Legislative Testimony on On-Line Learning

House Higher Education Committee

Dr. Melody Rose, Interim Chancellor, OUS

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- Good morning Chair Dembrow and members of the committee. For the record my name is Melody Rose and I'm Interim Chancellor of the Oregon University System. Thank you for the opportunity today to talk about on-line learning opportunities in Oregon.

- We used to use the term "distance education" to describe on-line learning and we sometimes still use it today. But the term distance education has been around since the mid-1800s when correspondence courses were first used to reach geographically dispersed populations with the pony express model of mailing materials back and forth. New channels were created in the 20th century, including use of radio first, and then television to deliver distance education, which by the 1970s moved into the computer age, and has now moved into a new period of maturity with sophisticated on-line learning.

- On-line learning continues to be a matter of access: from remediation to advanced dual credit to reaching rural students and those with family/work responsibilities that make traditional classroom challenging, it has opened up education to students who previously had no access to the quality teaching that exists today through technology-enabled learning.

- On-line learning has enabled higher education, and K-12 education for that matter, to reach new students, use new teaching and learning modalities, and most importantly, improve student outcomes. Today, 8.7% of the total credits awarded by OUS institutions are taken as distance education credits. This number is up from 4.8% in 2004-05. In addition, many students are opting for a hybrid approach, taking a combination of distance learning and traditional courses. In 2011-12 nearly 27% of students system wide took advantage of this opportunity.

- Online learning is certainly challenging the "sage on the stage" model of instruction. I like to think about the on-line model, particularly with math labs and "flipped" courses, as incorporating the Montessori philosophy of the teacher as "guide": with pure content, facts, and formulas that can be delivered remotely. And then class time, where teacher and learner are face-to-face, becomes more about connectivity and problem-solving, where the professor "guides" the students through meaning and lessons, providing context, initiating practice, and focusing on theory-building. That's what we mean by flipped courses.

- So on-line learning has led to course redesign inclusive of these flipped courses, things like math labs, MOOCS – or Massively Open Online Courses – are all used as supplemental materials and/or textbook replacement.

- It's important to recognize that the pedagogy of this new version of on-line learning is unique and different, and thus it requires faculty development for the transition, because as I noted earlier, this is very different than the "sage on the stage". Faculty need to flip their teaching style and learn how to use these new learning objects, including web-based tools and content that are free to students and open-sourced.

- Some recent data on the effectiveness of on-line learning has some interesting results that we can learn from. This is from a 2010 Federal DOE metastudy analysis of online learning results in K12 setting (http://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf):

  1. Students did moderately better in on-line than face-to-face settings;

  2. But blended, or hybrid courses, had the best results: better than fully on-line or face-to-face;

  3. Collaborative learning environments where students could interact with one another and the teacher produced better results than solitary environments; and

4. Different learner types were affected distinctly from one another. So we must continue to be vigilant when using on-line learning that we watch for populations that don't have the technological preparedness and the developed learning skills to be as successful as students with more developed technology assets.

- As a professor, one of my favorite possibilities and perhaps the most intriguing is the potential of the international component. We can now teach a joint class on supply-chain management simultaneously in Portland and Tokyo, and convene joint projects in one city. This makes resource sharing possible, with group projects transcending oceans, and virtually bringing the world to place-bound students.

- A neat example from Professor Vivek Shandas at PSU is how he has used Skype to provide 'guest lectures' from internationally renowned scholars based in Mexico, India, China, the Middle East, and other places where he currently has research collaborations. These guest lectures work well because they are consistent with the 'lecture format' used in large classes, and allow for easy interaction between the speaker and student. Since Skype is free, he simply connects his personal computer to the classroom projection system, and uses a microphone for students to ask questions. Dr. Shandas works with his international collaborators on what might be best suited for the class participants and asks them to provide an exercise that helps the students learn about another part of the world, which often includes datasets or policies that students analyze.

- Then Dr. Shandas facilitates a conversation about the differences (and similarities) in addressing environmental challenges from other parts of the world. Student evaluations suggest that they are 'compelled and inspired' by seeing international cases, and that having non-Pacific Northwest examples help students make the connections between the local and global.

- When time zones or other logistical challenges arise, Dr. Shandas uses Youtube or other video conferencing systems to record materials in collaboration with international partners. One recent example is working

with Leibniz University Hannover in Germany. In this case, the time zones made direct student-to-student interaction and lectures challenging, but his German colleague and he found a way to use YouTube and Leibniz University's video recording system to share materials. As part of the class' final group project, students created a video (as opposed to a PowerPoint presentation), in which they addressed different topics relating to urban environmental planning. We will provide you a link to that so you can look at it later.
http://icast.zew.uni-hanover.de/FlowcastsPlayer/FlowcastsPlayer.php?uniqueID=Pme0VZJS&picture=0&HQ=1&sec=0

- Now a bit on the myths and realities of on-line learning. Probably the main myth about on-line learning is that there are very few costs associated with it. This is not correct. On-line learning is not free or cheap to deliver – and it is not a silver bullet.

- Costs include technological platforms that change frequently and thus have replacement and training costs that are not insignificant. Faculty development to learn a new delivery system and pedagogy has time and training costs. And very importantly, the need to provide student supports does not disappear with on-line learning and remains necessary so that students can be successful and get help when they get stuck.

- Traditional classes can't just be thrown online – and be expected to succeed; delivery and approach must be changed, sometimes significantly.

- And the research would suggest that not all students succeed equally. Students from less advantaged backgrounds tend to need more high touch supports that call for traditional student support systems that reach students more directly and build a scaffold of assistance that gets the student where they need to be academically and in terms of acculturating to the rigor of the university environment. These students need to "learn the ropes" and have someone there to help them through the tough times when they fall and need those safety nets to ensure that the stumbling blocks don't force them to leave school.

- Another on-line myth is that courses can accept unlimited enrollment. From the experience with MOOCs we have learned that without "skin in the game," i.e., tuition and connectivity to other students and faculty, completion rates are horrendous. Online learning needs to be used as an approach to IMPROVE connectivity, not reduce it. So that work groups, chats that are beneficial to shy students or those overlooked in the classroom, and collaborative document production, etc, improve student outcomes.

- Online instruction can mean coursework, but it goes way beyond that to include:

  1. online student advising
  2. online writing support
  3. remediation
  4. student affairs opportunities: such as orientations, debt counseling, curriculum mapping; and
  5. We can use online to go beyond our own educational sector and support the pipeline: for example, teacher professional development.

- The other truly radical potential for online learning is use of data analytics, or "big data" to help improve student learning outcomes. We can literally use online tutorials, which are self-paced, to "study" how students are learning. This gives the professor instant feedback: If I'm doing a lesson on the Madisonian design of the American legislative branch, and students can take an online tutorial, which gives me instant feedback, I instantly know: how many students understood bicameralism? Did they see the connection between Madison's theory of federalism, and the contemporary fight between Oregon and the US Attorney General on death with dignity?

- I can literally take these results, provided to me instantly, and adjust my lesson plan for the next day, circling back on what students didn't

understand and gliding past what they did. In short, these tools give us the power to improve student learning outcomes through instant feedback and faculty responsiveness. This is a key power tool for instructors that has the potential to accelerate learning outcomes.

- And these techniques can be applied in all education settings: such as language courses, labs, etc.

- But we also need to be strategic about triaging the order of using on-line learning to meet the instructional, capacity, and budget needs on our campuses. Here are some of the immediate needs for OUS and where on-learning can help us the most:
  1. Prioritize bottleneck courses that can extend a student's time to degree
  2. Prioritize high D, Withdrawl, and Fail courses so that students have the opportunity to take these on-line and be able to move forward towards degree
  3. Prioritize courses used broadly as pre-reqs for popular majors, so again, students can move through appropriately.

- This is where all the cost savings comes in: not only do we improve student learning, we speed up time to degree by eliminating waiting for courses and the need to re-take high D,W,F courses in the traditional classroom. We are wasting precious resources every time a student fails a course: the faculty's time investment, the student's, etc. Why not help them succeed instead using technology, which students are so comfortable with anyway?

- I want to end with this: I recently saw an interesting, tongue-in-cheek description of some of our technology tools in a magazine which was showing how some of our most innovative connection tools today are born out of old standards. This piece in Vanity Fair magazine had a graphic that said, What's Old is New, and showed that your family's annual holiday card letter + the internet = Facebook. In other words, we have always found ways to connect with one another, and technology has simply enabled those connections to be made in new and faster ways.

- But the purpose of these connection points remains the same whether it's

the holiday letter from Aunt Bea or a Facebook post, and the same is true with higher education. In our public universities, we must be constant in delivering high quality, affordable and innovative teaching and experiential learning for our students so that they can be successful after graduation for themselves, for their families, and for the Oregon communities in which they live.

- I will stop here and see if there are any questions. Thank you for your time today.

OUS Annual Participation in Distance Education
2004-05 through 2011-12

Year	OUS Total Annual Student Headcount[1]	Students Taking Exclusively Distance Education Courses		Students Taking both Distance Education and Traditional Courses		Total Credits Awarded at OUS	Credits Taken as Distance Education	
		N	%	N	%		N	%
2004-05	109,003	4,402	4.0%	19,555	17.9%	3,056,503	148,230	4.8%
2005-06	110,491	5,008	4.5%	20,903	18.9%	3,059,056	158,062	5.2%
2006-07	110,192	5,487	5.0%	20,074	18.2%	3,044,004	156,441	5.1%
2007-08	111,917	6,639	5.9%	22,210	19.8%	3,074,605	180,520	5.9%
2008-09	115,959	7,648	6.6%	25,437	21.9%	3,252,190	212,497	6.5%
2009-10	121,882	8,873	7.3%	29,751	24.4%	3,469,157	259,061	7.5%
2010-11	127,223	9,595	7.5%	33,312	26.2%	3,643,339	297,770	8.2%
2011-12	129,677	10,936	8.4%	35,129	27.1%	3,737,466	323,667	8.7%

Includes all distance-delivered courses including correspondence, video, and computer-based delivery. In 2011-12, the definition of distance education changed to include any course where technology is used to deliver instruction to students who are separated from the instructor.

[1] The annual student headcount reports all students enrolled in an OUS institution during any of the four terms of the academic year, counted only once even when a student changes level from undergraduate to graduate during the year.

Source: OUS Institutional Research.

Proportion of OUS Students Taking Distance Education Courses
2004-05 through 2011-12