Online Graduate Education

COUNCIL OF GRADUATE SCHOOLS

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By

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FOREWORD

Few U.S. universities and colleges have not been touched in some way by the revolution that has taken place over the past decade in distance education occasioned by the rise of online learning. This publication is designed to assist graduate deans and other senior administrators as they consider, initiate, expand, or manage online distance learning as part of their institutions' overall graduate education portfolio. As they go about these tasks, these leaders should be prepared to ask broader questions, such as: What are the changes in the roles and responsibilities of the graduate school in the world of online education? and, How does the graduate school continue to present a vision of excellence, promote quality, and maintain equitable standards for graduate education in this new environment? Graduate education leaders should also consider answers to more specific questions touching on a range of issues such as: faculty professional development, assessment and accreditation, and financial structure. If planned and managed well, the administrative policies and practices underlying distance learning can improve access, cost-effectiveness, and quality in graduate education.

Online Graduate Education replaces the 1991 CGS booklet, *Distance Education*. This new publication is neither a comprehensive nor scholarly review of distance education and online learning. Rather, it is intended to be a practical guide for graduate deans and other graduate education administrators to support the development of quality distance programs that are aligned with institutional mission and strategic direction. The Council of Graduate Schools is grateful to authors Charles McClintock, Joey Benoit, and Deirdre Mageean for the time and effort they contributed to ensuring that this timely publication can fill such an important need in the graduate community.

Debra W. Stewart
President, CGS

INTRODUCTION

The past decade has witnessed a strong and continual growth in online enrollment in U.S. universities and colleges. Once the business of a relatively small number of institutions, online education is now commonplace. Initially, the momentum behind this growth was fueled by institutions specializing in online learning. More recently, private and public institutions that had hitherto been highly selective in their admissions practices have entered the world of distance education through open education resources that essentially are in the public domain for individual or institutional use (e.g., "MOOCs," or massive open online courses). This situation is part of a broader trend in which the technological innovation behind online education has produced significant and far-reaching changes in higher education, more generally. Because the rapid growth of online education has the potential to transform graduate education, it is vital that graduate deans and other senior leaders be aware of broader trends and be actively engaged in shaping how these transformations unfold at their own institutions.

Online Education Growth Trends

Online education has been one of the fastest growing segments of American higher education over the past decade. Most notable has been the growth of online enrollment as a percentage of total enrollment, reaching an impressive 32% in the fall of 2011 (Allen & Seaman, 2013.) The proportion of students taking one or more online course has increased from fewer than one in ten in 2002 to nearly one third by 2010. During this same time period, the number of online students grew from 1.6 million to over 6.1 million—an annual compound growth rate of 18.3% (Allen & Seaman, 2011). The online growth rate for the following year of 9.3% was the lowest recorded since annual tracking began a decade ago, suggesting a possible deceleration (Allen & Seaman, 2013). But online education as a fundamental part of U.S. higher education is here to stay. The dramatic

growth associated with online education suggests that every senior graduate leader should be prepared to make informed decisions regarding how their institution will participate.

Such growth has broader implications for access and affordability in higher education that will impact traditional educational institutions. For profit institutions, for example, have doubled their share of the U.S. higher education market in the last decade, and now attract more than 10% of students. The continued growth at these institutions is driving change in public and non-profit independent colleges and universities as they compete around accessibility, especially among working adult and international student prospects. The dominant higher education pricing model in which students pay a single price for a large package of services they may or may not need or use may become less and less attractive to graduate students, especially as so many students incur significant debt to fund their studies.

A Role for Graduate Education Leaders

Many higher education leaders believe that online learning has the potential to improve faculty productivity without sacrificing educational quality and to grow enrollments without having to invest in expensive infrastructure. Educational delivery is being transformed through growth in blends of in-class and online teaching that draw upon unlimited Internet resources and by the demands of new cohorts of students whose lives are intertwined with information technology and social media.

As the pace of growth and interest in online education has accelerated, more and more institutions have felt the pressure to get aboard the online education train. In many universities professional and graduate programs have been targeted for growth. Faced with an uncertain fiscal environment, increasing pressure to make education both accessible and affordable, and declining enrollments in some areas, universities have turned to online education as an answer to these challenges. As a result, most institutions are experimenting with online instruction. However, in many instances, this new world of instruction and learning has raised concerns as well as hopes and has left many faculty and administrators grappling with how best to channel the new forms of teaching, learning,

and assessment in an interactive world in order to ensure what we might call productive innovation. In particular, graduate deans are having to address the critical question of how this affects the role and responsibilities of the graduate school.

Graduate deans, directors, and faculty, committed to the principle that graduate programs must be organized and administered in a way that makes their success possible, are now addressing questions concerning quality control, completion and attrition, faculty training and credentialing, outcomes assessment, program review, and accreditation and student support. Added to this by no means exclusive list are questions and concerns about the appropriate balance between online and on campus students, how to maintain a "community of scholars," and how best to deal with other facets of graduate learning and experience more commonly addressed in an exclusively on-campus environment.

Distance Education and the Workforce

While the growth of online education is taking place in a variety of settings, both alone and in combination with face-to-face instruction, the potential to reap broader public benefits through distance education is particularly promising. The Council of Graduate Schools' 2010 report, *The Path Forward: Graduate Education in the United States*, provides an important context for considering the role for distance learning in terms of both access and skill development. For example, distance programming can address the needs of working adults who require flexible access to education in order to balance their concurrent career and family needs. Similarly, institutions seeking to increase international enrollments can make strategic use of distance education.

As important as providing access is the need to educate professionals through the very technologies they will need to use in their careers. Attuning graduate learning to varied post-graduate career paths must take account of the fact that the workplace is increasingly characterized by online information technology and distributed organizational structures. In addition, professional practitioners in fields of education, health, mental health, law, engineering, consulting, and more, will make use of information technology at a distance to conduct their business. Distance

education provides direct experiential learning and skill development with virtual work that gives graduates a competitive edge in addressing the changing needs of employers in a global context. Many forms of employment will require skilled online interaction with a geographically distributed workforce to conduct the social and operational aspects of work. Graduate students' facility with online work at a distance is likely to be considered an essential skill for many post-graduate professional pursuits.

Finally, distance education serves a professoriate of the future that may look quite different from that of the previous half century. We have seen large increases recently in the proportion of fixed-term or adjunct faculty, and many of these are expected to teach online courses. Indeed the relatively low cost of adjunct faculty has made them an attractive part of the online package. Many universities, however, have striven to avoid a separation of online teaching faculty from other faculty and require that full-time faculty be prepared to teach both on campus and online. Regardless of their official faculty status, the ability to teach students online and at a distance will likely become a valuable asset for those seeking faculty positions as well as for those already in the professorial ranks.

Monograph Overview

Senior leaders will keep overarching considerations foremost in their minds about how the graduate school can advance and support online education in a way that is consistent with the institutional mission. In so doing, however, leaders will also typically be faced with a range of concrete issues. This publication addresses five key questions about graduate online education that deserve careful attention:

1. What are the roles and responsibilities of the graduate school in developing and approving courses and programs?

2. What new types of professional development are critical to improve (current and future) faculty teaching and to ensure the quality of online education, especially given that the majority of

today's professoriate were not themselves taught in online learning environments? What core issues need to be addressed, and what are best practices in this area?

3. What special considerations are required in the online distance environment for supporting and assessing student learning?

4. Acknowledging that financial models vary considerably across institutions: How should distance education best be integrated into an institution's organizational structure, and a full accounting of direct and indirect costs provided?

5. What accreditation and regulatory concerns should deans be aware of to ensure that distance education is supported by and integrated with institutional mission, strategy, and capacity?

Online education should not be considered as a phenomenon apart from an institution's face-to-face graduate offerings. Indeed, adding or expanding distance components to graduate programs can be an occasion to reflect on the caliber of graduate instruction more generally. The roles of information technology and the Internet environment should be seen as secondary to a focus on fundamental issues of quality in teaching and learning. In addition, when developing distance education programs, it is necessary to remember that these efforts will reflect and project institutional reputation in more public ways than has been the case with traditional on campus instruction. Rigorous attention to assessment of learning, faculty development, financial planning, as well as regulatory and accreditation issues can provide substantial benefits for graduate schools interested in distance education as a means to expand their reach nationally and globally.

Terminology

Graduate deans are likely to encounter a host of terms such as distance or distributed education, online education or online learning, blended or hybrid learning, e-learning, and web-facilitated or Internet-assisted learning

to name several. In addition, technology-related change in education from K-16 to graduate school is awash with an evolving vocabulary including learning management systems, social media, Web 2.0, networked learning, mobile learning, and MOOCs. Graduate deans should try to stay informed about this expanding milieu of educational terminology in order to maintain a focus on essential elements of instruction and learning outcomes.

"Online Education" and "Online Learning"

Online learning includes a wide range of activity from simple use of e-mail and list serves to course management platforms, course management software, and social media. Online course management platforms allow for sophisticated and differentiated forms of instruction that incorporate a rich array of teaching resources and opportunities for student engagement and interaction.

"Distance Education"

Online distance education, in contrast to pre-Internet versions of distance education such as correspondence, off-site, and television broadcast, capitalizes on asynchronous delivery in which students can work on course material at any time or location, as well as synchronous events such as online lectures, webinars, and telephonic or computer-mediated discussion groups.

In this monograph, the terms distance and online learning are sometimes used interchangeably, and distance education is used specifically to refer to curricula that are delivered solely or largely through online course platforms.

"Blended Delivery" or "Hybrid Education"

Campus-based instruction in general is increasingly characterized by education that is a blend of face-to-face and online delivery. The U.S. Department of Education's 2009 meta-analysis of rigorous research designs supports the conclusion that blended delivery is associated with the most positive learning outcomes in comparison to instruction that is

done solely in class or online. As graduate schools seek to expand access and manage cost through distance learning that is all online, it will be important to consider how to use the available delivery models to improve learning outcomes and support broader institutional goals of access, cost containment, and educational quality.

I. DEVELOPMENT AND APPROVAL OF PROGRAMS AND COURSES

While the organization and responsibilities of graduate schools vary across institutions, among the common activities are the review of new and revised programs. The development of new graduate courses and programs is primarily the responsibility of the faculty of each academic unit. The review and approval of such programs, including those offered off campus and in non-traditional formats, is generally the responsibility of the graduate school. Likewise the graduate school is extensively involved in the review of existing programs and departments. Some institutions require that before a course is offered online it must first be offered face-to-face. In some systems and regions the university system office or accrediting agency must be notified of the intent to offer an existing course online (for more on this requirement, see Chapter V). Overall, the graduate school's responsibilities remain the same for distance learning courses and programs. However, an institution's commitment to develop and/or grow distance education raises a number of issues that graduate schools need to address.

Staying on Mission

As reiterated throughout this publication, the success of an institution's distance education activities is more likely when the programs reflect and are compatible with the institution's mission. Further, administrative structure and responsibility for the quality of distance

learning programs should be clear and indicated in the organizational structure of the institution. If, as in the case of some institutions, there is a specialized unit in the university with primary responsibility and oversight of distance education, the relationship between it and the graduate school should be clearly articulated, particularly on the respective roles and responsibilities for quality control of programs. This is particularly important in ensuring the comparability of distance education programs to campus-based programs. To achieve such comparability, there needs to be a system for evaluating educational effectiveness, including assessments of student learning outcomes, student retention, and student satisfaction (see Chapter III for more on these topics).

Managing the Expansion of Distance Education

The graduate school should be involved in discussions about how extensive distance graduate education should become. Given the close relationship between the research goals of the institution and graduate education, graduate deans may need to reflect on the appropriate balance between on-campus and distance-only graduate students. Such a question has considerable implications for infrastructure, technology and library resources, graduate student financial support, and graduate faculty responsibilities. Finally, in this rapidly changing environment of distance education, some institutions have "out-sourced" the design, development, and even delivery of distance education courses and programs to third party vendors. An important issue for graduate schools is whether or not provision is made for quality control by the institution awarding credit for the course or program. If so, are the responsibilities clearly delineated? In particular, what are the roles of the graduate faculty and the graduate school?

Credit Transfers

As the world of online education continues to evolve at a fast pace, many issues are as yet unresolved. Whether offered by single institutions or consortia, online courses are frequently taken for credit, thus raising the issue of transferability of credits. While acceptance of credit transfers

is not common and currently occurs at the undergraduate level, graduate schools can nevertheless anticipate that they will confront the issue of credit transferability from online graduate instruction under the auspices of different institutions, including those from for-profit colleges and universities.

II. PROFESSIONAL DEVELOPMENT FOR CURRENT AND FUTURE FACULTY

This can be viewed as both an exciting and perplexing time in higher education. Not surprisingly the growth in distance education has evoked a range of reactions among faculty from enthusiasm and excitement to concern and fear. Higher education faculty are likely to be conflicted in their attitudes even as distance education has become more pervasive. At many institutions, faculty *are* more pessimistic than optimistic about online learning—an attitude that stands in sharp contrast to that of university administrators who are, in general, more optimistic. One annual survey reveals that the attitudes of the faculty reflect their exposure to and involvement in online education: the greater the participation, the greater the enthusiasm—though even among those faculty teaching online courses, there was considerable concern about the quality of learning outcomes (Allen and Seaman, 2011). Other concerns of faculty were the pace at which it was being promoted at their institutions; the dearth of effective tools to assess online instruction and, to a lesser extent, the adequacy of compensation for teaching online courses. Interestingly, while most faculty surveyed believed that their institutions had fair systems for recognizing teaching with technology during promotion and tenure reviews, there were more mixed results on the issue of whether their institution rewarded "contributions made to digital pedagogy."

Faculty fears and concerns about online education highlight a number of areas that require attention by graduate deans, such as faculty training, credentials for graduate faculty status, assessment and outcomes evaluation of graduate courses and programs, and incentives and rewards

for teaching online. Almost all of these fall into three main areas of graduate school activities, namely appointments and review of graduate faculty, participation in faculty appointment and promotion decisions, and faculty development.

Training for Online Education

Many graduate schools play a role in shaping or administering faculty development programs whose purpose has been to encourage and support research development or the identification of new opportunities for scholarship and professional activity. Less frequently has there been involvement in preparation for, or improvement in, teaching. Consideration of teaching performance has also been of less importance in the review of faculty for graduate faculty status. However, the growth and transformation of distance delivery are changing this. While good preparation for teaching is highly desirable, regardless of medium or location, there is a particularly strong need for such preparation in an online environment that is constantly changing and where consultation or collaboration with experts in pedagogy, communication, and technology is a necessity.

Depending on an institution's history of engagement in online learning, quality faculty preparation activities may have evolved from within departments and colleges or in centers for faculty development. While there are many fine examples of practices that have emerged from colleges, the value of core, centralized training has become increasingly evident. At times this centralized training has been prompted by program or institution accreditation requirements. For instance, the Southern Association of Colleges and Schools (SACS) requires that "An institution offering distance or correspondence learning course/programs ensures that there is a sufficient number of faculty qualified to develop, design, and teach the courses/programs" and that "The institution has clear criteria for the evaluation of faculty teaching distance education courses and programs." Regardless of the imperative, graduate schools should be involved in these efforts because they are central to maintaining high-quality programs. Further, in reviewing graduate online education proposals, graduate schools should ascertain that courses are taught by faculty with appropriate training as well as other qualifications.

Graduate Student Faculty Preparation Programs

Increasingly graduate teaching assistants are being drawn into undergraduate online teaching necessitating revision of teaching assistant preparation. Preparing Future Faculty (PFF) and similar programs have an important role to play in preparing graduate students for these opportunities. Such programs prepare graduate students for the variety of roles and responsibilities they are likely to incur as faculty in multiple institutional contexts. In order to prepare graduate students for the new realities of their future faculty roles, such programs must, of necessity, include training with new pedagogies and delivery systems. Unlike many existing faculty, graduate students likely will have already been exposed to these systems through their participation in these programs.

The Content of Professional Development for Online Education

There are many facets to a mature faculty development program for online teaching. These include institutional and school mission and policies, general as well as discipline or field-specific pedagogy, academic peer support and quality oversight, faculty work effort and compensation policies, technical support, and use of external consultants. A coordinated approach to faculty development requires a role for the graduate school, school and department, centers for faculty excellence and campus-wide IT, library, and instructional support (see Chapter IV below for more on the financial aspects of this multi-unit approach).

Program content should address a range of questions commonly asked by those without experience in online teaching, such as:

1. How can I manage my time since students are online at any time of any day?
2. How does one conduct lectures online in synchronous and asynchronous formats?
3. What mix of synchronous and asynchronous delivery should be used, and when is each method appropriate?
4. How can one teach laboratory and research-based courses online?
5. How does one develop a sense of connection with students who

one cannot see in person?
6. How can one be sure that registered students are doing their own work?
7. How long will it take me to learn the online course management system?

These and similar questions can best be addressed through instructor information sessions and demonstrations that are targeted to those at the early stage of online teaching development. The graduate school can play a vital role in helping faculty members new to online teaching become more personally familiar with it and can anticipate some of the basic uncertainty or resistance that might be encountered. For those who will be assigned to online teaching, more extensive training is necessary.

Moving from classroom to distance education involves much more than posting and pasting course materials into an online course management system. The growing literature on faculty development for online teaching emphasizes the desirability of a phased approach based on peer support and with cognizance of organizational and personnel factors that influence successful outcomes.

The initial phase of faculty training is best conducted in face-to-face sessions, given that for most instructors, this will be a new form of professional practice. However, some institutions have found modular online training to be effective. General practice at this time suggests that two to three days of introductory face-to-face training should be adequate for those new to online distance education. Initial training might include topics such as:

- Terminology (e.g., distance education, online learning, blended/hybrid delivery, social media, Web 2.0 software),
- Campus and academic program policies, goals and norms that pertain to online instruction,
- Orientation to the course management system and software used in online instruction,
- Fundamentals of online teaching with an emphasis on creating instructor and student presence,

- Assessment of student learning,
- Making a transition from in-class to online teaching, and
- Internet resources and tools.

Subsequent training, including ongoing and advanced professional development, can be supplemented or delivered fully online. This phase might include an emphasis on activities such as:

- Peer guidance in course design and delivery,
- Course shadowing and co-teaching, and
- Peer review of course performance and student learning outcomes.

Each campus will need to determine the content and duration of this more advanced phase of training, which might vary from several weeks to a full semester. Attention should also be paid to the requirements of the relevant regional and/or professional accrediting bodies.

Administering Professional Development Programs

Costs

Providing professional development and training has costs. The costs of not providing these resources, however, can outweigh such expenditures and result in low quality instruction that leads to student attrition and threats to institutional reputation. If a campus decides to add distance programs to its menu of educational options, it should embrace faculty development as part of the package. Faculty orientation and training programs for online teaching can support institutional goals of increased access to underserved student populations, new revenue streams, more efficient program delivery, improved student learning outcomes, and timely graduation, thereby enhancing overall institutional success.

External Providers

Training (usually in the form of a certificate program) for online learning is also offered by external groups. These certificate courses, taken online,

typically provide faculty with tools and practices and training in pedagogy. It is uncertain whether or not such certificate cources satisfy the training requirements of accrediting bodies.

Faculty Status

The issue of faculty development and training for online education is an important aspect of the graduate school's overarching obligation to ensure that only well-qualified, active faculty members are involved in graduate programs. While institutions may handle the appointment and review of graduate faculty in different ways, a central concern has been to ensure that graduate faculty be productive scholars capable of involvement in graduate programs. While all faculty, tenure-track and tenured, deal with the balance between teaching, research, and service, teaching online has particular implications for this balance. Online teaching, and the preparation for such teaching, can be particularly time consuming. Consequently, many universities do not ask faculty to teach online until they have been at the university for one or two years. Tenure track faculty, in particular, can be protected by not being asked to teach online for their initial few years or, at least, until they have established a solid line of research.

Other Organizational Considerations in the Design of Faculty Development Programs

There are several organizational participants relevant to faculty development for online graduate education, including the graduate school, campus instructional, library, and IT support staff, and school, college, and departmental units. Coordination among the various actors is an issue for the graduate dean to address in order to ensure an integrated approach that emphasizes academic integrity, quality, and support for student learning outcomes. Teaching and learning, not technology, should be the lead concepts in maximizing effectiveness in the online environment. At the same time, as discussed below in Chapter V on financial considerations, there needs to be specific agreement about how library, IT, instructional support and other campus resources will be committed to support distance education through online teaching. Specific issues include tutorials for

online library usage and database searching, provision and training for course management and related software, emergency response to system outage and downtime, and availability of technical support for faculty and students.

Experienced peers can be very effective leaders in training for faculty members who are just beginning to teach online with support from staff on specialized aspects such as features of online library and course management systems. Ongoing support from these groups is also highly desirable during the first semester of teaching. External consultants can also be helpful in designing training programs for campuses that are contemplating or just beginning to offer online graduate instruction. There are a number of private firms offering this and related technology and data system services, often for a share of the revenue from online distance programs. There are several academic institutions in this business as well who promise the kind of collegial understanding of the academic enterprise that can help allay faculty resistance. Institutions might use their own experts, external consultant expertise, or a mix of the two in the development of faculty training and mentoring programs.

Where appropriate, advanced phases of faculty development might be coupled with planned co-teaching in which novice online instructors are able to practice how to deliver content online and facilitate student discussion and engagement in general. For professionally accredited programs, such as the MBA, it is desirable to have faculty development closely aligned with academic oversight from the degree-granting unit in order to assure compliance with external instructional standards.

Academic Personnel Issues in Distance Education

Faculty development is affected by an instructor's official status in the program. Some institutions have deliberately avoided having a separate or adjunct faculty for distance education in the belief that an integrated structure maintains quality. Indeed, there is an expectation in some graduate programs that a faculty member will earn the opportunity to teach online through ongoing professional development, peer review of one's courses, and additional compensation. These factors mitigate barriers such as skepticism or uncertainty about the quality of online instruction.

Some graduate programs have elevated the requirements for online teaching such that course proposals and end-of-term evaluation data are subject to peer review. This form of instructional assessment is congruent with the general approach of regional and professional accreditation bodies in which evidence is used as feedback for ongoing improvement of curriculum and program delivery.

Compensation for online distance education is determined differently depending on campus or unit policy and the stage of development of online distance education. Some campuses have adopted an incentive approach where faculty members can earn stipends for developing and teaching online courses. Such an approach might be advisable in early stages of campus exploration of distance learning where entrepreneurship is desirable for start-up initiatives. This strategy can be coupled with incentive agreements for departments or schools in which tuition revenue from online programs is shared between those units and the campus. (See Chapter V for further discussion.)

In sum, faculty development in support of online distance education is a serious and significant undertaking. Viewed in the larger context of systemic change in higher education aimed at broadening access to new populations of students and exploring innovative approaches to teaching and learning, faculty development is a critical part of institutional adaptation. In this light, the investment in faculty development is central to the economic health and academic reputation of any campus's graduate education enterprise.

III. SUPPORTING STUDENT LEARNING IN THE ONLINE ENVIRONMENT

Offering distance education through online instruction is an occasion to reflect on graduate teaching more generally, including pedagogy, course design, academic integrity, norms about class attendance and interaction, and assessment of learning outcomes. Many of the best practices for online instruction apply to classroom teaching as well, although there are differences specific to learning in the online environment that we will highlight.

Orientation for Students to the Online Learning Environment

It is essential that there be institutional standards for orienting students to the online environment of the university, school or program, even though an increasing number of students will previously have taken online courses before enrolling in a graduate program. Many institutions now have required comprehensive orientation to prepare students for the online environment. In some cases this orientation might take the form of a "pre-term" experience. Such a course can be developed centrally or, in the case of some completely online programs such as an MBA or other professional degrees, be a required first course prior for all incoming students. The benefit of such an orientation is not confined to familiarizing students with the world of online education. A significant number of students in such programs have full time jobs and may have been out of school for a number of years and be unprepared for the intensity of graduate level work.

An all-online non-credit, pre-term course might run for about four weeks and cover such topics as:

- Introduction to the online learning environment,
- Introduction to the range of student, academic and technical support services,
- Introduction to the appropriate library and other learning resources supporting online learning,
- Time management and goal setting,
- Study skills appropriate for graduate school,
- Maintaining a healthy work-school-family balance,
- Importance of communicating with faculty and classmates, and
- Importance of networking with classmates.

While traditional university orientation sessions are conducted face-to-face on campus, for many of the students enrolling in online programs, attendance on a campus remote from home or workplace can be problematic. For this reason, it is advisable that such sessions be either conducted both on-site and available online or be offered exclusively online.

Such sessions can help considerably in student preparation and, hence, the probability of successfully completing the course or degree, but continuous monitoring, and support during the life of the course is also essential. This can be achieved to varying degrees throughout the term through student advising and support services (e.g., technology support help desk; online tutorials and manuals; chat sessions, discussion forums, and group projects to encourage interaction; and teaching assistants).

Introducing Students to the OnlineTeaching Platform

There are a variety of proprietary online course management systems. Graduate programs will utilize those that are officially supported by their home institution since training and technical support are necessary for implementation of successful online learning. Ideally, the institution will utilize an online learning management platform that includes procedures for student identification and access, thus helping ensure that only

duly registered students are submitting their own work on quizzes and exams. In addition to institution-determined online identification, these procedures can include software that monitors server time on password protected exams, date, time and author authentication for electronically submitted work, and browser lock-down during exam and testing periods. Along with academic practices and software that help minimize academic dishonesty, the success of any approach to academic integrity in online instruction requires campus-wide and course-specific emphasis by faculty and administration, along with technical monitoring.

Academic Integrity

As distance education enrollments increase many academics have become more concerned about academic integrity. There is no evidence that academic integrity problems have arisen in the online environment to a greater degree than they already exist in on campus and classroom environments. In addition, there is substantial overlap in procedures for promoting academic integrity between online and in-class instruction. One comprehensive list of best practices (Western Cooperative for Educational Telecommunications, 2009) includes items that would be common to graduate education; these include promoting a campus wide policy on academic integrity, engaging students in interpreting such a policy, as well as a range of procedures for test and written assignment preparation that minimize opportunities for cheating or plagiarism.

Guidelines and best practices for academic integrity in online courses also are published by a number of professional organizations including those that speak to general accreditation standards (e.g., Council for Higher Education Accreditation) and those specific to fields and disciplines (e.g., Commission on Accreditation of Healthcare Management Education). Plagiarism detection software is now common practice in higher education. In addition to use for academic integrity, it can be used as a developmental tool for draft versions of student writing that assist in rephrasing and adherence to citation norms.

It is advisable for program faculty to develop a unified position on how matters of plagiarism will be handled in advance of an incident rather than attempting to craft a position in response to a detected case

of plagiarism. Consequences for such misconduct should be included in course syllabi and brought to the attention of students at the beginning of the course.

Some of the most useful approaches for promoting academic integrity are based on pedagogy and instructional design, and do not rely on specialized technology or detection systems. For example, having students demonstrate their learning in multiple ways and at varied times during the course will minimize the risk that someone other than the registered student is doing the work. These modes include electronic portfolios that accumulate student work, online presentations, group projects such as wikis where content is developed collaboratively, and blogs in which an individual's online posts are responded to by others and updated chronologically. Required participation in these kinds of discussion and varied assessment tasks reduces the possibility of plagiarism and cheating.

One useful practice is to require that at least 50% of the course grade be derived from assessments that ensure that students are submitting their own work. Such assessments may include, but are not limited to, face-to-face on campus exams, face-to-face proctored exams given at remote locations, and other activities that can reasonably be attributed to the student. Some examples are: a) ongoing interactive participation in a discussion forum or chat room; b) individualized written papers or assignments; and c) assignments that are randomly selected from a larger question bank.

Even with the options outlined above, requiring that a significant portion of the course grade be based on a proctored or face-to-face assessment can help minimize risks of academic dishonesty. Interestingly, at least one consortium offering MOOCs has now offered proctored exams in order to ensure the integrity of the courses. Proctored exams may not be feasible for all, and it should be noted that they do demand resources of the institution and place a demand on students who need to find the time and the means to travel to a local proctoring center. For this reason it may be advisable to have only one proctored exam given per semester, usually the final. For the university the burden is to provide a network of local exam centers and a system for approving such facilities. It must also provide a pool of approved proctors and a policy for their approval. In those institutions where a significant percentage of programs are provided

online, a centralized proctoring office with clearly defined policies and procedures is recommended.

Assessment and Evaluation

Assessment of Student Learning Outcomes

Academic rigor and integrity are critical to the quality and therefore to the success of distance learning, and these criteria are reflected in the attention to valid assessment of learning outcomes. The emphasis on learning outcomes, both national and through regional and professional accreditation, offers an opportunity to ensure quality in online distance learning that is comparable to the best standards that apply in classroom settings.

The goal of comparability of quality in online and campus-based programs and courses can best be ensured by the evaluation of educational effectiveness, including assessments of student learning outcomes, student retention, and student satisfaction. Despite this importance, assessment and learning outcomes remain some of the as yet unresolved issues in online education. As noted in several surveys about online education, a significant number of faculty express concern about the quality of learning outcomes in online education. While the extent of those concerns vary, depending on whether faculty were directly involved in teaching and on the extent of online teaching at their institution, the degree of concern presents a problem to institutions seeking to expand their offerings. It can also contribute to the reluctance of some faculty to embrace online learning.

Initially, the assessment of online courses tended to mirror those of traditional courses and was based on student evaluations. This was so because of the belief that online courses should reflect, as much as possible, practice in traditional courses. However, these evaluations tended to be subjective and reflected student satisfaction rather than learning outcomes. Some institutions created metrics to monitor the delivery of their online courses but these should not be confused with metrics on outcomes because they tend to measure utilization and response.

Graduate deans, like other academic leaders, can provide a

supportive role in helping faculty become knowledgeable about learning outcome rubrics: that is, defined levels of performance for gradable activity, and the integration of these into course design and instructional practice (see Table 1 below for an example that illustrates the previous discussion of promoting student interaction in online courses). The specifics of assessing learning outcomes will vary by subject matter, academic field, and over time as academic and professional groups take hold of this important shift in higher education. The linkage of accreditation and financial aid to earnest efforts at assessment of learning outcomes creates a strong incentive for this work to continue.

Ideally a program's effectiveness should be assessed using several methods some of which are outlined below. The learning outcomes should be stated clearly and reviewed on a regular basis in order to ensure clarity, usefulness, and appropriateness.

There are many tools for assessment. The specific ones used should reflect discipline standards, course design, and school or institutional mission. In addition, graduate instructors should consider using a framework to guide the kind of assessment that is appropriate for a given online course. One such framework commonly used is Bloom's taxonomy of educational objectives (see Table 2 below). The use of rubrics is important in assessing higher-order learning outcomes in order to help guide students regarding the expected criteria and assessment standards.

Traditional approaches to assessment include quizzes, tests, assignments, and papers with an emphasis on criterion- or norm-referenced grades and class ranks. Quizzes and tests, which can be computer generated, scored, and authenticated, are useful for assessment of knowledge and comprehension in Bloom's taxonomy, while assignments and papers are more suitable for assessing higher-order skills.

Assessing skilled performance is a second approach that draws on observable results and application of knowledge. Online instruction can make full use of case studies, simulations, and role-playing exercises where students are asked to demonstrate their capacity, individually or in small groups, to solve problems based on course content. Assigned peer or collaborative review among students is suitable for developing draft versions of assignments and assessing final products for this kind of learning outcome. Online tools that support this kind of assessment

include wikis, blogs, and class forums. In the natural and physical sciences, open source web-based and commercial products are available that allow laboratory assignments to be completed at a distance.

A third approach to assessment is through student portfolios. The emphasis in this approach is to have students document their growth over the duration of the course through means such as reflection and self-assessment on assignments in relation to their own educational goals and accomplishments. Portfolios can include digitized collection of artifacts, including text, graphic or multimedia work, demonstrations, and resources that represent an individual or group. The use of rubrics is important to ensure reliable and valid assessment of portfolio work.

It has been argued that learning outcomes—not the availability of technology—should determine the technology used to deliver course content. However, the development of new technology has great potential to help better to assess and evaluate student learning. Among the most promising is assessment that supports the learning environment through machine-guided diagnostic feedback. While these adaptive learning platforms are being developed, few are in general use today. They represent a shift from assessing the outcomes of learning toward guiding the learning process, and we can expect them to have significant impact within the next two to five years in online education.

The topic of learning outcome assessment is a large one with a long history in the field of education and beyond. It is undergoing considerable change currently as graduate programs develop more transparent approaches to assessment that are linked to academic program development. The specifics of this topic are outside the scope of this volume, yet each of the general approaches to assessment outlined above is suitable for online distance programs.

Retention and Attrition

In this age of greater accountability in higher education and attention to outcomes the issues of retention and attrition are critical in efforts to ensure quality in online education. Indeed, evaluation of educational effectiveness, including assessments of student learning outcomes, student retention, and student satisfaction is seen as a cornerstone of comparability

of distance and online programs to campus-based programs.

An issue that is raised frequently in relation to the effectiveness of online education is that of student attrition. Some institutions and administrators look to new modes of delivery such as online education as a means of improving student outcomes and dealing with retention challenges. While concerns about retention and pass rates have been expressed, especially early on, greater attention has been paid to, and methods devised for, increasing retention and completion. Notwithstanding the U.S. Department of Education meta-analysis (2009), there is still a dearth of rigorous, research-based evidence of the relative effectiveness of online learning compared to more traditional, campus-based learning. Furthermore, the populations of online and on campus courses are self-selective and may differ significantly in demographic and other characteristics. More rigorous methods of assessing the two types of learning in the graduate education setting would be needed that can address the full range of such factors.

Given the importance of the issues of attrition and retention for both on-campus and online students, the best advice for graduate deans is to work closely with department chairs and college deans in carefully reviewing this important aspect of student performance and program quality. It is best if this is conducted both continuously and in a summative fashion as programs are systematically reviewed.

Course and Instructor Evaluation

Online instruction is easily assessed in relation to course content and instructor competence in the same ways as for in-class teaching. All institutions make use of campus-wide or school-based evaluation forms that can be administered online as a required part of course completion. Evaluation items for online courses will include questions about instructor engagement and interaction, course management, and technical quality and support, along with traditional principles of good instructional practice. Some institutions are making use of faculty peer review of online courses prior to their approval and on an ongoing basis, including comparisons of grade distributions for online versus in-class courses. Engaging faculty in peer review of online distance education is a critical means of ensuring

quality for an institution's investment in this form of program delivery.

Program Review

Academic program evaluation is integral to regional and professional accreditation. It currently emphasizes the use of learning outcome assessment data as a meaningful part of faculty and administrative deliberation about program improvement and continuation. In addition to data on learning outcomes, program evaluation for distance learning should address the motivating reasons that this kind of program delivery was established. For example, a leverage point for distance programs is to expand access to new populations of students based on geography (e.g., out-of-state or international) or demographics (e.g., working professionals, dispersed military personnel, or first generation graduate students). Distance programs also expand access by virtue of asynchronous delivery, thereby overcoming time constraints for those students who are managing work and family life. The financial model for distance delivery may also justify a reduced tuition that can expand access based on cost (see Chapter 4 below). Finally, intertwined with these foci, distance programs can expand or enrich existing campus-based academic programs in a cost-effective way, by building specialized, professionally oriented graduate degrees around core institutional strengths in particular disciplines and fields.

Additional factors in evaluating distance programs, which also apply to any academic program, include increased attention to employment outcomes for graduates, and perceptions of quality and utility of the program from alumni and employers. As noted earlier, graduate alumni who have facility with online distance education may be increasingly attractive to employers as they make greater use of a workforce that is distributed regionally, nationally, and globally.

Finally, rigorous approaches to academic program evaluation also address the specific knowledge and competencies associated with each course within a degree curriculum, and assess how they address the larger educational objectives for the program, the school, and the campus. Increasingly, professional association accreditation requires this level of detail in program review and evaluation. In addition, accrediting groups

emphasize not just the collection of such information but making it an integral part of faculty and administrative efforts at program improvement and decision making (see Chapter 5 for more on accreditation and regulation).

Program review and evaluation is a given on every campus and thus needs to include distance programs. Many stakeholders should be involved, including students, faculty, alumni, employers, and potentially trustees. Given lingering questions about the quality of online learning among faculty, this stakeholder group needs to be centrally involved in the interpretation of evaluation data and, in particular, in comparisons between distance programs taught online and comparable curricula, faculty, and students taught on campus. Such comparisons are critical for establishing and improving the quality and legitimacy of distance education.

The challenge for graduate education, which relies on a more traditional professoriate grounded in scholarly rather than pedagogical expertise, is to provide support for faculty development in online instruction. This topic is examined in greater detail in the next section.

Table 1: Example of a Rubric for Assessing Student Interaction in Online Distance Education Course

Level	Course Design	Instructor Behavior	Student Behavior
Low	No use of bios or introductions. No required use of online course forum.	Responds only to student assignments.	Responds only to instructor.
Minimal	Intros and bios required. Discussion forum required only for occasional assignments.	Responds to individual postings only, limiting student-to-student interaction.	Responds to discussion questions with little voluntary response to other students.
Average	Intros and bios required. Ice-breaker at start of course. Students required to respond to one or two peers each week.	Sets expectation of timely feedback, promotes peer interaction. Poses strategic questions in response to group discussion.	Responds to discussion questions with voluntary peer interaction on course concepts.
Above Average	All of the above plus small group discussion assignments, a café area for informal interaction, synchronous audio or video exchange on pre-arranged dates.	All of the above plus demonstrates and promotes interest in students as a learning community.	All of the above plus initiates discussion beyond the assignment. Comments show application and evaluation of course concepts. Engages in café conversation beyond course assignments.

Adapted from Palloff, R. & Pratt, K. (2009). Assessing the Online Learner. San Francisco: Jossey-Bass

Table 2: Bloom's Taxonomy of Educational Objectives

Lower-Order Skill	Knowledge	Define, recall, recognize
	Comprehension	Describe, review, explain
Higher-Order Skill	Application	Demonstrate, use, illustrate
	Analysis	Differentiate, calculate, relate
	Synthesis	Reconstruct, modify, devise
	Evaluation	Assess, defend, interpret

Adapted from Bloom, B. S. & Krathwohl, D. R. (1956). Taxonomy of Educational Objectives: The Classification of Educational Goals, by a Committee of College and University Examiners. Handbook 1: Cognitive Domain. New York: Longmans.

IV. FINANCES AND FACILITIES

As noted earlier, expansion of distance programming represents one of the largest growth markets that higher education has experienced in recent years. Many institutions, public and private, have seen the need to introduce more options for students seeking flexibility and access as they advance their education. At the institutional level, online distance education is often viewed as an opportunity to increase enrollment, reach new audiences, and most importantly increase revenue. For some programs, distance delivery has made the difference between program continuation and termination. For others, the movement into online programming has been costly with little or no returns.

The purpose of this section is to highlight some of the major financial factors that one needs to consider when establishing distance educational programs. We realize that no one model fits all institutions, but believe that the ability of an institution to succeed in distance education is enhanced when careful financial planning occurs. This is particularly true when one is more aware of the costs and compromises that may need to occur as programs transition from campus-based to blended or entirely online instruction. The marginal costs of online distance programming are relatively low but startup costs, and those associated with maintaining high quality online programs, are significant. They require commitment of resources—financial and personnel—and include costs of faculty development, technology support, student services and administrative support. To these costs may be added space for proctoring centers and offices.

At this point in time, most campuses are selective in terms of the schools, programs, or disciplines in which online teaching is being introduced. This approach has the advantage of experimenting with and refining the full range of factors that influence successful outcomes

including faculty development, campus resources, personnel policies, and modes of organization. Graduate deans should consider identifying those colleges or departments that are ready to embrace distance online curricula and provide support and/or waivers that allow for robust experimentation.

Organizational Structure for Online Education

In order to develop a successful financial model for distance education, it is important that consideration be given to the institutional organizational structure that supports online program delivery. Traditional college or university organizational culture is designed around residence-based classroom instruction, student services, on-campus faculty, and subsidized operational expenses. For that reason online education in some institutions is classified as outreach, is administratively delegated to a specialized college or school within the organization, and may not fall under the traditional academic affairs graduate school model. Under these circumstances graduate deans and faculties may not be sufficiently included in planning, implementation and oversight of online programs at a level that is typically afforded to them in relation to campus-based programs.

As online learning emerges with greater frequency in graduate education, there is considerable variation in specific arrangements for organizational oversight of distance education. Notwithstanding these evolving circumstances, there are three general models most commonly found on U.S. campuses. The existence of a particular organizational structure is one of preference or circumstance within the institution with no single scheme proven as better or worse overall. Each will be considered briefly since financial models can be influenced by organizational structure.

Distance Education within the Academic Affairs Structure

Placement of distance instruction within the campus academic affairs environment may seem most logical for reasons of oversight. Assuming that institutional standards are applied similarly to online and classroom instruction, it is necessary to have active involvement in development of distance education from senior academic affairs offices (e.g., vice-

president, dean, or equivalent) and governance bodies (e.g., faculty senate). In this way, there is assurance that the faculty has responsibility for curriculum development and delivery while deans and academic officers provide oversight, guidance, and resources to ensure the success of the degree program.

In the typical academic affairs model faculty members have responsibilities that extend beyond instruction including scholarship and creative work, governance, and outreach or community engagement. Faculty contracts need to address these duties and to include expectations for distance education within overall determinations of workload. As noted earlier, it takes additional effort and training to become adept at online instruction. Therefore, in any instance where distance instruction is considered overload in an individual's expected effort, contractual agreements should reflect these additional responsibilities and possible compensation. Faculty members need to be aware that formalized overload does not absolve them from designated campus-based responsibilities, and they should be clear about the relative emphasis on teaching, research, and service that will be included in their annual performance evaluation.

Distance Education as Outreach

It might be the case that academic affairs units have limited involvement with respect to distance education development because of its innovative nature. Distance learning is still at a relatively early stage of academic program development, requiring the need for new technology support and additional faculty training, and addressing ambiguities regarding core faculty workload, tenure and promotion, as well as the possible need to separate campus-based tuition from other instructional revenue.

Many campuses have found the best organizational location for distance instruction to be divisions responsible for outreach or continuing education. These are the units that have experience addressing the needs of non-resident students who have been served historically by correspondence education or face-to-face instruction at off-campus meeting sites.

In such instances, outreach program management is the responsibility of a division, college, or school that may function autonomously or semi-autonomously with respect to academic affairs

operations, finance, and delivery of instruction, except at the level of the registrar function whose responsibility lies with ensuring proper enrollment and transcript integrity. In some instances, compensation for distance education instructional staff might be arranged independently of department, dean, or academic affairs, which raises potential workload problems as noted earlier.

In many instances, the outreach administrator has more flexible resources to support information technology than the academic affairs division. Therefore the technology demands of distance education are somewhat easier to address.

However, the potential for a significant disconnect between distance programs and the graduate school dean is higher in this model and requires focused effort of the graduate school to stay abreast of outreach office operations. This issue is especially important in relation to external partnerships and prospective students both of whom will rightly assume that the graduate school is supportive of distance offerings.

The Hybrid Structure for Distance Education

As distance education becomes more common in higher education, organizational structure is more likely to resemble a hybrid where academic affairs and outreach coordinate responsibilities for program development, faculty training, effort allocation, and revenue sharing. Under a hybrid model, one is more likely to find campus-based and distance programs marketed as "same faculty, same degree, and same university." While the hybrid model might maximize the strengths of the campus it also presents the most challenges with respect to management of resources. As with any organization, many of these challenges center on the revenue from online programs and how that revenue is shared among administrative divisions. In addition, this structure also requires a firm commitment from university administration to collaboration across campus divisions.

Graduate deans working in this model should endeavor to clarify lines of authority regarding program development, oversight, and revenue, as well as a firm commitment of support from the senior academic vice-president.

Consortium Structures

Some campuses are approaching distance graduate degrees through consortia, which offer a way to share experience, costs, and revenue. This strategy has the advantage of sharing faculty and other resources to reach student markets that might not be large or mobile enough to populate a residential program. For example, the Great Plains Interactive Distance Education Alliance (GPIDEA) offers graduate courses, certificates, and master's degrees through a multi-campus consortium consisting currently of eleven public universities including Colorado State University, Iowa State University, Kansas State University, Michigan State University, University of Missouri, Montana State University, University of Nebraska, North Dakota State University, Oklahoma State University, South Dakota State University, and Texas Tech University. This arrangement has the advantage of sharing the costs for program marketing and staffing, as well as serving student populations that might not have access to residential programs.

Defining the Costs Associated with Graduate Distance Education

The costs associated with delivery of graduate distance instruction are influenced by the organizational structure of the institution and its resultant ability to share resources across divisions. In a broad sense, costs can be divided into categories that are easily measured as well as those that are difficult to gauge but nonetheless essential to the functioning of the institution. The business plan for distance programs must account for all expenses, direct as well as indirect. In assessing the costs of distance delivery of an academic program, it is necessary to recognize several basic points:

- Access to the Internet is not free.
- Institutions are not created equal when it comes to capacity to support quality distance delivery.
- Approaches to pedagogy can vary considerably between on-campus and online courses.

- Distance program students expect support when they need it, not just during normal business hours.
- Students choosing a particular college or university for distance learning expect to receive quality consistent with institutional brand and reputation.

One of the biggest challenges facing academic institutions centers on competitive pricing of distance programs at launch and then managing growth in ways that do not compromise program integrity or place additional burdens on the campus. The business plan must be built on actual costs and it must have a scalable financial model. To establish a business model for distance education, the graduate dean or other senior leader needs to understand how resource and revenues are distributed in the campus-based environment. For example, the dean needs to examine how revenue for distance programs will be shared among the various units on the campus that have responsibility for supporting online program delivery. Since the goal of any distance program is to expand and/or complement campus offerings, funding of the program should not be designed in a way that uses resources from existing campus programs without proper compensation.

A detailed analysis of the cost of the distance program should take into account startup requirements as well as long term costs that will be necessary to grow and sustain the endeavor. In essence, the non-profit institution needs to develop a mindset somewhat akin to the proprietary organization. While there is no set formula for developing a business model, there are certain areas that need to be part of the discussion. At a minimum these include academic program capacity, infrastructure support, pricing (tuition and fees), and revenue distribution.

Academic Program Capacity

Perhaps the single most important determinant of whether to launch a distance graduate program is academic capacity. Capacity is defined as the enrollment that can be supported by faculty institutional resources. While one can nearly always build a case for starting a new program or even expanding to a new delivery mode, the conversation becomes more

complicated when trying to set limits on program size. Unlike most campus-based graduate programs where enrollment capacity is limited by physical space, availability of tuition waivers and assistantships, and fixed faculty numbers, a distance program has no physical space constraints and has the potential to grow through the use of part-time or adjunct faculty who could live anywhere.

In order to establish an initial capacity target, it is important for the program to define faculty workload as well as how faculty members might distribute workload. Once established, the institution can set clear expectations for faculty effort and avoid the potential for misunderstandings. One approach is to apportion faculty effort into workload units based on specific activities. To define a workload unit for program faculty, one must first establish the amount of effort that typically goes into a specific activity. For most faculty members, a campus-based workload unit is most easily based on teaching since instruction is generally the common factor across all programs and has the traditional Carnegie definition as a metric.

Infrastructure Support for Students and Faculty

Other direct costs associated with distance instruction must also be accounted for to arrive at a reasonable estimate of total program cost. These include technology, technical and educational support for students and faculty, and student services. During the planning process, it is important to define the exact modes of delivery for the program as well as to determine if the available campus hardware and software can support the preferred mode of distance delivery. It is also important to work closely with the campus information technology and instructional support units to ensure that resources are available to ensure quality. Key factors include Internet bandwidth availability, server space, line charges, technical and faculty training support, learning platform and related software costs, and phone charges. These costs, which are often not carefully specified, will nonetheless need to be paid by the institution.

It is necessary to define the minimal technology requirements, both hardware and software, for students enrolling in the program. Detailed information will need to be provided to students regarding computer hardware and software required for attending class online, as well as the

support services they can expect. Such advanced planning will allow the institution to establish solid ground rules necessary for student success and to know exactly what resources are needed on campus to support the recommended student hardware and software configuration. By defining these student and campus requirements, the program can minimize frustration that may result from students who need ongoing support for reliable access to the distance program.

Many distance programs offer pre-course checks in which students are taken through a series of equipment and software tests prior to beginning instruction. It is important to tailor the pre-course assessment to mimic what the student will be expected to do to fully function in the course since online access alone may be insufficient. It may become necessary to deny access to a prospective student on the basis of the inability to establish reliable Internet connectivity and ongoing use of instructional materials.

Another cost often overlooked in planning online distance programming is the cost associated with providing technical support. Two types of technical support are needed to ensure seamless deployment of a distance program. The first is support for the faculty members delivering instruction. This issue was discussed above in Chapter II. In relation to faculty training and development, creation of a distance course involves a considerable amount of faculty effort, and in many instances the online presentation may be substantially different from the face-to-face classroom. To this end, the institution needs to consider course development grants for faculty, instructional design staff to assist faculty with course development, or both. The cost of this curriculum and faculty development needs to be factored into total program costs.

In addition, as with any classroom technology, it is important to keep in mind that instructional faculty cannot teach when the technology is not running, and also to recognize that most faculty do not have the expertise to troubleshoot technological problems that arise in their online classrooms. To this end, it is prudent to have technical support available during all scheduled university instructional periods.

A second form of technical support for students can be crucial to recruitment, retention, and graduation rates, and is increasingly expected. Telephone and computer chat lines are recommended for students seeking support as they pursue their studies. It is important to remember

that students may be in multiple time zones with asynchronous use of instructional platforms. They expect support when they need it, not when the institution makes it available. From a customer service standpoint, the campus should log service support incidents and document system failures. This information can be crucial to the graduate dean in resolving disputes over assignments and grades, as well as to assess institutional effectiveness.

For graduate education, it is important to provide students with online access to the campus library and other learning resources. While this need seems to be obvious, it is often overlooked and may sometimes not be apparent since the more highly motivated students may find alternatives through local libraries or work-related resources (e.g., employer resources). Nonetheless financial planning needs to involve discussions with the campus library to ensure that electronic resources are sufficiently robust to support the number of students enrolled. It may be necessary to provide additional funding to the library from program revenue if threshold subscription rates to databases are exceeded by distance program enrollments. If this situation does arise, this cost should also be included in the financial plan.

One additional consideration is that of access to laboratories, workshops, and other facilities appropriate to the course or program. As with library facilities, provision needs to be made for students (particularly in blended courses) to have access to these resources and to be able to use them effectively, and to ensure that the resources are adequate to support the programs.

Another form of cost for students in distance programs comes from federal legislation and regulation. Section 495(1)(A) of the Higher Education Opportunity Act amended the HEA to require accrediting agencies to ensure that "…the student who registers in a distance education or correspondence education program is the same student who participates in and completes the program and receives the academic credit." The Office of the Inspector General has identified management challenges for FY-12 and states that "The Department of Education needs to develop requirements specific to distance education and to increase its oversight of schools providing programs through distance education." Verification of student identity is a mandate that cannot be ignored. Costs associated with

meeting this mandate should be included in the financial plan.

In increasingly competitive markets, distance students are finding more options available to them than ever before. Many students choose a program by availability, yet many also choose a program by name recognition of the institution or by alumni loyalty. No longer do students find that they need to relocate to their alma mater or the home campus of an established public or private institution; instead they can get the same degree at a distance. While the opportunities for students have never been greater, the demands being placed on colleges and universities for student services have also increased. Distance program students expect to earn the same degree as the resident student and have access to the same services as are provided to the on-campus student. Inasmuch as the program is always available online, student services should be available online.

While accommodating these expectations can be expensive, it should be viewed as a necessity. Students will always have questions and need for answers from the business office, financial aid and career counselors, and the registrar, to name several. Planning needs to go into establishing helplines, virtual office hours for staff, as well as robust online forms with data tracking ability. Expenses associated with supporting student service staffing should also be considered when developing the business plan. This expense may be incremental as it does not necessarily increase in a stepwise fashion with distance enrollment expansion.

Pricing a Distance Education Program

Pricing distance programs typically involves a mixture of tuition and fees with the distribution of the two varying considerably between institutions. One may find low tuition rates and high fees at some institutions with the opposite ratio at others. Regardless of the tuition/fee schedule, the program needs to take into account the overall cost of the program from the business plan that includes a realistic assessment of program capacity. With this information, a program can then begin to define a tuition rate. Consider the following example:

A master's program has an estimated total cost of delivery of $400,000 per year and an estimated enrollment capacity of 60 students.

The program requires 32 credits for completion and the estimated time to completion for the target audience of working professionals is 36 months. Total institutional cost over three years is $1,200,000. At maximum capacity the total program cost per student is estimated as $20,000, which would equate to $625/credit hour as the minimal tuition rate to break even. At that point, the institution needs to use data from an elasticity study to determine how much higher tuition could be set in order to increase net revenue. At a total program cost of $30,000, tuition would rise to approximately $940/credit hour. This circumstance would achieve breakeven revenue at 40 students. For each student over 40 the program would net $30,000 over three years or $10,000 per year. Financial planning also needs to address the possibility of falling enrollment. In the foregoing example, falling below 40 enrollments costs the institution $10,000/student/year. It is important to base tuition on realistic enrollment goals with the breakeven point occurring well within a target range. Failure to do so may jeopardize the ability of the program to be sustainable.

Distribution of Distance Program Revenue

Perhaps the most difficult issue to resolve on a campus is how to distribute the revenue brought in by distance education programs. While there is no set formula, the business plan and cost estimates provide a general guide for where expense reimbursement is warranted. Assessment of incremental cost due to the addition of distance program development and delivery should be the guiding principle.

It is important to consider, however, that the likelihood of long term success and opportunity for growth will be realized if a significant portion of the revenue is returned to the academic program with the remaining amount used for administrative overhead. The amount provided to the program can be used to reinvest in the program in a variety of ways including addition of instructional staff, teaching assistant stipends, and faculty training that will allow program capacity and quality to increase.

The graduate dean should be prepared to articulate the needs of the graduate school administrative office for a portion of the administrative overhead that will offset the cost of supporting additional students. It is important for the graduate dean to realize that a successful program will

place more pressures on graduate school staff and may require additional services as well as extended office hours.

It is important, too, that the financial plan includes the cost of maintaining the support systems needed for the programs. These costs include those associated with upgrading the systems being used and for ensuring that the technology delivery is current.

V. ACCREDITATION AND REGULATORY ISSUES IN DISTANCE EDUCATION

Given the reach of online programs and the fact that students no longer need to be in residence, the graduate school dean is often faced with the need to address concerns of various stakeholders with specific interests in distance education. These include but are not limited to accrediting bodies, federal agencies, and individual state requirements. The purpose of this section is to review some of the current issues facing U.S. academic institutions that are providing distance education programs. The reader should be aware that this information is rapidly evolving as new policies and guidelines are continually being developed. For this reason, the authors encourage the reader to check with accreditation groups and federal and state agencies for the most current information.

Regional Accreditation

The six regional accrediting agencies in the United States all provide some degree of guidance regarding distance or online education and include these activities as part of regular comprehensive evaluations. The definition of distance programs by the regional accrediting agencies follows the U.S. Department of Education which defines distance education as a "formal learning activity where students and instructors are separated by geography, time, or both for the majority of the instructional period" (http://www.nrsweb.org/docs/NRSDEguide.pdf).

In reviewing resources provided by the regional accrediting agencies, the following patterns emerge:

- There is a base expectation that distance programs are consistent with the institutional mission.
- Planning for distance programming must be integrated into the institution's normal planning procedures.
- The institution must provide sufficient resources to support distance programs.
- The academic standards of distance courses and programs must be the same as those offered on campus.
- Distance program design and oversight is under review by the academic affairs division. Campus core faculty should be integrally involved in development and implementation of distance curricula to ensure that:
    - Distance students have adequate access to requisite learning resources including library, information technology, laboratories and equipment;
    - Distance students are afforded adequate access to student services, including for example financial aid, academic advising, registration offices, and career counseling;
    - Distance programs are evaluated for educational effectiveness by evidence that demonstrates outcomes comparable to campus-based programs; and
    - The institution maintains direct and sole responsibility for the distance programs that it offers, including those offered through contractual and consortium relationships.

One can easily see from the list provided that the expectation of accrediting agencies is that distance programs should have quality equivalent to campus-based programs, and that students are afforded access to institutional resources that are similar to resident students. As a result, it is important for graduate deans to lead discussions that focus on student support in addition to the standard discussions regarding curriculum and academic rigor. Resources for student support services are central to these discussions.

The Regulatory Environment for Distance Education

Federal and state regulations that impact distance education are in a rapid state of evolution. As of this writing, the U.S. Department of Education has issued stringent regulations on institutional eligibility to operate distance education programs in any state. Graduate deans should become familiar with sections of the Higher Education Act of 1965 pertaining to these emerging regulatory requirements prior to initiating distance education programs that operate within or outside their home states.

State Authorization for the Institution's Home State

Achieving state authorization has created considerable concern among institutions of higher education and has significant implications for institutions delivering programs in their home state as well as across state lines. The regulation requires that institutions be "established by name as an educational institution by a State through a charter, statute, constitutional provision, or other action. . ." (http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr;sid=422e8e1e4276e7662af45f2cd8f09d1e;rgn=div2;view=text;node=20101029%3A1.25;idno=34;cc=ecfr;start=1;size=25). In many instances, institutions founded before statehood were not legally authorized. This situation alone has resulted in the need for legislation in numerous states to legally authorize institutions that have their primary location in their state. This first level of authorization is required of all institutions whether they offer distance education or not.

State Authorization for Distance Students in Other States

For all institutions wishing to deliver distance education programs to students in multiple states, the institution is expected to follow the laws of each state in which it serves students.[1] Institutions need to determine exactly what each state requires for authorization. Some states require very

1 The authors thank Russell Poulin, Deputy Director, Research and Analysis with WICHE Cooperative for Educational Technologies, for his assistance with recent developments in state authorization. Mr. Poulin also leads the State Authorization Network, which aids institutions on their path to compliance, and has been extensively involved in the efforts to create the State Authorization Reciprocity Agreement.

little while others have lengthy application processes and requirements that involve payment of significant annual fees.

For information regarding individual state requirements, the reader is referred to the following sources:

- WCET October 29, 2012 update on Federal regulations on State Approval of Out-of-State Providers. http://www.wcet.wiche.edu/advance/state-approval

- State Higher Education Executive Officers' surveys of state authorization regulations. http://www.sheeo.org/node/434

- State Authorization Requirements for Public Colleges and Universities. State University System of Florida and the Florida College System. http://www.flbog.org/_doc/State-Authorization-Requirements_2011_06.pdf

These regulations also place additional responsibility on distance programs by requiring institutions to track changes in students as they relate to state requirements and student location. In short, institutions must have a mechanism in place to track changes in state requirements for the distance education activities that their institution is conducting in each state. Furthermore, institutions must also track mobility of distance students and be responsive to the regulations when a student moves from one state to another.

While the federal regulation that tied compliance to eligibility for federal financial aid has been struck down, each state still expects institutions to comply by their state laws. These state regulations preceded the federal regulation. Since the federal "state authorization" regulation was vacated on a technicality, it would not be surprising to see it return.

State Student Complaint Processes

Meeting the definition of state authorization has also required establishing processes whereby states can act on complaints. This requirement was not vacated by the federal courts. For states that did not have third-

party complaint processes, it has resulted in the need for states to pass legislation to create a process for collecting and acting upon complaints against institutions of higher education operating within their boundaries.

While institutions have their own complaint processes, this federal requirement seeks to create an avenue for students to have grievances considered that were not addressed by the institution. Information on where to complain must be provided to all current and prospective students both on-campus and at a distance. For distance students, institutions must provide them with contact information for filing complaints within the state in which they reside, not the state in which the institution is located. To this end, the practices and policies of institutions providing distance programs are subject to review by multiple states. As of this writing, the regulations remain in place and educational institutions offering distance programs are engaged in various stages of compliance.

Regulations Pertaining to International Students

Graduate education in the United States involves significant numbers of students who are not U.S. residents. Graduate deans must remain cognizant of the changing state of regulations concerning international students. These regulations could address matters of homeland security and export controls.

International students working or studying in the U.S. may be able to access distance education courses and degree programs offered by U.S. institutions, but may find certain limitations in relation to completing a degree. It is advisable for graduate schools to identify and verify all international students to avoid possible compliance violations with Homeland Security. For example, international students studying through U.S. institutions are limited in the number of courses they can access online. In addition, international students living abroad or in the U.S. may be restricted from pursuing some subjects through study online, especially in certain areas that may be viewed as important to national security. For these and other reasons, the institution must be fully aware of student background and location, and in certain instances must guard against the possibility of providing educational programming that would be in violation of federal policies designed to protect the nation.

Current guidance on export controls would suggest that distance education is immune to regulations as long as the materials presented are in the public domain and general in nature. While many graduate courses comply with this definition, it is important to remember that research required for a graduate degree involving technology or discovery might not be included in the generally exempt category. As such, it is important for institutional review of distance programs targeting international student populations to include information about student access to sensitive technology or information that might not be in the public domain. In such instances, adjustments to the curriculum may be necessary or disclosure of the potential export be made.

CONCLUSION

We have summarized the five main subjects of this monograph in Table 3, which provides a rubric for an initial assessment of the viability of an institution's programs for distance education through online instruction. This framework is offered as a guide for working with the various campus and collegial constituencies that play a role in shaping distance learning for graduate education.

The state of distance online programs is changing rapidly and will be part of many related forces for change in higher learning and graduate education in the coming years. Notwithstanding a continuous climate of technological, economic, global, and regulatory change, this overview provides guideposts for the graduate dean that should prove useful for some time to come.

Graduate education in the United States occupies a place of historical prestige and global acclaim for its leadership in research and scholar preparation. For many colleges and universities, to retain this position will require new institutional models that address the growing national and international demand for access, managing costs while maintaining quality, and for utilizing technology in support of innovative teaching strategies and methods for a professoriate of the future. Incorporating distance learning into graduate degree programs offers a path towards these broader goals for institutional vitality and U.S. leadership in graduate education.

Table 3: Rubric for Assessing the Quality of Graduate Education Distance Programs

Criterion	Exemplary Standard	My Institution
Development and Approval of Programs	The role of the graduate school is clear vis-à-vis academic and support units, including potential third-party vendors.	
Faculty Professional Development	There are criteria for selecting and evaluating faculty for online and distance programs. There are faculty mentoring, training and compensation programs to ensure quality online instruction.	
Supporting Student Learning in the Online Environment	Programs are in place to orient students to online learning. Assessment rubrics and processes are in place to evaluate online learning outcomes and programs comparable to those for classroom programs	
Financial Planning and Organizational Oversight	There is shared faculty/administrative governance for oversight of academic quality. The institution has a business model that assures capacity for technical, student, staff and faculty requirements (e.g., hardware, software, learning platforms, faculty training, helpdesk, student services).	
Regulatory and Accreditation	Online and distance programs are aligned with institutional strategy and commitment to academic quality and support. Systems are in place to demonstrate quality and compliance in relation to federal, regional, state, international and professional field standards.	

APPENDIX A.

REFERENCES AND RESOURCES FOR DISTANCE EDUCATION AND ONLINE LEARNING

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Guidelines for the Review and Evaluation of Distance Education from the Regional Accrediting Commissions. wcetinfo@wiche.edu

Wildavsky, B., Kelly, A. P., & Carey, K. (2011). Reinventing Higher Education: The Promise of Innovation. Cambridge, MA: Harvard Education Press.

2. Conferences

Jossey Bass Online Teaching and Learning Conference
This annual online three day event on online teaching and learning and includes interactive online sessions, discussions, hands-on learning, strategy swapping, and networking.

Sloan-C Conference on Asynchronous Learning Networks
This annual conference includes an online component brings together practitioners and researchers, administrators, instructional designers, faculty developers, library and support people, instructors, and students.

Wisconsin Distance Teaching and Learning Conference
This annual conference includes a wide spectrum of professionals in distance education from all regions of the United States and other countries.

3. Partnerships and Consortia

ADEC Distance Learning Consortium is a international consortium of state and land grant institutions providing economic distance education programs.

Great Plains Interactive Distance Education Alliance (GPIDEA)
Founded in 1994 with resources of 11 major research universities to sponsor graduate coursework and programs in high-demand professional fields.

Instructional Technology Council

Focuses on best practices in learning technology primarily two and four year institutions but with resources that are relevant to graduate education.

Western Governor's University
An online university driven by a mission to expand access to higher education through online degree programs in fields of health, business, education, information technology, serving almost 29,000 students from all 50 states.

Western Cooperative for Educational Telecommunications (WCET)
WCET accelerates the adoption of effective practices and policies, advancing excellence in technology-enhanced teaching and learning in higher education.

4. Professional Associations and Organizations

Commission on Accreditation of Healthcare Management Education is an interdisciplinary group of educational, professional, clinical, and commercial organizations is devoted to accountability and quality improvement of education for healthcare management and administration professionals.

The Distance and Education Training Council (DETC) is a clearinghouse for the distance study/correspondence field.

Federal Government Distributed Learning Association (FGDLA) focuses on education and training within the federal government.

Sloan Consortium (Sloan-C) is an institutional and professional leadership organization dedicated to integrating online education into mainstream higher education.

State Distance Learning Associations – All states have distance education associations.

United States Distance Learning Association (USDLA) distance learning in higher education, continuing education, corporate training, and military and government training.

https://www.qualitymatters.org/
Quality Matters is an international inter-institutional organization that promotes peer-based tools to assure quality in the design, delivery and assessment of learning outcomes for online education.

5. Websites and Related Resources

www.albion.com/netiquette
"Netiquette" is network etiquette about the dos and don'ts of online communication.

www.secondlife.com
Second Life is one example of an online tool in which users interact through virtual identities.

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