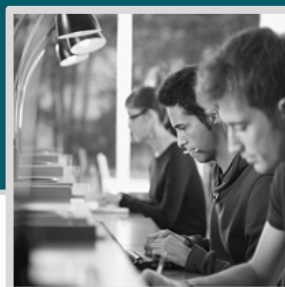
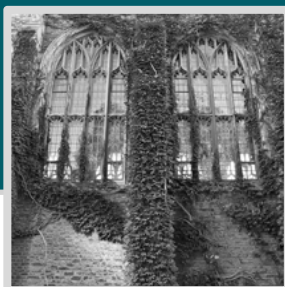


Developing and Funding Distance Learning Programs at Public Institutions

March 2014



In the following report, Hanover Research provides an overview of online course development and implementation practices at public postsecondary institutions. The report considers trends in program development, implementation, and maintenance, as well as trends in funding strategies for online programming. The report also considers the development of massive open online courses (MOOCs) at higher education institutions.

TABLE OF CONTENTS

Executive Summary and Key Findings	3
INTRODUCTION	3
KEY FINDINGS.....	4
Section I: Developing and Funding a Traditional Distance Learning Program.....	6
INTRODUCTION	6
THE DEVELOPMENT PROCESS.....	6
Developing an Online Program.....	6
Assessing and Maintaining Online Program Quality	9
THE DISTANCE LEARNING FUNDING PROCESS.....	10
Distance Learning Costs.....	11
Distance Learning Funding Practices	14
Section II: Developing and Funding a Massive Open Online Course.....	17
INTRODUCTION AND BACKGROUND	17
The Rise of MOOCs	18
Major MOOC Providers.....	18
DEVELOPING AND IMPLEMENTING A MOOC	20
MOOC Development Guidelines.....	21

EXECUTIVE SUMMARY AND KEY FINDINGS

INTRODUCTION

Since the early 2000s, the number of students enrolling in online coursework has grown rapidly, and in 2012, an estimated 7.1 million students enrolled in at least one online class, up from 6.7 million in 2011 and 6.1 million in 2010.² With this growth in student interest in online learning – at both for- and non-profit postsecondary institutions – faculty and staff have had to confront a variety of issues related to the development, implementation, and maintenance of online learning. They have had to deal with the costs of online coursework, determine the most effective online teaching pedagogies, and determine how to create and organize courses within online learning management systems.³ With the expansion of massive open online courses (MOOCs) over the last few years, institutions have faced new issues, such as ensuring these programs are efficiently run and receive enough funding.⁴

In this report, Hanover Research (Hanover) considers online course development and evaluation strategies, with a focus on public postsecondary institutions. Hanover provides information on development and implementation practices and further considers how institutions are funding online programming. Alongside analyses of programming practices for traditional, for-credit online programming, Hanover also considers how institutions have developed massive open online courses and how these MOOCs have been funded and maintained once developed.

Online Enrollment at Postsecondary Institutions, 2008-2012

YEAR	STUDENTS TAKING AT LEAST ONE ONLINE COURSE	AS % OF TOTAL POSTSECONDARY ENROLLMENT
2008	4,606,353	24.1%
2009	5,579,022	27.3%
2010	6,142,280	29.2%
2011	6,714,792	32.0%
2012	7,126,549	33.5%

Source: Sloan Consortium¹

¹ Allen, I. and Seaman, J. *Grade Change: Tracking Online Education in the United States*. Sloan Consortium and Babson Survey Research Group, January 2014. p. 33.

<http://www.onlinelearningsurvey.com/reports/gradechange.pdf>

² Ibid.

³ For one discussion of these issues, see Vignare, K., Geith, C., and Schiffman, S. "Business Models for Online Learning: An Exploratory Survey." *Journal of Asynchronous Learning Networks*, May 2006. pp. 53-67. <http://sloanconsortium.org/jaln/v10n2/business-models-online-learning-exploratory-survey>

⁴ The Education section of *The New York Times* even designated 2012 as the "Year of the MOOC." See Pappano, L. "The Year of the MOOC." *The New York Times*, November 2, 2012. http://www.nytimes.com/2012/11/04/education/edlife/massive-open-online-courses-are-multiplying-at-a-rapid-pace.html?pagewanted=all&_r=0

The report is presented in two sections:

- **Section I** provides an overview of development and funding practices for a traditional distance learning program.
- **Section II** outlines the development and quality assurance practices for a massive open online course.

KEY FINDINGS

- **Distance education programs at public institutions appear to typically be funded through online student tuition and technology fees assessed to distance learners.** Institutions often implement tuition and additional fees to generate a positive return on students enrolling in distance learning courses. At public institutions, online learners appear to typically be charged at the same level as in-state, on-campus students, though online learners are not often required to pay campus fees for health care or recreational services.
- **An additional distance learning fee appears to be the most common fee assessed to online learners to supplement tuition revenue.** Nearly all institutions, both public and private, appear to assess such fees, which can range considerably depending on the number of credits taken per semester as well as the requirements of a specific course. While some institutions treat this as a technology fee and assess it to both on-campus and online students, many refer to it as a distance learning fee assessed only to online learners.
- **On the whole, processes for the development and approval of distance learning offerings appear similar to those for on-campus programs and courses.** At a base level, institutions simply require a faculty member to develop a proposal for an online course or program that is then submitted to a department chair and dean. Following this process, an institution's course/program approval board – often a faculty senate or a board of trustees – reviews the offering before making a final decision on whether or not it can be offered.
- **Institutions increasingly maintain offices of distance learning or centers for learning and technology that are involved in the development and approval process for online courses.** At Florida State University, for example, the Office of Distance Learning (ODL) plays an important role throughout the course development and approval process. ODL staff members help craft program proposals and once a program is approved provide support in development, from help in managing a program's budget to navigating complicated online learning management systems.
- **The quality assurance/evaluation process for distance learning offerings also remains similar to those for on-campus programs.** End-of-term student evaluations continue to play a major role in assessment, but institutions have also experimented with faculty peer evaluations and other forms of

assessment to ensure that an online program delivers high quality content to distance learners.

- **The development process for these MOOCs in particular requires a significant time commitment.** A university's faculty and staff, typically working in conjunction with a third-party MOOC provider, must spend considerable time in the program development process prior to launching a MOOC. At the University of Minnesota, for example, faculty spent hundreds of hours in the spring of 2013 developing MOOCs to be launched that summer. Furthermore, the current system requires faculty to volunteer for this job, and a university receive little to no direct monetary payoff.
- **Existing guidelines for the development of MOOCs suggest that sound pedagogical approaches and strong early planning are essential for success.** In general, the guidelines available for MOOC development suggest that programs should be relatively short, and that learning resources for a program be continuously available online for ease of student access. Northwestern University's guidelines further provide an overview of typical evaluation measures that can be used to assess the strength of a MOOC and provide feedback on areas of potential change, noting that a MOOC should be considered successful if:
 - It recruits and retains a large number of students;
 - Those students who complete the course perform well on the summative assessments;
 - It experiences few technology issues;
 - Students provide favorable responses on end-of-course surveys; and
 - The faculty member teaching the course feels that it is an effective teaching and learning experience.

SECTION I: DEVELOPING AND FUNDING A TRADITIONAL DISTANCE LEARNING PROGRAM

INTRODUCTION

As online programming has grown in popularity since the early 2000s,⁵ postsecondary institutions have begun to standardize procedures for developing and funding these offerings.⁶ In this section, Hanover Research outlines both the development and funding process for distance learning programming. While information is drawn from a wide variety of sources, the section focuses on providing an outline of practices at larger, state-funded institutions.

THE DEVELOPMENT PROCESS

Research suggests that at most public institutions (both large and small) the development process for online programs is similar to that for traditional, on-campus offerings. In general, the major difference is that the process for an online program is partially guided or overseen by an office of distance learning or center for learning and technology. These types of support offices, often providing guidance in development and implementation of both on-campus and distance learning technologies and programs, have become fairly common at non-profit institutions. While many have been only recently developed, such as the Resource Center for Online Education at the University of California, Berkeley,⁷ they have become important areas of support for learning technologies and online program development resources.

DEVELOPING AN ONLINE PROGRAM

For most non-profit institutions, the process for developing an online degree program appears to typically be, as noted, similar to the process for developing an on-campus program. As such, relatively few distance learning-specific development guidelines are available. In general, individual faculty members are responsible for initial program proposal and development. During the program development process:

⁵ Allen and Seaman, Op. cit., p. 33.

⁶ For a discussion of the increasing presence of non-profit institutions within the online sphere, see Ross, C. "Are the Sleeping Giants Awake? Non-Profit Universities Enter Online Education at Scale." White Paper, The Parthenon Group, October 2012. pp. 1-7.
http://parthenon.com/GetFile.aspx?u=%2FLists%2FPressReleases%2FAttachments%2F126%2FParthenonPerspectives_AretheSleepingGiantsAwake_October2012_2.pdf

⁷ This is an extension – developed in 2012 – of the "UC Berkeley Extension's Online Learning department." For more information, see "About Us." Berkeley Resource Center for Online Education, University of California, Berkeley. <http://online.berkeley.edu/about-us>

Most higher education institutions take a decentralized and bundled approach, meaning that faculty departments, committees, and/or individual faculty members develop the curriculum – product innovation – and deliver the instruction – customer relationship management – through their own processes.⁸

While faculty members or departmental leaders may drive the process, a variety of other administrative bodies play a role in program approval and development.

Initial Program Development Steps

Initial program development is typically driven by a faculty member who subsequently meets with a dean or department chair to determine the feasibility of the offering. New program proposals at some institutions must also be vetted by an institution’s office of distance learning (or similar body) to ensure that the program’s structure is feasible.⁹ At Florida State University (FSU), for example, a faculty member simply develops a written proposal in consultation with the institution’s Office of Distance Learning (ODL). This proposal provides an overview of how the program will be developed, how the program will comply with university guidelines, and how the program will be sustained over multiple years and benefit the university. The proposal must then be approved by the “Dean, Chair, and/or Faculty offering the program” prior to advancing through the approval process.¹⁰

Other institutions have similar requirements. At Fitchburg State University, in Massachusetts, faculty must also complete a form outlining program expectations and the overall program feasibility prior to moving further into program development and approval efforts.¹¹ At the University of the District of Columbia, those interested in developing an online course must first complete training in online course delivery. They then subsequently complete an “Online Course Proposal Form” which, much like FSU’s, requires information on the justification for the program and the proposed course design. This form is then submitted to a department chair, and must be

⁸ Sheets, R., Crawford, S., and Soares, L. “Rethinking Higher Education Business Models.” Center for American Progress, March 28, 2012. pp. 8-9. http://www.americanprogress.org/wp-content/uploads/issues/2012/03/pdf/higher_ed_business_models.pdf

⁹ For example, at Prairie View A&M University those interested in developing an online course are asked to initially consult with the Office of Distance Learning and subsequently provided with ODL support throughout the process. See “Guidelines for Developing an Online Course.” Prairie View A&M University. http://www.elac.pvamu.edu/Include/College%20of%20Education/TEA/Online_Course_Module/PVAMU_Course_Development_Guidelines.pdf

¹⁰ [1] “Guidelines for Proposing New Online Programs or Courses.” Office of Distance Learning, Florida State University. http://distance.fsu.edu/docs/admin_docs/ODLProposingNewOnlineProgram.pdf
[2] “Developing and Managing an Online Program.” Office of Distance Learning, Florida State University. <http://distance.fsu.edu/instructors/developing-and-managing-online-program>

¹¹ “Distance Learning Course Development Guidelines.” Fitchburg State University. <http://www.fitchburgstate.edu/academics/online-learning/distance-education-faculty-resources/distance-education-development-guidelines/>

approved by the chair and the academic dean.¹² Following this step, the subsequent process to approval is the same as for traditional, on-campus course proposals at the institution.¹³ This process is discussed in more depth below.

Program Approval Process

Following initial approval of program structure and design, the next steps of the process vary slightly by institution. In general, these steps require the involvement of a distance learning or learning technologies center or department, and subsequent program approval by various levels of hierarchy within the institution (e.g., dean, faculty senate, board of trustees). At Prairie View A&M University, the Office of Distance Learning remains in close collaboration with the faculty member developing a program throughout the process. During the approval and course review, it provides support in assembling course materials and developing online content, and even provides online course management training. Following this, it supports faculty throughout the approval process, as the proposed program or course is reviewed by other faculty, the department head, and the dean, before being reviewed by the institution's Distance Learning Council and the Office for Academic and Student Affairs.¹⁴

Florida State University provides another example of the online program approval process. At the institution, a "Letter of Agreement" – jointly signed by the "Department Chair, Dean, the Director of ODL, and the Vice President for Planning and Programs" – is developed for the program, which outlines a three-year program budget (estimating enrollment and program costs) and provides a timeline on course rollout. Following this, a curricular request is submitted to the Faculty Senate for approval and the program continues along the traditional degree program approval process, with the Dean of the Faculties obtaining "administrative sign-off" by various institutional stakeholders and a review by the Board of Trustees.¹⁵ If approved, funds can then be requested for the program and a distance learning fee for the offering is calculated. Finally, with aid from the Office of Distance Learning, the program is implemented, taking into consideration budget available and the various pedagogical issues related to distance learning and online learning management systems.¹⁶ To better visualize this process at FSU, Figure 1.1 provides an overview from initial program proposal to approval.

¹² "Online Course Proposal Form." University of the District of Columbia, January 2010.

http://www.udc.edu/docs/senate/other/Online_Course_Proposal_Guide_Policy.pdf

¹³ "Faculty Senate." University of the District of Columbia. <https://www.udc.edu/senate/welcome>

¹⁴ "Guidelines for Developing an Online Course," Prairie View A&M University, Op. cit.

¹⁵ "Florida State University Degree Program Approval Process." Office of Faculty Development and Advancement, Florida State University. This can be accessed at: <http://fda.fsu.edu/Academics>

¹⁶ "Guidelines for Proposing New Online Programs or Courses," Op. cit.

Figure 1.1: Online Program Development and Approval Process, Florida State University

PROGRAM STEP	DESCRIPTION
Step 1: Program Proposal	The proposal, developed with ODL support, details the educational need for the online offering and indicates support of the Dean, Chair, and/or Faculty offering the program.
Step 2: Letter of Agreement	The LOA establishes development and support roles between the college offering the program and ODL.
Step 3: Approvals	Include an approval from the institution's Faculty Senate for a Curricular Request to ensure the program is properly registered, and other approvals based on degree type.
Step 4: Auxiliary Budget Application Request	Determine the costs of program, as well as the distance learning fees that are required (collected by the ODL), and have those approved through the ODL.
Step 5: Program Management and Implementation	Office of Distance Learning aids program staff as they implement offering, providing support for budget, program design, and other issues.

Source: Office of Distance Learning, Florida State University¹⁷

ASSESSING AND MAINTAINING ONLINE PROGRAM QUALITY

Alongside guidelines for program development, Hanover has also reviewed the evaluation procedures that institutions employ for maintaining an online program's quality. This has become an especially important issue with the expansion of online learning in recent years, as over 25 percent of educators still view online education as at least somewhat inferior to face-to-face methods (Figure 1.2).¹⁸ Currently, program review assessments for online courses and programs appear to be much less structured than the guidelines for development discussed above, with student and peer evaluations often the major assessment tools available.

Figure 1.2: Institutional Perceptions of Online Learning in Relation to Face-to-Face Learning, 2009-2013

COMPARISON TO FACE-TO-FACE	2009	2010	2011	2012	2013
Somewhat Inferior	23%	24.3%	22.7%	17.7%	18.2%
Inferior	9.5%	9.8%	9.7%	5.3%	7.7%

Source: Sloan Consortium¹⁹

While online programming appears to typically undergo the same long-term review processes as on-campus programs, there do not appear to be many new evaluative tools available to determine their effectiveness. While there have been efforts to develop assessments for online programs,²⁰ such as online peer review assessment,²¹

¹⁷ Ibid.

¹⁸ Allen and Seaman, Op. cit., p. 31.

¹⁹ Ibid.

²⁰ Chao, T., Saj, T., and Tessier, F. "Establishing a Quality Review for Online Courses." *EDUCAUSE Quarterly*, January 1, 2006. <http://www.educause.edu/ero/article/establishing-quality-review-online-courses>

²¹ Matchett, N., and Main, C. "Faculty Collaboration at a Distance: Using Online Peer Review to Improve Course Design." *EDUCAUSE Quarterly*, September 22, 2010.

institutions appear to more often rely on student feedback from end-of-course evaluations.²²

Hanover's research suggests that, outside of course evaluations, institutions typically provide a variety of external resources – through an office of distance learning or other department – to guide evaluation. At Michigan State University, for example, the institution's Office of Faculty and Organizational Development provides a number of external resources to assist in effectively evaluating online courses. The website includes links to a variety of resource types, including:

- **Online Course Evaluation Rubrics or Checklists;**
- **Peer Evaluation of Online Course Tools;**
- **Administrative Evaluation of Online Course Tools;** and
- **More general research on online pedagogical best practices.**²³

THE DISTANCE LEARNING FUNDING PROCESS

In addition to passing through the conventional approval procedures associated with on-campus programs, distance learning programs may also require assessment or approval from newer institutional services such as a center for learning and technology. This increasingly complex process is necessary not just to ensure program quality and feasibility, but to ensure that a program has the proper funding and is well budgeted. Distance learning courses can often be more expensive to develop than new on-campus offerings, and may cost at least as much to maintain. A report on distance learning costs in the University of North Carolina system suggests that this increased cost:

is largely due to staff support needed to create distance courses or for converting on-campus course content for distance delivery. On average, the cost to deliver distance education courses does not differ significantly from the cost of delivering on-campus courses.²⁴

Below, Hanover provides a fuller outline of some of these costs, as well as some of the funding practices institutions have developed to offset these.

<http://www.educause.edu/ero/article/faculty-collaboration-distance-using-online-peer-review-improve-course-design>

²² See, for example, "Course Evaluations – Instructors." Office of Distance Learning, Florida State University. <http://distance.fsu.edu/instructors/course-evaluations>

²³ "Evaluating Online Courses." Office of Faculty & Organizational Development, Michigan State University. <http://fod.msu.edu/oir/evaluating-online-courses>

²⁴ "University Distance Courses Cost More to Develop Overall but the Same to Deliver as On-Campus Courses." Program Evaluation Division, North Carolina General Assembly, April 28, 2010. p. 5. http://www.ncleg.net/PED/Reports/documents/DE/DE_Report.pdf

DISTANCE LEARNING COSTS

Research indicates that costs associated with online programming can be broken down into three categories: development, delivery, and administrative costs. As these expenses vary somewhat between institutions, this sub-section simply provides an overview of the major expenditures within these areas. Furthermore, institutions with well-established online programming have likely already paid for many of the development/infrastructural costs needed to develop an online program.

Development Costs

The development costs for creating an online program can include, among others, large up-front instructional support and staffing costs. A 2006 report by the Association for the Study of Higher Education (ASHE) entitled ““Cost-Efficiencies in Online Learning” details common costs associated with online course development and delivery in more depth. Figure 1.3 provides an overview of the major development costs outlined within the report.

Figure 1.3: Common Online-Course Development Costs

EXPENDITURE	DESCRIPTION
Materials	Includes course syllabus or outline, textbooks, texts with web-based content, reference materials, audio, video, simulations, virtual reality
Staffing	Includes instructional design, content development, text authoring, software development, multimedia design and production, course-specific software development, content integration and testing, posttest modification, and training
Staff Equipment	Computers and software, provided by the institution or staff
Copyright Clearance	Direct negotiations or outsourced
Materials Production	Text, audio, video, graphics, and software production, including staff time and supplies
Annual Revision of Materials	New assignments, examination questions
Developmental Testing	Payments to course testers, general costs of developmental testing

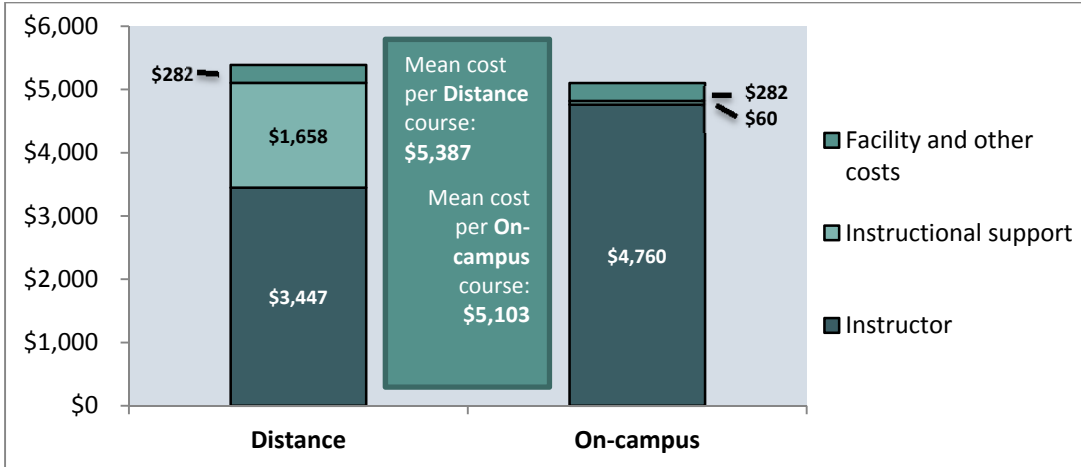
Source: Meyer, 2006²⁵

As mentioned above, in the University of North Carolina system development costs for online programming are slightly higher than for on-campus coursework. This is especially due to many of the expenditures listed in Figure 1.3, such as materials, materials production, and staff equipment. To better outline expenditure issues, Figure 1.4, below, provides a comparison between the development costs for on-campus and distance learning programs. These data were drawn from courses developed at various University of North Carolina campuses during the 2007-2008

²⁵ All expenses and their descriptions are taken verbatim from the source. See Meyer, K. “Cost Efficiencies in Online Learning.” *ASHE Higher Education Report*, 32:1, 2006. p. 21.

fiscal year. Many of the costs listed in Figure 1.3 are actually included under the broad expense area, “Instructional support.”

Figure 1.4: Comparison of Development Costs, On-campus vs. Distance, 2007-2008



Source: North Carolina General Assembly²⁶

Delivery Costs

While development costs can be higher for online programs, delivery costs appear to typically be similar for online and on-campus offerings. In general, instructional costs are about the same for both types of programs, though on-campus programs typically have to deal with higher facility costs to deliver a program within a physical classroom²⁷ The 2006 ASHE report suggests that, as with delivery costs, a number of costs are common to most distance learning programs (Figure 1.5).

Figure 1.5: Common Online-Course Delivery Costs

EXPENDITURE	DESCRIPTION
Materials Delivery	Postage, courier, and so on resulting from the distribution of physical goods
Instructor Equipment	Network charges, computers, printers, and software for instructors
Instructor Expenses	Payments to Internet service provider; increased energy costs, insurance for equipment, and equipment repair
Instructor Time	Tuition varies whether full-time or part-time staff teach a course and how much time instruction requires from the instructor
Student/Instructor Helpdesk	Staffing a helpdesk for both students and instructors for help with routine technical questions
Call Costs	Toll free access to the helpdesk or other support functions

Source: Meyer, 2006²⁸

²⁶ “University Distance Courses Cost More to Develop Overall but the Same to Deliver as On-Campus Courses,” Op. cit., p. 8.

²⁷ Ibid., p. 14.

²⁸ Meyer, Op. cit., p. 26.

Administrative Costs

Administrative costs are the final major expense for distance learning programs. These include intranet costs, website development support, and course management system software. Figure 1.6 outlines common administrative costs identified in the 2006 ASHE report.

Figure 1.6: Common Online-Course Administrative Costs

EXPENDITURE	DESCRIPTION
Decision making	Includes development of an IT or distance learning or online learning strategy [and] travel to study other institutions, costs of consultants to help advise the institution on its online learning planning
Institutional evaluation and quality assurance	Includes staff time and expenses such as survey costs, report production, and dissemination
Web site development costs	Includes staff time and internet specialists, graphics designer, internet designer
Web site development support	Includes staff computers, software, and repair for individuals devoted to web site development
Web site implementation	Includes portion of network services and maintenance as well as domain name registration
Learning platform software or course management system	Includes cost of purchase or licensing fees and costs to upgrade equipment [and] network server, network costs, and access to the internet, which increases with enrollment and courses offered
Intranet costs	Includes computers, installing network connections, servers, and server software, and other software
Intranet start-up costs	Includes design consultants or in-house designer and technical support staff, training costs
Intranet ongoing costs	Includes editorial and design staff, technical personnel, ongoing consultants, promotion, training, and maintenance of applications
Local training center	Includes accommodation costs, equipment (server, computers, printers, photocopier, telephone), furnishing (desks, chairs, storage cupboards, shelving), wiring, and internet access
Digitized courseware and library	Includes cost of purchase, lease, or fee use of digitized content; library support, including staff to create and maintain records; document scanning, indexing and equipment; maintenance and repair of equipment
Marketing costs and expenses	Includes staff salaries, benefits, and consumables

Source: Meyers, 2006²⁹

²⁹ Ibid., pp. 28-29.

DISTANCE LEARNING FUNDING PRACTICES

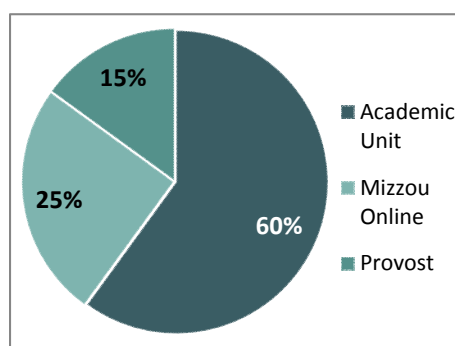
To ensure that the various costs of online courses and programs are met, institutions often modify tuition levels and create new fees for distance learners. While research into the business models employed by institutions to facilitate online learning is only in beginning stages,³⁰ based on some common funding practices are already emerging. Perhaps the most prominent new program funding mechanism developed for online learning is the distance learning/technology fee that is assessed to students enrolled in an online program.

Funding Online Learning

Though overall business models for online programming have not yet been explored in depth,³² the tuition and fees charged to distance learners by public institutions can be evaluated, and some institutions even provide a breakdown of how these revenues are distributed by the university. For example, at the University of Missouri, revenues for semester-length online courses are shared between the academic unit offering the program, Mizzou Online (the distance learning department/center at the institutions), and the provost's office. The academic unit receives the majority of revenue for an online course, though the other two stakeholders also receive a small percentage (Figure 1.7).³³

The University of Missouri's online student revenue appears to essentially be derived from tuition fees. The university charges distance learners \$274 per credit, the same as for on-campus in-state students. Students are assessed a \$12.80 technology fee per credit, though this is also required of on-campus students.³⁴ Online students "are not charged campus fees (e.g. Activity, Rec)" by the University.³⁵ Other institutions have similar tuition and fee charges for distance learners.

Figure 1.7: Revenue Share for Semester-Length Online Courses, University of Missouri



Source: University of Missouri³¹

³⁰ Vignare, Geith, and Schiffman, Op. cit., p. 53.

³¹ "Operations Guide." Mizzou Online, University of Missouri, March 2013.

<http://online.missouri.edu/pdf/MizzouOnline-Operations%20Guide-March2013.pdf>

³² For a discussion of e-learning business models, see Nagle, T. and Golden, W. "The Examination of a Business Model Framework With The E-Learning Industry." Proceedings of the 15th European Conference on Information Systems, 2007. pp. 239-250.

<http://aran.library.nuigalway.ie/xmlui/bitstream/handle/10379/40/Nagle%20and%20Golden%20ECIS%202007.pdf>

³³ "Operations Guide," Op. cit.

³⁴ "Fees – Spring 2014." Office of Cashiers, University of Missouri. <http://cashiers.missouri.edu/costs/index.html>

³⁵ "Operations Guide," Op. cit.

In general, tuition for online learners is often similar to that for on-campus, in-state students, though this does vary. To provide a better sense of differences in tuition between online and on-campus programs, Figure 1.8 outlines tuition and fees for a number of other public institutions within the United States. The figure further provides details on the various fees assessed by program type, including the distance learning fee assessed to online students at most institutions.

Figure 1.8: Per-Credit Tuition Costs for Online vs. Campus-Based Undergraduate Programs

INSTITUTION NAME	ONLINE TUITION	DISTANCE LEARNING FEE	CAMPUS-BASED TUITION (IN-STATE RATES)	CAMPUS-BASED PROGRAM FEES
University of Minnesota ^{36, 37, 38}	\$464	2-5 credits: \$90 6-10 credits: \$180 11+ credits: \$270	\$464	\$526 per semester
Arizona State University ³⁹	\$460	\$50 per semester	\$677	\$153 per semester
Oregon State University ⁴⁰	\$191	\$80 per credit	\$191	\$482 per semester
University of Iowa ⁴¹	\$279	1-5 credits: \$116 6-11 credits: \$174 11+ credits: \$232	\$279	1-4 credits: \$287 5 credits: \$405 6-11 credits: \$549 12+ credits: \$692
University of Alabama ^{42, 43}	\$320	None	\$393	--
Pennsylvania State University ^{44, 45}	\$518	1-4 credits: \$84 5-8 credits: \$186 9+ credits: \$248	\$670	--

Source(s): Institution Websites

³⁶ "Distance learning." ONE STOP Student Services, University of Minnesota.

http://onestop.umn.edu/finances/costs_and_tuition/tuition_and_fees/distance_learning.html

³⁷ "Course fees." University of Minnesota ONE STOP Student Services.

http://onestop.umn.edu/finances/costs_and_tuition/fees/course_fees.ph

³⁸ "2013-2014 Undergraduate Tuition & Fees." ONE STOP Student Services, University of Minnesota.

http://www.onestop.umn.edu/pdf/tuition_ugrad_2013-2014.pdf

³⁹ "Tuition and Fees Schedules." Arizona State University.

https://catalog.asu.edu/tuitionandfees/fees_spring2014.html

⁴⁰ For access to this information, see "Tuition and Fee Information." Oregon State University.

<http://oregonstate.edu/fa/businessaffairs/student/tuition-and-fees>

⁴¹ "Fall 2013 and Spring 2014 Per-Semester Tuition and Fees." University of Iowa, pp. 1 and 10.

<http://www.registrar.uiowa.edu/LinkClick.aspx?fileticket=y%2b7QCY0xt%2fk%3d&tabid=95>

⁴² "Tuition." University of Alabama: Bama by Distance.

<http://bamabydistance.ua.edu/financial-aid-scholarships/tuition.html#distance-learner>

⁴³ "Undergraduate Campus Student Tuition." University of Alabama. <http://cost.ua.edu/undergraduate-13-14.html>

⁴⁴ "Tuition Estimator." Pennsylvania State University World Campus.

<http://www.worldcampus.psu.edu/tuition-and-financial-aid/tuition-estimator>

⁴⁵ "University Park, Hershey, Dickinson, and Great Valley Tuition." Pennsylvania State University.

<http://tuition.psu.edu/tuitiondynamic/rates.aspx?location=up>

Distance Learning Fees

As Figure 1.8 suggests, distance learning fees are one of the major revenue tools that institutions employ to ensure proper funding levels for online courses and programs. While some institutions, such as the University of Alabama, do not require online students to pay this fee, most do. The fee often varies by the number of credits a student is completing over the course of a semester. For example, at Iowa State University, undergraduate distance learners are assessed a technology fee on a tiered system, based on the number of credits a student is completing. For five credits or less, students must pay \$57.50; for more than five credits to 11 credits, students must pay \$86.25; and for more than 11 credits, students must pay \$115.⁴⁶

Florida State University provides detailed information on how to determine the distance learning fee for a program. The institution distinguishes between “fundable” and “non-fundable” online courses. With fundable courses, instructors are paid from the Educational & General (E&G) budget, while for non-fundable courses, instructors are paid from auxiliary funds, partly generated from higher distance learning fees. According to the University’s Office of Distance Learning, “Where tuition and out-of-state fees are not sufficient to cover the cost of developing and delivering a fundable distance learning course, a per-credit-hour *fundable distance learning course fee* may also be assessed.”⁴⁷

Fees other than the distance learning fee include the University’s standard financial aid fee, capital improvement fee, and building fee. With non-fundable courses, there is no state funding available, so the distance learning fee “is meant to cover the entire cost of developing and delivering the non-fundable distance learning course.”⁴⁸ Distance learning fees must be reviewed annually to ensure that auxiliary funds do not maintain a balance in excess of 15 percent of revenues.⁴⁹

⁴⁶ “Tuition and Fees: Online & Distance Learning.” Iowa State University. <http://www.distance.iastate.edu/apply-enroll/fees#tech>

⁴⁷ “Departmental Guide to Distance Learning Auxiliary Operations.” Florida State University. p. 2. Accessible at: http://budget.fsu.edu/content/download/56474/460390/file/DL%20Manual_Final.pdf

⁴⁸ Ibid.

⁴⁹ “Distance Learning Fees: Calculations and Considerations.” Office of Distance Learning, Florida State University. http://distance.fsu.edu/docs/admin_docs/DistanceLearningFees.pdf

SECTION II: DEVELOPING AND FUNDING A MASSIVE OPEN ONLINE COURSE

INTRODUCTION AND BACKGROUND

Massive open online courses, or MOOCs, are a recently developed format through which to offer online learning. MOOCs are taught online and usually offered free of charge to a participating student. Courses are typically offered by an established higher education institution through a third-party website. A student does not typically have to be enrolled in the higher education institution which is offering the course. Instruction largely occurs via pre-taped video lectures, and students are tested on what they have learned by methods such as automated quizzes, or assignments that are graded by other students participating in the course.⁵⁰ Furthermore, the model requires relatively little upkeep once a course is created.

This combination of relatively open access, and the potential for a single, or small number, of professors to teach a “massive” number of individuals suggests huge potential as a tool to provide cheap, easily accessible online programming. While the benefits and opportunities for MOOCs within higher education have been questioned as they have increased in size and faced some notable failures,^{51, 52} the online delivery method still suggests a new opportunity for institutions to reach a much larger student audience.

In this section, Hanover provides a brief overview of the rise of MOOCs and further discusses some of the major MOOC providers currently operating to provide context when discussing MOOC development approaches. In general, it appears that institutions developing MOOCs work in conjunction with third-party MOOC platforms in the creation of a course, rather than shouldering the burden of development and course funding alone.

⁵⁰ For an overview of MOOC development from 2011 onwards, see “What You Need to Know About MOOC’s.” *The Chronicle of Higher Education*. <http://chronicle.com/article/What-You-Need-to-Know-About/133475/>

⁵¹ For one take on the problems facing MOOCs, see Sharma, G. “A MOOC Delusion: Why Visions to Educate the World Are Absurd.” WorldWise Blog, *The Chronicle of Higher Education*, July 15, 2013. http://chronicle.com/blogs/worldwise/a-mooc-delusion-why-visions-to-educate-the-world-are-absurd/32599?cid=pm&utm_source=pm&utm_medium=en

⁵² Lewin, T. “After Setbacks, Online Courses Are Rethought.” *The New York Times*, December 10, 2013. http://www.nytimes.com/2013/12/11/us/after-setbacks-online-courses-are-rethought.html?_r=0

THE RISE OF MOOCS

Massive open online courses began to first receive considerable attention in fall 2011 with an artificial intelligence course offered by Stanford University professor Sebastian Thrun,⁵³ though the term had circulated and the format had been discussed in educational technology circles as early as 2008.⁵⁴ By the end of 2012 this attention had ramped up considerably. Coursera and edX, both established early in 2012, began in the fall 2012 to expand at faster and faster rates and media latched on to stories about the revolutionary potential of massive open online courses. The *New York Times* education section even dubbed 2012 the “Year of the MOOC” and debate surrounding these courses has little abated through early 2014.⁵⁵

While MOOCs have struggled with student persistence in courses,⁵⁶ monetization of their services, and developing credit-granting options over the past year,⁵⁷ they have continued to grow. Through January 17, 2014, Coursera offered over 550 courses to a user-base of over 22 million individuals.⁵⁸ More broadly over the last year, universities and third-party providers have taken a variety of steps to increase the number of MOOC options. The number of third-party MOOC providers has continued to grow, with a small number of international consortiums and individual institutions even implementing MOOC platforms.⁵⁹ The major third-party providers – such as edX and Coursera – have also increased their base of universities.⁶⁰

MAJOR MOOC PROVIDERS

With the continued growth of MOOCs, a wide variety of providers now offer these courses. Figure 2.1 outlines these, to provide a better idea of potential partners available to higher education institutions.

⁵³ Webley, K. “MOOC Brigade: Will Massive Open Online Courses Revolutionize Higher Education?” *Time*. September 4, 2012. <http://nation.time.com/2012/09/04/mooc-brigade-will-massive-open-online-courses-revolutionize-higher-education/>

⁵⁴ Waldrop, M. “Online learning: Campus 2.0.” *Nature*. March 13, 2013. <http://www.nature.com/news/online-learning-campus-2-0-1.12590>

⁵⁵ Pappano, L. “The Year of the MOOC.” *The New York Times*. November 2, 2012. <http://www.nytimes.com/2012/11/04/education/edlife/massive-open-online-courses-are-multiplying-at-a-rapid-pace.html?pagewanted=all>

⁵⁶ For a recent overview of this, see Stein, K. “Penn GSE Study Shows MOOCs have relatively few active users, with only a few persisting to course end.” Press Room, Graduate School of Education, University of Pennsylvania, December 5, 2013. <http://www.gse.upenn.edu/pressroom/press-releases/2013/12/penn-gse-study-shows-moocs-have-relatively-few-active-users-only-few-persist>

⁵⁷ Kolowich, S. “California Puts MOOC Bill on Ice.” *The Chronicle of Higher Education*, August 1, 2013. <http://chronicle.com/blogs/wiredcampus/california-puts-mooc-bill-on-ice/45215>

⁵⁸ These data appear to be periodically updated by Coursera, see “Community.” Coursera. <https://www.coursera.org/about/community>

⁵⁹ One example of an international MOOC is the United Kingdom based FutureLearn, see “FutureLearn.” <https://www.futurelearn.com/>

⁶⁰ For a broader discussion of these trends, see Shah, D. “MOOCs in 2013: Breaking Down the Numbers.” *edSurge*, December 22, 2013. <https://www.edsurge.com/n/2013-12-22-moocs-in-2013-breaking-down-the-numbers>

Figure 2.1: Example of Different Types of U.S. Based MOOC Providers

MOOC PROVIDER	DESCRIPTION
edX	edX is a “not-for-profit enterprise” founded by Harvard University and MIT in May 2012 and governed by the two bodies. ⁶¹ Currently, 32 institutions offer courses, or are developing courses to be offered, through the MOOC provider. ⁶² Courses are offered in a variety of subjects: including computer science, mathematics, and the humanities. ⁶³
Coursera	Coursera initially offered 14 courses when it launched in early 2012, from institutions such as the University of Michigan. ⁶⁴ Since then, multiple additional institutions have partnered with the MOOC platform. Currently, 108 institutions have partnered with Coursera. ⁶⁵ These include Ivy League institutions such as Princeton, prominent liberal arts colleges such as Wesleyan University, and prestigious non-North American institutions, such as the École Polytechnique Fédérale de Lausanne. Courses are offered in a number of subjects: including the humanities, business, and STEM fields.
MOOC2Degree	In January 2013, Academic Partnerships – a company that partners with institutions to develop online learning options – launched MOOC2Degree “to offer credit-bearing MOOCs as a first step and a free start toward earning a degree.” ⁶⁶ Students completing a MOOC have the option of enrolling in MOOC2Degree institutions with initial credit options fulfilled. ⁶⁷ Currently, 7 institutions, including Utah State University and Cleveland State University, have joined this initiative. ⁶⁸
Udacity	Unlike edX, MOOC2Degree and Coursera, instruction on Udacity is provided by independent professors, rather than partnerships with higher education institutions. Teaching largely occurs via the same methods (video and automated quizzes). Udacity has stated that its courses focus on “computer science and related fields.” ⁶⁹
Khan Academy	Khan Academy, founded in 2006, is largely composed of a collection of instructional videos on YouTube, relating to subjects such as math, science, computer science, finance and economics, humanities, and test preparation. The majority of its content does not take the form of an actual course in a given subject, although it has recently begun to offer structured instruction in computer science. Khan Academy does not have any content partnerships with higher education institutions, but it has received financial assistance from the Gates Foundation. ⁷⁰

⁶¹ DeSantis, N. “Harvard and MIT Put \$60-Million Into New Platform for Free Online Courses.” *The Chronicle of Higher Education*. May 2, 2012. <http://chronicle.com/blogs/wiredcampus/harvard-and-mit-put-60-million-into-new-platform-for-free-online-courses/36284>

⁶² edX. <https://www.edx.org/>

⁶³ “Courses.” edX. <https://www.edx.org/courses>

⁶⁴ DeSantis, N. “4 Start-Ups are Offering Free Online Courses.” *Chronicle of Higher Education*. February 10, 2012. <http://chronicle.com/blogs/wiredcampus/4-start-ups-are-offering-free-online-courses/35355>

⁶⁵ “Partners.” Coursera. <https://www.coursera.org/about/partners/global>

⁶⁶ “Conversation About a MOOC.” MOOC2Degree. <http://www.mooc2degree.com/about.php#.UWLNAJOG3y0>

⁶⁷ Press Release. “Academic Partnerships Launches MOOC2Degree Initiative.” MOOC2Degree. January 23, 2013. http://www.mooc2degree.com/MOOC2Degree_Press_Release_012313.pdf

⁶⁸ MOOC2Degree. <http://www.mooc2degree.com/index.php#.UWLNoJOG3y0>

⁶⁹ “What you need to know about MOOC’s.” Op. cit.

⁷⁰ Ibid.

MOOC PROVIDER	DESCRIPTION
Udemy	Udemy offers a platform by which instructors can offer courses in a wide variety of subjects. The most popular courses have over 10,000 participants. ⁷¹ Some instructors are college professors, but many are independent individuals. Udemy has also launched “The Faculty Project,” in which a small number of professors from leading higher education institutions will provide courses charging tuition in a variety of subjects. ⁷² “Most courses are free on Udemy, although some charge a fee, ranging from \$5 to \$500.

Source(s): MOOC provider websites

DEVELOPING AND IMPLEMENTING A MOOC

As mentioned above, most MOOCs are developed in conjunction with a third-party provider such as Coursera or edX. These MOOCs require major effort prior to implementation from university faculty and staff as well as third-party support staff, and they can be difficult and time-consuming during the development process. They do appear to typically require less work once they have been launched. At the University of Minnesota, faculty members volunteered “hundreds of hours” over spring 2013 to develop MOOCs offered by the institution via Coursera during summer 2013. While this process was exhausting for many involved it did provide a new approach to teaching, with one faculty member noting that the process “has changed the way he prepares for the classroom version of the course he also teaches.”⁷³

At the Massachusetts Institute of Technology, one of the institutions that launched edX, developing a MOOC appears to be similarly time-consuming. For an introductory biology MOOC, faculty members and edX staff worked together over the spring 2013 semester to develop the course and filmed segments for it during a traditional, on-campus introductory biology course. For the MOOC, the on-campus course had to be offered at a special time and the professor leading it, Eric Lander, spent extra hours recording “‘bumpers,’ short video introductions to each class, to quizzes and problem sets and other components of the course.”⁷⁴ In general, the extra volunteer time required of faculty to develop these courses does not appear to be sustainable. At the University of Virginia, faculty have struggled to “find time to make the investment” to teach a MOOC. One faculty member has noted that a course strategy built upon this model “seems unlikely to last indefinitely.”⁷⁵

⁷¹ “Popular Courses.” Udemy. <http://www.udemy.com/>

⁷² “The Faculty Project.” The Faculty Project. <http://facultyproject.org/>

⁷³ Bitters, J. “What’s it take to make a MOOC? Hundreds of hours, no pay.” *The Minnesota Daily*, May 29, 2013. <http://www.mndaily.com/news/campus/2013/05/27/what%E2%80%99s-it-take-make-mooc-hundreds-hours-no-pay>

⁷⁴ Fitzgerald, M. “How To Make A MOOC, MIT Style.” *Information Week*, March 28, 2013.

<http://www.informationweek.com/software/how-to-make-a-mooc-mit-style/d/d-id/1109309>

⁷⁵ Weingast, M. “The MOOC Experiment.” *Cavalier Daily* (University of Virginia). February 26, 2014. <http://www.cavalierdaily.com/article/2014/02/mooc-experiment>

MOOC DEVELOPMENT GUIDELINES

Along with the rise of massive open online courses, at least two institutions have developed MOOC creation guidelines to serve as rubrics for faculty and staff developing these programs: Northwestern University and the University of Toronto. Northwestern University's guidelines suggest that they should be treated as "a 'starting place' for each MOOC."⁷⁶ The University of Toronto's guidelines are in place for similar reasons: "to ensure courses are well designed from a pedagogical perspective." The institution further suggests a number of basic steps or pedagogical approaches course designers should take when considering developing a MOOC:⁷⁷

Figure 2.2: MOOC Design Suggestions

MOOC DESIGN PROCESS TIPS
1. Identify the intended learning outcomes for students (knowledge, skills, attitudes)
2. Ensure assessment strategy aligns with learning outcomes
3. Develop a progression of tasks and activities that will support learners in building the target knowledge, skills and attitudes <ul style="list-style-type: none"> • Present content that will support active learning; model activities/skills for students • Over duration of course, build upon foundational knowledge toward higher order skills such as application, integration and analysis
4. Ensure a balance between instructor presence, social/peer interaction and cognitive challenge

In general, the guidelines for MOOC development suggest that programs should be relatively short and that learning resources for a program be continuously available online for ease of student access. The Northwestern University guidelines further provide an overview of typical evaluation measures that can be used to assess whether a MOOC has been successful and provide feedback on areas of potential change. The guidelines state that:⁷⁸

Each MOOC should be considered successful if:

- It recruits and retains a large number of students;
- Those students who complete the course perform well on the summative assessments;
- It experiences few to no technology issues;
- Students provide favorable responses on end-of-course surveys;
- The faculty member teaching the course feels that it is an effective teaching and learning experience.

⁷⁶ "MOOC Creation Guidelines." Northwestern University. p. 1. http://www.northwestern.edu/provost/initiatives/online-and-blended-learning/MOOC_Creation_Guidelines.pdf

⁷⁷ Taken verbatim from "Design and Development Process Guidelines, Massively Open Online Courses (MOOC)." Open UToronto, University of Toronto, February 2013. p. 1. <http://www.ocw.utoronto.ca/wp-content/uploads/2013/05/MOOC-Design-and-Development-Guidelines-2-Feb-2013.pdf>

⁷⁸ "MOOC Creation Guidelines," Op. cit., p. 3.

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Washington, DC 20006

P 202.559.0500 F 866.808.6585
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