hours of test receipt.
6. DLI grades tests according to course specifications and submits grades to the Instructor of Record (IOR).
7. DLI posts grades for student review and provides feedback, test files, etc. as appropriate.
8. Paper tests (taken and untaken) and electronic test files are returned to IOR or destroyed by proctor.

Step 1: Student submits the proctor request form to DLI.

Proctor request forms are located online at <http://www.iddl.vt.edu/handbook/proctor.php>.

Step 2: DLI goes through steps to approve or disapprove the proctor requested based on approved criteria outlined in the DLI Proctoring Agreement Form

DLI reviews the proctor request form noting the proctor, the relationship of the proctor to the student, etc. The instructor approves or disapproves the proctor requested based on the criteria outlined on the DLI Proctor Agreement Form.

In the case of a questionable request or process evaluation, the DLI contacts the proctor with a list of the following questions:

- What is your relationship to the student?
- Do you have a secure place to keep the test(s)?
- Do you have access to an appropriate testing environment?
- Will you be able to monitor the student during the test?
- Will you have any problems returning the tests immediately upon completion?
- Do you have any questions or concerns?

Based on the information obtained, and following the criteria for approving a proctor, the DLI approves or disapproves the proctor. Instructor of Record (IOR) input is sought.

The IOR is notified via email of which students are being proctored along with the respective proctors name and contact information. IDDL is notified of any proctors not approved.

Step 3: Material is sent to the proctor by DLI.

The following material is sent to the proctor:

- Test(s)
- Test Receipt Form (one per test/assignment)
- Instruction Sheet for test proctors (which includes a statement that all tests not taken by end date of the semester should be returned to DLI and all tests taken and not in paper copy should be destroyed after notification of receipt by DLI).
- Contact and return information (address, phone, email, fax)
- Letter confirming the agreement to proctor

Step 4: Completed tests are returned to DLI.

Proctors return the tests to the DLI using the return information and procedure established by the DLI and IOR.

Step 5: DLI notifies proctor and student within 72 hours of test receipt.

Step 6: DLI grades test(s) according to course specifications and submits grades to the Instructor of Record (IOR).

Step 7: DLI posts grades for student review and provides feedback, test files, etc. to students as appropriate.

Step 8: Paper tests (taken and untaken) and electronic test files are returned to IOR or destroyed by proctor.

Paper tests (taken and untaken) and electronic test files are returned to and filed with the Instructor of Record. Proctor destroys electronic copies or originals (e.g., if a test has been faxed to DLI) after notification by DLI of test receipt.

Appendix 6 - Guidelines for the Evaluation of Electronically Offered Degree and Certificate Programs, Council of Regional Accrediting Commissions, March 2001

Introduction

These *Guidelines* have been developed by the eight regional accrediting commissions⁶ in response to the emergence of technologically mediated instruction offered at a distance as an important component of higher education. They express in detail what currently constitutes effective practice in distance education and as such seek to address concerns that regional accreditation standards are not relevant to the new distributed learning environments, especially when those environments are experienced by off-campus students. The *Guidelines*, however, are not a departure from the regionals' standards, but rather they explicate how the well-established essentials of institutional quality found in these criteria are applicable to the emergent forms of learning.

These *Guidelines* are meant to assist institutions in planning distance education activities and to provide a self-assessment framework for those already involved. For the regional accrediting associations the *Guidelines* constitute a common reference for the evaluation of such activities. As such they are intended to inform and facilitate the evaluation policies and processes of each region.

Developed to reflect current best practice in electronically offered programming, the *Guidelines* were initially drafted by the Western Cooperative for Educational Telecommunications (www.wiche.edu/telecom/), an organization recognized for its substantial expertise in this field. Subsequently, following a rigorous review process, each regional commission will consider adopting the *Guidelines*, implementing them compatibly with their own policies and procedures. Given the rapid pace of change in distance education, the *Guidelines* are necessarily a work in progress. They will be subject to periodic review by the regionals, individually and collectively, who welcome comments and suggestions for their improvement.

Overview to the *Guidelines*

These *Guidelines* are divided into five separate components, each of which addresses a particular area of institutional activity relevant to distance education. They are:

1. Institutional Context and Commitment
2. Curriculum and Instruction
3. Faculty Support
4. Student Support
5. Evaluation and Assessment.

Each component begins with a general statement followed by individual numbered paragraphs addressing specific matters describing those elements essential to quality distance education

⁶ Commission on Higher Education, Middle States Association of Colleges and Schools; Commission on Institutions of Higher Education, New England Association of Schools and Colleges; Commission on Technical and Career Institutions, New England Association of Schools and Colleges; Commission on Institutions of Higher Education, North Central Association of Colleges and Schools; Commission on Colleges, The Northwest Association of Schools and Colleges; Commission on Colleges, Southern Association of Colleges and Schools; Accrediting Commission for Community and Junior Colleges, Western Association of Schools and Colleges; Accrediting Commission for Senior Colleges and Universities, Western Association of Schools and Colleges.

programming. These in turn are followed by protocols in the form of questions designed to assist in determining the existence of those elements when reviewing either internally or externally distance education activities.

The Guidelines and Protocols

1. Institutional Context and Commitment

Electronically offered programs both support and extend the roles of educational institutions. Increasingly they are integral to academic organization, with growing implications for institutional infrastructure.

1a. In its content, purposes, organization, and enrollment history if applicable, the program is consistent with the institution's role and mission.

- What is the evidence that the program is consistent with the role and mission of the institution including its goals with regard to student access?
- Is the institution fulfilling its stated role as it offers the program to students at a distance, or is the role being changed?

1b. It is recognized that a healthy institution's purposes change over time. The institution is aware of accreditation requirements and complies with them. Each accrediting commission has established definitions of what activities constitute a substantive change that will trigger prior review and approval processes. The appropriate accreditation commission should be notified and consulted whether an electronically offered program represents a major change. The offering of distributed programs can affect the institution's educational goals, intended student population, curriculum, modes or venue of instruction, and can thus have an impact on both the institution and its accreditation status.

- Does the program represent a change to the institution's stated mission and objectives?
- Does the program take the college or university beyond its "institutional boundaries" as defined formally in law, regulation, or policy? These boundaries typically define students to be served, geographic service area, locus of instruction, curriculum to be offered, or comparable formally stated definitions of institutional purpose.
- Is the change truly significant?

1c. The institution's budgets and policy statements reflect its commitment to the students for whom its electronically offered programs are designed.

- How is the student assured that the program will be sustained long enough for the cohort to complete it?
- How are electronically offered programs included in the institution's overall budget structure?
- What are the institution's policies concerning the establishment, organization, funding, and management of electronically offered programs? Do they reflect ongoing commitment to such programs? (See also item 1e below.)

1d. The institution assures adequacy of technical and physical plant facilities including appropriate staffing and technical assistance, to support its electronically offered programs.

- Do technical and physical plant facilities accommodate the curricular commitments reviewed below, e.g., instructor and student interaction (2e), and appropriateness to the curriculum (2a)?
- Whether facilities are provided directly by the institution or through contractual arrangements, what are the provisions for reliability, privacy, safety and security?
- Does the institution's budget plan provide for appropriate updating of the technologies employed?
- Is the staffing structure appropriate (and fully qualified) to support the programs now operational and envisioned in the near term?

1e. The internal organizational structure which enables the development, coordination, support, and oversight of electronically offered programs will vary from institution to institution. Ordinarily, however, this will include capability to: (1) facilitate the associated instructional and technical support relationships; (2) provide (or draw upon) the required information technologies and related support services; (3) develop and implement a marketing plan that takes into account the target student population, the technologies available, and the factors required to meet institutional goals; (4) provide training and support to participating instructors and students; (5) assure compliance with copyright law; (6) contract for products and outsourced services; (7) assess and assign priorities to potential future projects; (8) assure that electronically offered programs and courses meet institution-wide standards, both to provide consistent quality and to provide a coherent framework for students who may enroll in both electronically offered and traditional on-campus courses; (9) maintain appropriate academic oversight; and (10) maintain consistency with the institution's academic planning and oversight functions, to assure congruence with the institution's mission and allocation of required resources. Organizational structure varies greatly, but it is fundamental to the success of an institution's programs.

The points above can be evaluated by variations of the following procedure and inquiries:

- Is there a clear, well-understood process by which an electronically offered program evolves from conception to administrative authorization to implementation? How is the need for the program determined? How is it assigned a priority among the other potential programs? Has the development of the program incorporated appropriate internal consultation and integration with existing planning efforts?
- Track the history of a representative project from idea through implementation, noting the links among the participants including those responsible for curriculum, those responsible for deciding to offer the program electronically, those responsible for program/course design, those responsible for the technologies applied, those responsible for faculty and student support, those responsible for marketing, those responsible for legal issues, those responsible for budgeting, those responsible for administrative and student services, and those responsible for program evaluation. Does this review reveal a coherent set of relationships?
- In the institution's organizational documentation, is there a clear and integral relationship between those responsible for electronically offered programs and the mainstream academic structure?
- How is the organizational structure reflected in the institution's overall budget?
- How are the integrity, reliability, and security of outsourced services assured?
- Are training and technical support programs considered adequate by those for whom they are intended?
- What are the policies and procedures concerning compliance with copyright law?
- How does program evaluation relate to this organizational and decision-making structure?

1f. In its articulation and transfer policies the institution judges courses and programs on their learning outcomes, and the resources brought to bear for their achievement, not on modes of delivery.

- What are the institution's policies concerning articulation and transfer? What are decisions regarding transfer of academic credit based upon?

- Is the institutions internally consistent in its handling of articulation and transfer issues, or do different divisions have different policies and procedures?

1g. The institution strives to assure a consistent and coherent technical framework for students and faculty. When a change in technologies is necessary, it is introduced in a way that minimizes the impact on students and faculty.

- When a student or instructor proceeds from one course or program to another, is it necessary to learn another software program or set of technical procedures?
- When new software or systems are adopted, what programs/processes are used to acquaint instructors and students with them?

1h. The institution provides students with technical support for each educational technology hardware, software, and delivery system required in a program.

- Is a help desk function realistically available to students during hours when it is likely to be needed?
- Is help available for all hardware, software, and delivery systems specified by the institution as required for the program?
- Does the help desk involve person-to-person contact for the student? By what means, e.g., email, phone, fax?
- Is there a well-designed FAQ (Frequently Asked Questions) service, online and/or by phone menu or on-demand fax?

1i. The selection of technologies is based on appropriateness for the students and the curriculum. It is recognized that availability, cost, and other issues are often involved, but program documentation should include specific consideration of the match between technology and program.

- How were the technologies chosen for this institution's programs?
- Are the technologies judged to be appropriate (or inappropriate) to the program(s) in which they are used?
- Are the intended students likely to find their technology costs reasonable?
- What provisions have been made to assure a robust and secure technical infrastructure, providing maximum reliability for students and faculty?
- Given the rapid pace of change in modern information technology, what policies or procedures are in place to keep the infrastructure reasonably up-to-date?

1j. The institution observes the legal and regulatory requirements of the jurisdictions in which it operates, e.g., requirements for service to those with disabilities, copyright law, state and national requirements for institutions offering educational programs, international restrictions such as export of sensitive information or technologies, etc.

- Does institutional documentation indicate an awareness of these requirements and procedures for compliance?

2. Curriculum and Instruction

Methods change, but standards of quality endure. The important issues are not technical but curriculum-driven and pedagogical. The big decisions are made by qualified faculty and focus on learning outcomes for an increasingly diverse student population

2a. Through its formal processes of curriculum development and review, the institution assures that each program of study results in collegiate level learning outcomes appropriate to the rigor and breadth of the degree or certificate awarded by the institution, that the electronically offered degree or certificate program is coherent and complete, and that such programs leading to undergraduate degrees include general education requirements.

- What process resulted in the decision to offer the program?
- By what process was the program developed? Were academically qualified persons responsible for curricular decisions?
- How were “learning outcomes appropriate to the rigor and breadth of the degree or certificate awarded” established? Does the program design involve the demonstration of such skills as analysis, comprehension, communication, and effective research?
- Is the program “coherent and complete?”
- Are related instructional materials appropriate and readily accessible to students?

2b. Academically qualified persons participate fully in the decisions concerning program curricula and program oversight. It is recognized that traditional faculty roles may be unbundled and/or supplemented as electronically offered programs are developed and presented, but the substance of the program, including its presentation, management, and assessment are the responsibility of people with appropriate academic qualifications.

- What were the academic qualifications of those responsible for curricular decisions, assessment, and program oversight?
- What are the academic qualifications of those presenting and managing the program?
- If the principal instructor is assisted by tutors or student mentors, what are their qualifications?
- Are these qualifications considered appropriate to the responsibilities of these persons?

2c. In designing an electronically offered degree or certificate program, the institution includes all courses necessary to complete the program. It provides a coherent plan for the student to access all courses necessary to complete the program, or clearly notifies students of requirements not included in the electronic offering. Hybrid programs or courses, mixing electronic and on-campus elements, are designed to assure that all students have access to appropriate services. (See also 2d below, concerning program elements from consortia or contract services.)

- How are students notified of program requirements?
- If the institution relies on other providers to offer program-related courses, what is the process by which students learn of these courses?
- Is the total program realistically available to students for whom it is intended? For example, is the chosen technology likely to be accessible by the target student population? Can target students meet the parameters of program scheduling?

2d. Although important elements of a program may be supplied by consortial partners or outsourced to other organizations, including contractors who may not be accredited, the responsibility for performance remains with the institution awarding the degree or certificate. It is the institution in which the student is enrolled, not its suppliers or partners, that has a contract with the student. Therefore, the criteria for selecting consortial partners and contractors, and the means to monitor and evaluate their work, are important aspects of the program plan. In considering consortial agreements, attention is given to issues such as assuring that incentives do not compromise the integrity of the institution or of the educational program. Consideration is also given to the effect of administrative arrangements and cost-sharing on an institution's decision-making regarding curriculum. Current examples of consortial and contractual relationships include:

Course material: Courses or course elements acquired or licensed from other institutions; courses or course elements provided by partner institutions in a consortium; curricular elements from recognized industry sources, e.g., Microsoft or Novell certification programs; commercially produced course materials ranging from textbooks to packaged courses or course elements.

Course management and delivery: WebCT, Blackboard, eCollege, etc.

Library-related services: Database access services for library or instructional materials support; provision of library resources and services, e.g., online help desk, reference services, etc.; bookstore services.

Services providing information to students concerning the institution and its programs and courses.

Technical services: Server capacity; technical support services, including help desk services for students and faculty.

Administrative services: Registration, student records, etc.

Services related to advising, counseling, or tutoring.

Online payment arrangements.

Evaluation of contract services and consortial arrangements requires a review of pertinent formal agreements. Note, for example:

- Are performance expectations defined in contracts and agreements? Are conditions for contract termination defined?
- Are there adequate quality control and curriculum oversight provisions in agreements concerning courseware?
- Are there appropriate system reliability and emergency backup guarantees in agreements concerning technology services?
- What are the provisions for protection of confidentiality and privacy in services involving personal information?
- What are the assurances concerning qualifications and training of persons involved in contact with students? These services may range from help desk to tutoring or counseling.

Consortial agreements introduce additional elements to be evaluated:

- How are curriculum-related decisions made by the consortium, noting the requirement that “Academically qualified persons participate fully in the decisions regarding program curricula and program oversight?”
- Is the institution fully engaged in the consortial process, recognizing the decision-making responsibilities of shared ownership?

- What are the financial arrangements among the parties to the consortial agreement? What are the implications of these arrangements for institutional participation and management?
- What entity awards the certificates and degrees resulting from the consortial program?
- What articulation and transfer arrangements are applicable to courses offered via the consortium? Did these arrangements involve specific curricular decisions by the academic structures of the participating institutions? Were they prescribed in a state or system decision?
- To what extent are the administrative and student services arrangements of the consortium focused on the practical requirements of the student?

2e. The importance of appropriate interaction (synchronous or asynchronous) between instructor and students and among students is reflected in the design of the program and its courses, and in the technical facilities and services provided.

- What provisions for instructor-student and student-student interaction are included in the program/course design and the course syllabus? How is appropriate interaction assured?
- Is instructor response to student assignments timely? Does it appear to be appropriately responsive?
- What technologies are used for program interaction (e.g., email, telephone office hours, phone conferences, voicemail, fax, chat rooms, Web-based discussions, computer conferences and threaded discussions, etc.)?
- How successful is the program's interactive component, as indicated by student and instructor surveys, comments, or other measures?

3. Faculty Support

As indicated above, faculty roles are becoming increasingly diverse and reorganized. For example, the same person may not perform both the tasks of course development and direct instruction to students. Regardless of who performs which of these tasks, important issues are involved.

3a. In the development of an electronically offered program, the institution and its participating faculty have a considered issues of workload, compensation, ownership of intellectual property resulting from the program, and the implications of program participation for the faculty member's professional evaluation processes. This mutual understanding is based on policies and agreements adopted by the parties.

- Does the institution have a well-developed policy to address such issues as workload, compensation, intellectual property rights, and faculty evaluation?
- Have these decisions been made in accordance with institutional or system processes customarily used to address comparable issues?

3b. The institution provides an ongoing program of appropriate technical, design, and production support for participating faculty members.

- What support services are available to those responsible for preparing courses or programs to be offered electronically? What support services are available to those faculty members responsible for working directly with students?
- Do participating faculty members consider these services to be appropriate and adequate?
- Does the staff include qualified instructional designers? If so, do they have an appropriate role in program and course development?

3c. The institution provides to those responsible for program development the orientation and training to help them become proficient in the uses of the program's technologies, including potential changes in course design and management.

- What orientation and training programs are available?
- Is adequate attention paid to pedagogical changes made possible and desirable when information technologies are employed?
- Given the staff available to support electronically offered programs, are the potential changes in course design and management realistically feasible?
- Do those involved consider these orientation and training programs to be appropriate and adequate?

3d. The institution provides to those responsible for working directly with students the orientation and training to help them become proficient in the uses of the technologies for these purposes, including strategies for effective interaction.

- What orientation and training programs are available?
- Do those involved consider these orientation and training programs to be appropriate and adequate?

4. Student Support

Colleges and universities have learned that the twenty-first century student is different, both demographically and geographically, from students of previous generations. These differences affect everything from admissions policy to library services. Reaching these students, and serving them appropriately, are major challenges to today's institutions.

4a. The institution has a commitment— administrative, financial, and technical— to continuation of the program for a period sufficient to enable all admitted students to complete a degree or certificate in a publicized timeframe.

- Do course and program schedules reflect an appropriate commitment to the program's students?
- Do budget, faculty, and facilities assignments support that commitment?

4b. Prior to admitting a student to the program, the institution:

Ascertain by a review of pertinent records and/or personal review that the student is qualified by prior education or equivalent experience to be admitted to that program.

Informs the prospective student concerning required access to technologies used in the program.

Informs the prospective student concerning technical competence required of students in the program.

Informs the prospective student concerning estimated or average program costs (including costs of information access) and associated payment and refund policies.

Informs the prospective student concerning curriculum design and the time frame in which courses are offered, and assists the student in understanding the nature of the learning objectives.

Informs the prospective student of library and other learning services available to support learning.

Informs the prospective student concerning the full array of other support services available from the institution.

Informs the prospective student about arrangements for interaction with the faculty and fellow students.

To evaluate this important component of admission and retention, it is appropriate to pursue the following:

- How do potential students learn about the electronically offered program? What qualifiers are included with this initial information?
- How are students informed about technology requirements and required technical competence?
- How are students informed about costs and administrative arrangements?
- What information and/or advice do students receive about the nature of learning and the personal discipline required in an anytime/anywhere environment?
- What criteria are used to determine the student's eligibility for admission to the program?
- What steps are taken to retain students in the program?
- What is the history of student retention in this program?

4c. The institution recognizes that appropriate services must be available for students of electronically offered programs, using the working assumption that these students will not be physically present on campus. With variations for specific situations and programs, these services may include:

Accurate and timely information about the institution, its programs, its courses, its costs, and related policies and requirements.

Pre-registration advising.

Application for admission.

Enrollment/registration in programs and courses.

Financial aid, including information about policies and limitations, information about available scholarships, processing of applications, and administration of financial aid and scholarship awards.

Secure payment arrangements.

Academic advising.

Timely intervention regarding student progress.

Tutoring.

Career counseling and placement.

Academic progress information, such as degree completion audits.

Library resources appropriate to the program, including, where appropriate, reference desk services; access to databases, online journals, and full-text resources; fax services for documents; institutional agreements with academic libraries; and shipment of materials on a direct loan or interlibrary loan basis.

Training in the use of library resources and in research techniques.

Within the context of the program, the requirements of the program's students, and the type of institution, review each of the services and procedures listed above from the standpoint of a student for whom access to the campus is not feasible.

- Are the institution's policies and procedures appropriate and adequate from the standpoint of the distant student?
- If not all appropriate resources are routinely available at a distance, what arrangements has the institution made to provide them to distant students?
- Are these services perceived by distant students to be adequate and appropriate?
- Are these services perceived to be adequate and appropriate by those responsible for providing them? What modifications or improvements are planned?

4d. The institution recognizes that a sense of community is important to many students' success, and that an ongoing, long-term relationship is beneficial to both student and institution. The design and administration of the program takes this factor into account as appropriate, through such actions as encouraging study groups, providing student directories (with the permission of those listed), including off-campus students in institutional publications and events, including these students in definitions of the academic community through such mechanisms as student government representation, invitations to campus events including graduation ceremonies, and similar strategies of inclusion.

- What strategies and practices are implemented by this institution to involve distant students as part of an academic community? By their statements and actions, do administrators and participating faculty members communicate a belief that a sense of academic community is important?
- How are the learning needs of students enrolled in electronically offered programs identified, addresses, and linked to educational objectives and learning outcomes, particularly within the context of the institution's definition of itself as a learning community.
- Do representative students feel that they are part of a community, or that they are entirely on their own?

5. Evaluation and Assessment

Both the assessment of student achievement and evaluation of the overall program take on added importance as new techniques evolve. For example, in asynchronous programs the element of seat time is essentially removed from the equation. For these reasons, the institution conducts sustained, evidence-based and participatory inquiry as to whether distance learning programs are achieving objectives. The results of such inquiry are used to guide curriculum design and delivery, pedagogy, and educational processes, and may affect future policy and budgets perhaps have implications for the institution's roles and mission.

5a. As a component of the institution's overall assessment activities, documented assessment of student achievement is conducted in each course and at the completion of the program, by comparing student performance to the intended learning outcomes.

- How does the institution review the effectiveness of its distance education programs to assure alignment with institutional priorities and educational objectives?
- How does evaluated student performance compare to intended learning outcomes?
- How is student performance evaluated?

5b. When examinations are employed (paper, online, demonstrations of competency, etc.), they take place in circumstances that include firm student identification.

- If proctoring is used, what are the procedures for selecting proctors, establishing student identity, assuring security of test instruments, administering the examinations, and assuring secure and prompt evaluation?

- If other methods are used to identify those who take the examination, how is identification firmly established? How are the conditions of the examination (security, time limits, etc.) controlled?

5c. Documented procedures assure that security of personal information is protected in the conduct of assessments and evaluations and in the dissemination of results.

- What procedures assure the security of personal information?
- How is personal information protected while providing appropriate dissemination of the evaluation results?

5d. Overall program effectiveness is determined by such measures as:

The extent to which student learning matches intended outcomes, including for degree programs both the goals of general education and the objectives of the major.

The extent to which student intent is met.

Student retention rates, including variations over time.

Student satisfaction, as measured by regular surveys.

Faculty satisfaction, as measured by regular surveys and by formal and informal peer review processes.

The extent to which access is provided to students not previously served.

Measures of the extent to which library and learning resources are used appropriately by the program's students.

Measures of student competence in fundamental skills such as communication, comprehension, and analysis.

Cost effectiveness of the program to its students, as compared to campus-based alternatives.

Although not all of these measures will be applicable equally at every institution, appropriate evidence is generally available through:

- Evaluations of student performance (see 5a above).
- Review of student work and archive of student activities, if maintained, in the course of program reviews.
- Results from students' routine end-of-course and -program evaluations.
- Student surveys of overall satisfaction with the experience of electronically offered programs; surveys reflecting student cost trade-offs experienced as they pursued the program.
- Faculty surveys, peer reviews of programs, and discussion groups.
- Documentation concerning access provided to students not previously served, through a combination of enrollment records and student surveys.
- Usage records concerning use of library and learning resources, and instructor assignments that require such usage.
- Assessment of students' fundamental skills in communication, comprehension, and analysis. How have the institution's usual measures of these skills been adapted to assess distant students?
- Documentation of the institution's analyses that relate costs to goals of the program.

5e. The institution conducts a program of continual self-evaluation directed toward program improvement, targeting more effective uses of technology to improve pedagogy, advances in student achievement of intended outcomes, improved retention rates, effective use of resources, and demonstrated improvements in the institution's service to its internal and external constituencies. The program and its results are reflected in the institution's ongoing self-evaluation process and are used to inform the further plans of the institution and those responsible for its academic programs.

- How is the institution's ongoing program of assessment and improvement developed and conducted?
- Does it cover the essential categories of improved learning outcomes, retention, use of resources, and service to core constituencies?
- Does the program appropriately involve academically qualified persons?
- What is the institution's mechanism for review of existing programs and courses?
- How does program evaluation affect institutional planning?
- What constituencies are actively involved in the ongoing process of planning for improvement?
- Has the process had measurable results to date?

5f. Institutional evaluation of electronically offered programs takes place in the context of the regular evaluation of all academic programs.

- What are the administrative and procedural links between the evaluation of electronically offered programs and the ongoing evaluation of all academic programs?
- How are the respective characteristics of campus-based and electronically offered programs taken into account?