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Online Learning: Broadening the Conversation

While online learning has been around for decades and is rooted in the tradition of distance education, the sudden explosion of massive open online courses (MOOCs) has sparked widespread discussion about the growing presence of technology in teaching and learning at the University of Washington and at other universities around the world. The current rapid development of new tools and modes of course delivery presents many new options for educators, and provides an opportunity for us to reexamine what quality higher education means, how we assess and improve it, and how we ensure that it remains accessible to learners throughout their lives.

This report, part of a new series about transformative trends in higher education, examines this issue of online learning. It seeks to provide a very basic primer on key course formats and current issues, and lays the foundation for further reports about more specific questions.

Many University of Washington faculty and staff members have been thinking creatively about this subject, testing out innovative practices in the classroom, and working to engage students in new forums and with new tools. Groups such as the Faculty Council on Teaching and Learning, Faculty and Professional Learning Communities at the UW Seattle Center for Teaching and Learning, UW Tacoma Technology Fellows, and participants in the UW Bothell Hybrid Course Development Institute have been discussing and strategizing about how to best approach online learning. Our goal with these reports is simply to broaden and connect these conversations happening on our three campuses, and to provide common reference points to inform our plans for the future. We welcome your feedback and suggestions — please email edtrends@uw.edu.

According to a survey of more than 2,500 colleges and institutions, nearly one third of all U.S. college students in 2010 took at least one online course, compared to just 1 in 10 in 2002.¹

In a 2012 survey of more than 100,000 students around the world, about 75 percent of students said that they had taken at least one course that included online components.²

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In his annual address to the university community on October 18, 2012, UW President Michael K. Young noted that higher education is currently faced with profound pressures to evolve and new opportunities to adapt ([video](#) of address):

“The university of tomorrow is moving toward a new paradigm — certainly one with greater efficiency, but also one where innovation and technology combine with hands-on, collaborative learning to give our students an enhanced experience. Tomorrow’s university also exists in a world that is getting smaller and more hyper-connected. That means the great societal challenges we face require equally connected, integrative solutions.”

Part of this shift is influenced by the remarkable growth of online education throughout the United States. A 2010 report to the UW Board of Regents prepared by a working group of faculty and staff noted that “online learning has become a ubiquitous part of any discussion about the future of higher education,” and that the UW has been “a national leader” in the field.³ During the 2010–2011 academic year, the UW Faculty Council on Teaching and Learning conducted a broad review of research about online learning and recognized its increasing significance at the UW due to “the interests and needs of our students, the rapid and continued maturation of educational technologies, and the growing body of literature that supports the strategic use of these technologies to enhance tra-

ditional educational practices.” However, the Council also stressed that substantive effort is needed to ensure that standards of quality are met and faculty members are not overburdened.⁴

It is clear that online learning has grown rapidly in a short period of time and has become a key issue in higher education. Many recent headlines about this subject, and much of the recent discussion at the UW, have focused specifically on MOOCs. And while many commentators consider these massive free online courses to be an exciting innovation in education, they remain largely an experiment. MOOCs have the potential to vastly expand access to high-quality course content, but it is still unclear if and to what degree they could ever serve as a substitute for more traditional forms of course delivery, including more traditional forms of online learning. While MOOCs are only one facet of online learning, they represent the kind of experimentation in education enabled by new technology.

The University of Washington, an early leader in online education, now offers 17 online degrees, 40 online certificates, and an additional 75 online distance courses. Many more courses are under consideration, which has spurred concerns about quality, efficiency, and access.

What is online learning?

Online learning is an umbrella term that encompasses a wide range of pedagogical tools, including:

- ▶ Social, interactive, and engagement formats, such as blogs, online learning communities, and peer-to-peer online feedback
- ▶ Readings accessible to students through electronic reserve systems
- ▶ Recordings of class sessions available for viewing and/or downloading
- ▶ Learning management systems, such as Canvas, that can accept electronically submitted student assignments, allow for electronic grading and feedback, and track grades with an electronic grade book; this tool is a current emphasis at UW’s three campuses⁶
- ▶ Virtual worlds in which students take on identities as avatars and interact with their classmates through these online alter egos⁷
- ▶ Lecture capture, which allows students the opportunity to view recorded lectures online when, where, and at what speed they wish; this tool is a current emphasis at UW’s three campuses^{8, 9}

What do we know about online learning?

This report reviews some of the key issues in online learning today, drawing from a series of national reports from sources such as the U.S. Department of Education, EDUCAUSE Center for Applied Research, Inside Higher Ed, and the Babson Survey Research Group.

Students and online learning

- ▶ Students see technology as an integral part of their academic experience, and many believe that effective technology use improves a class experience.¹⁰
- ▶ In a 2012 survey, only about 16 percent of students in face-to-face classes said that they skipped class when course materials were available online.¹¹
- ▶ Students value the flexibility and convenience of online courses. They can study at their own pace, anywhere and anytime.¹²
- ▶ Success varies. Mature, self-motivated learners may be most likely to succeed in fully online degree programs.¹³

Definitions

Methods of categorizing course formats vary, but a basic approach includes:⁵

- ▶ *Face-to-face: “traditional” classes; instructor(s) and students meet in the classroom or another in-person setting.*
- ▶ *Hybrid (or blended): a combination of both face-to-face instruction and online learning (often defined as 20–50% of total course time online).*
- ▶ *Online: primarily or entirely online (often defined as 80–100% of total course time online). Class size varies; at the UW, online courses offered through UW Educational Outreach usually have 45 or fewer students.*

Faculty views on technology and teaching

- ▶ Faculty members are using technology more and more. More than three-quarters of faculty — according to one recent study — are using digital materials in their classrooms in some way.¹⁴
- ▶ Faculty remain concerned about quality. In response to a 2012 survey, nearly two-thirds said they believe that learning outcomes for an online course are inferior to those for a comparable face-to-face course.¹⁵
- ▶ Some faculty are also concerned about the rapid growth of online education. In one recent study, about one-quarter of faculty members reported thinking that their institution is pushing too much instruction online.¹⁶
- ▶ Instructors with online teaching experience are the most optimistic about online education.¹⁷
- ▶ Faculty typically need institutional support and training to learn the pedagogical and technical skills required to produce high-quality online learning experiences.¹⁸

Effectiveness and access

- ▶ Studies such as a 2010 U.S. Department of Education meta-analysis show that well-designed courses with online elements can lead to learning outcomes comparable — and in some cases superior — to traditional face-to-face classes. Hybrid courses in particular may enhance student learning, although part of that effect may stem from the fact that students often devote more time to hybrid courses.¹⁹
- ▶ Technology can increase access. The Department of Education meta-analysis noted that “online learning has become popular because of its potential for providing more flexible access to content and instruction at any time, from any place.”²⁰
- ▶ Online education can ease campus space challenges. For example, online and hybrid courses can help ameliorate classroom shortages.²¹
- ▶ In online modalities, student-faculty interaction remains central for quality. As a result, instructors find that online and hybrid courses can demand as much — or even more — of their time as compared to face-to-face classes.²²

Continuing the conversation

The UW Faculty Council on Teaching and Learning found in 2011 that online learning was very much a part of the terrain of U.S. higher education. For the Council members, key issues included concerns about faculty involvement, time, compensation, and scholarly recognition, and the need to ensure quality and appropriate pedagogical methods. Around the country, similar questions are being raised about ensuring the effectiveness of courses with online elements, appropriately assessing student learning, and how to make the best use of all of the teaching and learning formats and tools that are now available. In hopes of further developing our conversations about these important issues, future reports in this series will focus on:

- ▶ Pros and cons of various class formats (e.g., face-to-face, hybrid, online)
- ▶ Instructor experiences with online teaching and educational technologies at the UW and nationwide
- ▶ Faculty concerns about online teaching (including intellectual property, cheating, and workload)

Again, we welcome your comments, questions and suggestions. Please email edttrends@uw.edu.

Notes

1. Elaine Allen and Jeff Seaman, “Going the Distance: Online Education in the United States 2011,” *Babson Survey Research Group*, November 2011, <http://www.babson.edu/Academics/centers/blank-center/global-research/Documents/going-the-distance.pdf>, 11. See also I. Elaine Allen, Jeff Seaman, Doug Lederman, and Scott Jaschik, “Conflicted: Faculty and Online Education, 2012,” *Babson Survey Research Group, Inside Higher Ed*, 2012, http://www.insidehighered.com/sites/default/server_files/files/IHE-BSRG-Conflict.pdf, 3.

2. Eden Dahlstrom, “ECAR Study of Undergraduate Students and Information Technology, 2012,” *EDUCAUSE Center for Applied Research*, September 2012, <https://net.educause.edu/ir/library/pdf/ERS1208/ERS1208.pdf>, 7–8. This report’s conclusions are based on a survey of more than 100,000 students around the world from 195 institutions of higher education.

3. Karen Dowdall-Sandford, James W. Harrington, Jr., Kevin Mihata, Robert Stacey, David Szatmary, and Deborah Wiegand, “Report to the UW Regents on Online Learning,” February 2010, Appendix A in University of Washington Faculty Council on Teaching and Learning Minutes (October 6, 2011), http://www.washington.edu/faculty/committees/fctl/fctl_minutes/fctlmin_100611.pdf.

4. Jan D. Carline, Chair of the UW Faculty Council on Teaching and Learning, in a letter to Interim President Phyllis Wise, June 23, 2011 (draft), Appendix A in University of Washington Faculty Council on Teaching and Learning Minutes (June 2, 2011), http://www.washington.edu/faculty/committees/fctl/fctl_minutes/fctlmin_060211.pdf.

5. For some other examples of online education course classifications, see Barbara Means, Yukie Toyama, Robert Murphy, Marianne Bakia, and Karla Jones, "Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies," *U.S. Department of Education Office of Planning, Evaluation, and Policy Development, Policy and Program Studies Service*, revised September 2010, <http://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf>, 5; Allen and Seaman, "Going the Distance," 7; and UW Bothell's Learning Technologies website: <http://www.bothell.washington.edu/learningtech/elearning/hybrid-learning/about-hybrid/hybrid-at-uwb>.

6. For more information about Canvas at the UW, see UW-IT's Learning and Scholarly Technologies website; for example, <http://www.washington.edu/ist/news/2012/canvas-rollout/> and <http://www.washington.edu/ist/help>.

7. See, for example, the Certificate in Virtual Worlds offered through University of Washington Educational Outreach, <http://www.pce.uw.edu/certificates/virtual-worlds.html>.

8. For more information about UW faculty experiences with lecture capture, see <http://www.washington.edu/teaching/teaching-resources/using-technology/>. To learn more about Tegrity, the UW-IT supported lecture capture tool, see <https://depts.washington.edu/tegrity/>.

9. Dowdall-Sandford et al., "Report to the UW Regents."

10. Dahlstrom, "ECAR Study," 19.

11. *Ibid.*, 29.

12. Carol B. Aslanian and David L. Clinefelter, "Online College Students 2012: Comprehensive Data on Demands and Preferences," *The Learning House, Inc.*, 2012, <http://www.learninghouse.com/files/documents/resources/Online%20College%20Students%202012.pdf>, 16–17. This report draws on a spring 2012 nationwide survey with 1,500 undergraduate and graduate student respondents. Sixty-eight percent of those surveyed said having access to online courses helped them balance responsibilities to family, work and school.

13. Lawrence S. Bacow, William G. Bowen, Kevin M. Guthrie, Kelly A. Lack, and Matthew P. Long, "Barriers to Adoption of Online Learning Systems in U.S. Higher Education," *Ithaka S+R*, May 1, 2012, <http://www.sr.ithaka.org/research-publications/barriers-adoption-online-learning-systems-us-higher-education>, 17-18.

14. I. Elaine Allen, Jeff Seaman, Doug Lederman, and Scott Jaschik, "Digital Faculty: Professors, Teaching, and Technology, 2012," *Babson Survey Research Group, Inside Higher Ed*, 2012, <http://www.insidehighered.com/news/survey/digital-faculty-professors-and-technology-2012>, 8. Additionally, in 2010, 47 percent of student respondents to the ECAR Study of Undergraduate Students and Information Technology survey reported that "most or almost all of their instructors effectively use technology to advance students' academic success," while in 2012, 68 percent agreed this was the case. See Dahlstrom, "ECAR Study," 9.

15. Allen et al., "Conflicted: Faculty and Online Education," 9.

16. *Ibid.*, 18.

17. *Ibid.*, 6.

18. One of the recommendations of the Faculty Council on Teaching and Learning's 2010–2011 annual report was that the university should support faculty development activities pertaining to educational technologies and highlight innovations and best practices. See "Faculty Council on Teaching and Learning 2010-11 Annual Report," (submitted by Jan Carline, Chair), 2011, http://www.washington.edu/faculty/committees/fctl/fctl_minutes/fctl_annrept1011.pdf. See also Allen and Seaman, "Going the Distance," 6.

19. Means et al., "Evaluation of Evidence-Based Practices in Online Learning," xiv–xv, 18–19, 51. This meta-analysis concludes that students in the studies reviewed who took courses online "performed modestly better" than those taking the same courses through face-to-face instruction. Students who took hybrid courses did best of all. However, the authors note that "the positive effects associated with blended learning should not be attributed to the media, per se," but likely resulted from the additional learning time and resources available to students enrolled in hybrid and/or blended courses. A May 2012 Ithaka S+R study found "no statistically significant differences in learning outcomes between students in the traditional and hybrid-format sections" when assessing students in an introductory statistics course (see <http://www.sr.ithaka.org/research-publications/interactive-learning-online-public-universities-evidence-randomized-trials>, 18). Evidence indicates that to achieve such strong learning outcomes, online and hybrid courses must be carefully designed, instructors must be prepared to work effectively under new conditions, students must be given a detailed picture of what is expected of them, and must be supported as they do their work. Additionally, the courses must be regularly reviewed, and information about how well students did must be fed back into revisions of the course design for future offerings.

20. Means et al., "Evaluation of Evidence-Based Practices in Online Learning," 1.

21. Dowdall-Sandford et al., "Report to the UW Regents."

22. "Faculty Council on Teaching and Learning 2010-11 Annual Report," (submitted by Jan Carline, Chair), 2011, http://www.washington.edu/faculty/committees/fctl/fctl_minutes/fctl_annrept1011.pdf, 2.