

Leading change in public higher education

A provost report series on trends and issues facing higher education

TOMORROW'S UNIVERSITY. TODAY.

Innovators Among Us: How UW Faculty are Enhancing Teaching with Technology

March 2013



Drawing on tools ranging from Twitter to 'clickers', online and hybrid class formats, and pedagogical techniques such as 'flipping the classroom', faculty from all three University of Washington campuses are working to support and challenge their students. This report, part of an ongoing series on transformative changes in higher education, highlights the work of 16 UW faculty members who are using innovative methods to engage students in the digital age.

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students when class is over. That never happened when lecturing," said Linda Martin-Morris, a principal lecturer in the Department of Biology at UW Seattle.

"Flipping the classroom opened up possibilities that have made teaching much more exciting and rewarding. To go back to the standard chalk and talk (or more accurately now, 'PowerPoint and talk') with largely unengaged students is now inconceivable," said Douglas Wills, associate professor in the Milgard School of Business at UW Tacoma.

These faculty members are meeting and exceeding the challenges presented by President Michael Young in his October 2012 annual address to the university, in which he urged UW faculty, staff, and students to be leaders and innovators in the changing world of public higher education.

While outlining the vision for [Tomorrow's University Today](#), President Young said, "Students of today are very different from students when most of us were in college. Technology has not only shaped the way they acquire information, but also how they process it, how they learn, and how they develop intellectually." As President Young observed, new technology tools may allow us to expand "the range and number of truly transformative intellectual experiences for our students. We have the capacity to expand dramatically access to our university so that we can reach many more people and change their lives for the better."

Each of these brief profiles shows how students and instructors are benefiting from using technology to enhance pedagogy, and shares advice to peers interested in exploring new tools or class formats. The techniques employed fall into three main categories: online-enhancement of face-to-face classes, hybrid classes in which face-to-face time is reduced by the addition of online components, and courses that are entirely online with the possible exception of occasional face-to-face meetings.

Featured Faculty

[Lekelia \(Kiki\) Jenkins](#)

[Gerry Philipsen](#)

[Matthew Kelley](#)

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[Craig Scott](#)

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[Martha Groom](#)

[Tracey Haynie](#)

The profiles refer to technologies such as learning management systems, new formats such as massive open online courses, and new practices such as flipping the classroom. The definitions below explain these innovations in more detail.

What are LMSs, MOOCs, and flipping?

Learning Management Systems (LMSs) are online integrated software packages — such as Canvas, Moodle, or Blackboard — that enable instructors to manage a course, deliver materials and resources, and promote student interaction. An LMS supports online discussion, quizzing, submission of assignments, sharing of files, and assessment and grading. Following a [pilot program](#), [Canvas](#) was selected as the UW's preferred, centrally supported LMS. Many faculty members still use Catalyst Web Tools as a hub for course materials, but Catalyst is a collection of separate web-based tools for collaboration and communication, not an integrated LMS package.

Massive open online courses (MOOCs) have recently captured the attention of the higher education community, the media, and the public. *The Chronicle of Higher Education* describes MOOCs as “classes that are taught online to large numbers of students, with minimal involvement by professors. Typically, students watch short video lectures and complete assignments that are graded either by machines or by other students.”² Currently, the majority of MOOCs are free and initial enrollments can number in the thousands to hundreds of thousands, with students participating from all over the world. Typically, only a fraction of students complete the entire course. Most MOOCs are the result of partnerships between universities or professors and educational companies that provide the platform. The UW has been partnering with one such company, Coursera, since July 2012. UW faculty have offered or are developing [12 UW courses on Coursera](#). The UW was the first university in the U.S. to offer a credit option for MOOC students to apply and pay for enhanced, instructor-led versions of the free, open courses.

Flipping the classroom refers to a collection of practices that increase active learning by allowing students to review lectures or course materials at their own pace, freeing up class time to grapple with the most challenging material in ways that rely on faculty expertise. Technologies, such as the UW-supported lecture-capture tool [Tegrity](#), now make it possible for faculty and students to benefit from active learning, which research shows is more effective, by providing accessible alternatives to the in-class lecture, out-of-class homework model. In the flipped classroom, students review materials or watch lectures at home or in the library, while class time is spent on case studies, group projects, complex problem sets, and collaborative work, with the goal of increasing student learning through active engagement. In this model, faculty members can use class time to focus on areas that students find the most challenging.

UW resources for faculty

UW-IT offers [Learning Technologies Workshops](#) for tools such as Canvas, Tegrity, and Google Apps.

The UW Seattle Center for Teaching and Learning offers [workshops](#) and [Faculty and Professional Learning Communities](#) (FPLCs), as well as extensive [resources on flipping](#), including a [video on lecture capture using Tegrity](#) produced by the Office of the Provost's 2y2d Initiative. The 2y2d Initiative has also created a [video about faculty and student experiences with the Canvas LMS](#).

UW Tacoma's [Faculty Resource Center](#) hosts the [iTechnology Fellows Initiative in Innovative Course Redesign](#), in which faculty 'Tech Fellows' redesign an existing course for the online environment.

UW Bothell's [Learning Technologies group](#), which bridges Information Technologies and the Teaching and Learning Center, offers the [Hybrid Course Development Institute](#) for faculty. The program is structured as a hybrid course so that faculty participants can gain insight into the experience of students taking hybrid courses.

Continuing the conversation

We welcome your comments, questions and suggestions. Please email edtrends@uw.edu.

Categorizing the Continuum from Face-to-Face to Online

Methods of categorizing course formats vary, but a basic approach includes:¹

- ▶ *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.*



"I don't do basic content delivery in my classes. I think that's really a waste of students' time."

Lekelia (Kiki) Jenkins, Assistant Professor, School of Marine and Environmental Affairs, UW Seattle

Lekelia (Kiki) Jenkins: Canvas and clickers...with a flip

Dr. Jenkins, an assistant professor in the School of Marine and Environmental Affairs at UW Seattle, uses a variety of technology tools, including the Canvas learning management system and portable response systems using '[clickers](#)' to enhance her introductory course "Society and the Oceans" (SMEA/SIS/ENVIR 103).

Value of Canvas: Dr. Jenkins says she likes the Gradebook feature of Canvas because "it's not too complicated." Her students "know all the time where they are, what their grade is at that point in the quarter. It is super helpful."

Clickers: "Using clickers is a way of keeping students engaged and making class more active. You can see that when they use them it causes a bit of a reboot, and they get more energy. I also use the clickers for my midterm and final review and that helps students see where they stand with the rest of the class. Also I can see, okay, for this particular lecture, students really don't have a strong understanding of this concept or that concept, and that tells me I need to dig in more here."

Flipping the classroom: "I don't do basic content delivery in my classes. I think that's really a waste of students' time. They can sit down and read about and understand definitions and all of those things. The next step is: so what, who cares, and how does this change the way you operate in the world? It's really just about giving content to the students ahead of class in such a way that they can do higher-level Bloom's type learning objectives with it and apply that synthesis when they come to class."

Advice: "Go to workshops! The Center for Teaching and Learning (CTL) hosts the [Large Class Collegium](#) at the beginning of each year. And what's wonderful is you're meeting other professors who are using these technologies at UW, and you're hearing their pros and cons as opposed to the ideal. Because the reality and the ideal are different. People say if you do active learning then all of these fabulous things are going to happen — yes and no, you're also going to hit roadblocks. So it is good to know in advance what the reality is, and to hear from someone else: how difficult was this, are you glad you did all of these things at the same time, what would you recommend? I think that's invaluable for deciding which things you want to start with. And then go slowly."

Links: Dr. Jenkins' faculty [web site](#)

More information on Bloom's Taxonomy of Learning Objectives (origin, 1956; revised 2000): "[How to Create Course Objectives Using Bloom's Taxonomy](#)" and "[Bloom's Taxonomy](#)"

First IV: Faculty Institutes for Reforming Science Teaching. Dr. Jenkins has participated in this NSF-supported project, which seeks to reform and transform undergraduate biology education by training postdoctoral scholars in innovative and engaging active learning techniques.



Gerry Philipsen: Focusing on the text, not the commute

Dr. Philipsen, professor of Communication at UW Seattle, has taught at the University of Washington for more than 30 years and now teaches two online courses — "Introduction to Communication II" (COM 202) and "Cultural Codes in Communication" (COM 484). He sees pros and cons to both the online and face-to-face class formats, but has carefully developed his online courses to cultivate student engagement and learner success.

Benefits for students: "The self-paced format (at least of my courses) provides an alternative pacing that some students find to be helpful. Student time is devoted exclusively to learning rather than transportation to and from campus. I do not see any negatives for students, which is not to say that online courses are equivalent in every way to other formats, only that for some courses this is a perfectly suitable way to learn the material."

"Student time is devoted exclusively to learning rather than transportation to and from campus."

Gerry Philipsen, Professor,
Communication, UW Seattle

Benefits for the instructor: "Opportunities to earn extra income; to reach students you would not otherwise reach; and to develop courses in a format that is quite focused, in terms of setting out readings, materials, and experiences, without having to adapt to a physical classroom and the presence of people interacting in that space. I am a great fan of meeting face-to-face, but face-to-face also has its downsides, and my online classes eliminate those downsides."

Is online equivalent to face-to-face? "It depends on the given student and the course material."

Advice: "I specifically developed my courses so that they would intensify student engagement with the required readings, and this was extremely successful. I did not pay attention to getting students to interact with each other, but rather zeroed in on getting students engaged with the text, and in a very powerful way. However, in each of my two courses, there is one assignment in which the students must interact with other people as part of the course assignment. I would advise faculty initiating online courses to try to develop the ways that facilitate the intensive engagement with text (broadly defined) and not to feel they must use newish technologies, some of which distract from serious engagement with text. I am, of course, a bit of a throwback, but this has worked very well for me — and for my students! At the same time, I do use, to very good effect, some videos, that the students can view at their leisure and, as necessary, re-view."

Links: Dr. Philipsen's faculty [web site](#)



"I am able to teach at times that are most suitable to my own rhythms — this means I can get my writing and research done during daytime hours (when collaborators are around, when the library is open, when computer labs are available, etc.). I notice considerably more flexibility in my research schedule."

Matthew Kelley, Assistant
Professor, Urban Studies,
UW Tacoma

Matthew Kelley: Teaching online frees peak hours for research

Dr. Kelley, an assistant professor in the Urban Studies program at UW Tacoma, has been teaching online for several years and recently started to use the Canvas learning management system.

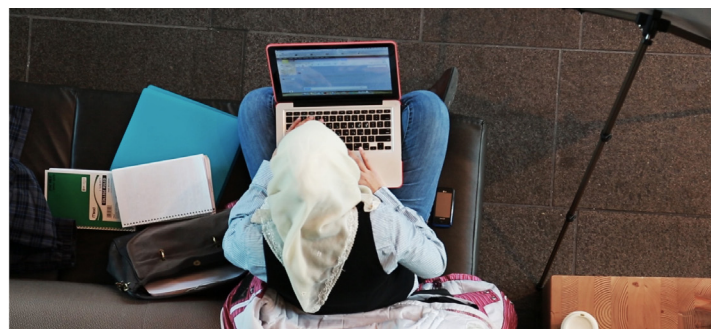
Value of Canvas: "Canvas has been great. Its analytics are a significant improvement" over other learning management systems.

Online flexibility: "I am not tethered to a particular place or a particular time in order to deliver my curriculum. Using little more than a mobile phone or tablet, I can participate in the class, grade assignments, or troubleshoot via email."

Benefits for the instructor: "I am able to teach at times that are most suitable to my own rhythms — this means I can get my writing and research done during daytime hours (when collaborators are around, when the library is open, when computer labs are available, etc.). I notice considerably more flexibility in my research schedule."

Benefits for students: He appreciates "getting to hear students' voices in a way that is not possible in the face-to-face environment."

Advice: "Design an explicit and logical schedule" so that students are clear on due dates and expectations. He adds, "Most likely, the first two times you teach a new online course it will be difficult (more work than teaching face-to-face), but after the kinks are worked out, it does get easier and more rewarding."





"It is important to use the fantastic technology that is available to us to try to improve our classes."

Hedwige Meyer, Senior Lecturer,
French, UW Seattle

Hedwige Meyer: Hybrid language classes let students pause, rewind at home, and practice more in class

Ms. Meyer is a senior lecturer in French and the 100-level French Language Coordinator at UW Seattle. She expanded access to her French classes through a hybrid format — shifting from five days a week in the classroom to a 3x (classroom) + 2x (online) model using Moodle, a learning management system. In structuring the class, she says, "I have designed activities so that the vast majority of the language input is done online and class time is reserved for practicing the newly acquired skills."

Benefits for students: "The advantage of these online lessons is that students can pause, rewind, or replay the lesson as many times as they wish. Of course, you cannot pause your instructor in class or ask him or her to repeat the same thing five times; therefore, students have commented positively on this part of the course."

Student reactions: "Students are happy with it and their progress is definitely satisfying."

Increasing access: "The hybrid course allows French instructors to teach two sections of 18 students instead of just one section of 24."

Improving classes: "It is important to use the fantastic technology that is available to us to try to improve our classes. The material covered in French 100 does not change, even if you change textbooks (French grammar and vocab is always pretty much the same!), but the way we present it can change and improve."



"Trust students — help them be more active in and accountable for their learning. Encourage transformative thinking by faculty — help them realize that there are often better ways to give students the benefit of their expertise than by lecturing."

Craig Scott, Professor, Medical
Education and Biomedical
Informatics, UW Seattle

Craig Scott: Team-based learning prepares medical students for interdisciplinary team-based practice

Dr. Scott, a professor in Medical Education and Biomedical Informatics, and Director of the Northwest Consortium for Clinical Assessment in the School of Medicine, UW Seattle, has been working to create classroom environments in which faculty members can better share their expertise and insights than by lecturing. Moodle, a learning management system, is used to administer 'answer until correct' class-prep feedback quizzes at the beginning of class, which leads into processes that promote more active student participation during class. He says that [Team-based Learning](#) (TBL), a form of small-group learning that promotes collaboration, active learning, and critical thinking, has several key attributes that make it an attractive supplement and/or alternative to lecturing.

Benefits for students: As Dr. Scott described in an [October 2012 Ignite! presentation](#), team-based learning better simulates the real-world experience of practicing medicine. He noted, "Medicine is a discipline of teams, and we have never concentrated on teamwork as much as we are now. We recognize that every facet of medicine involves individuals working together, and we're trying to start students off with team-based learning. One of the problems we're trying to address is the lack of value that the classroom has been adding for many students. We're now venturing into team-based learning where they're accountable for their pre-class preparation; students are choosing to come to class to participate in small teams." He added, "lectures are largely dispensed with. It gets very, very noisy if it works right."

Student reactions: "Students are certainly more engaged; they uniformly prepare better for class. TBL is coming to be viewed as a qualified success both by students and by initial faculty adopters, at least to the extent that most seem to like it relative to exclusive lecturing. Team-based learning has the potential for making better use of student's most valuable resource — *time*."

Advice: "Trust students — help them be more active in and accountable for their learning. Encourage transformative thinking by faculty — help them realize that there are often better ways to give students the benefit of their expertise than by lecturing."



"If they cannot come to me, I will bring the training to them."

*Belinda Louie, Professor,
Education, UW Tacoma*

Belinda Louie: Bringing training to busy working teachers

Dr. Louie, a professor in the Education department at UW Tacoma, was a 2012 UW Tacoma Tech Fellow and developed "Methods and Curricula in Literacy Instruction for English Language Learners" (TEDUC 564) into an online course. It is one of five required courses for teachers who would like to be certified in English as a Second Language in Washington state.

Access: "Online courses allow teachers flexibility and increase their access to much-needed professional development. If they cannot come to me, I will bring the training to them."

Efficacy of online instruction: "I see online courses as an alternate form of course delivery, neither superior nor inferior to face-to-face classes, just different."

Benefits for students: "Teachers need the professional development; however, it is difficult for them to come to campus to take courses after a long day of work at school. Teachers in smaller districts, such as the Yakima Valley, have limited professional development opportunities."

Advice: "Have clear goals for converting a face-to-face class to online. It takes much mental energy and hard work to launch the first online course."

Links: One of the videos Dr. Louie uses in TEDUC 564, in which she interviews a local expert on teaching English as a second language <http://vimeo.com/46115791>



"My goal is to try to find a way to use the more informal communication technology tools to help students understand that I am having a conversation with them about their paper, not editing it."

*Riki Thompson, Assistant
Professor, Interdisciplinary Arts
and Sciences, UW Tacoma*

Riki Thompson: Ditching the red pen for personalized video "veedback" on student writing

Dr. Thompson is an assistant professor of Rhetoric and Composition in the Interdisciplinary Arts and Sciences department at UW Tacoma. In her writing courses, she has often used technology tools such as Camtasia to grade student essays using a form of video feedback that has been dubbed 'veedback'. Dr. Thompson and a colleague recently published an article in *The Journal of Interactive Technology and Pedagogy* (JITP) about their experiences with the tool, concluding that "screencast video feedback serves as a better vehicle for in-depth explanatory feedback that creates rapport and a sense of support for the writer than traditional written comments."

The goal: "My goal is to find a way to use the more informal communication technology tools to help students understand that I am having a conversation with them about their paper, not editing it. I'm trying to create a change around how we teach writing."

Benefits for students: "The main thing is that this audio format gets rid of the red pen in feedback. It moves to a conversational format. When I give feedback through veedback, students say, 'I can hear you talking to me,' and they didn't seem to be as stressed. I knew that there was something there; that I was making a difference. It's motivated me to use this tool for this purpose. It feels like a more intimate connection. It's also changing the power dynamic."

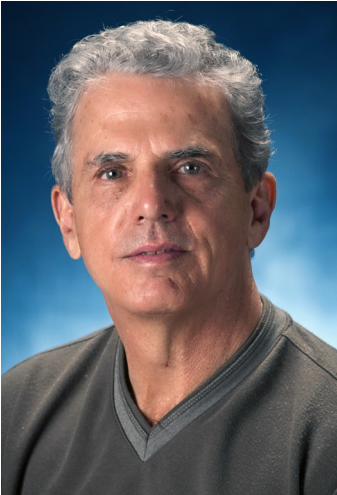
Challenges: "Flexibility and having tools that allow mobility have probably been the biggest challenges with using audio feedback tools for me. The other problem was saving files in a way that was accessible to everybody. At Tacoma, there are still a lot of students who don't have the latest tools at home, or they're still working on a really old system that doesn't have new media cards."

Advice: "Get on the radar of the technology people on campus, and find out who your peers are. Don't expect that it's going to take less time; there's a learning curve and it might take more time. Be flexible and check in with the students throughout the quarter to see if it's working and if you need to make changes. Mid-quarter assessment is vital when using new tools. You have to be willing to say, okay, we're going back to paper (or other traditional means). Because if they're not getting it, students fail to learn the content, and that's not worth it."

[Links:](#) JITP article "[Talking with Students through Screencasting: Experimentations with Video Feedback to Improve Student Learning](#)" with co-author Meredith Lee

The [UW Tacoma Teaching Forum blog](#), created and updated by Dr. Thompson

Dr. Thompson's faculty [web site](#)



"You need people to help faculty bridge from traditional methods to technology, because you can't do it alone unless you're really, really savvy."

Arnold (Arnie) Berger,
Associate Professor, Science and
Technology, UW Bothell

Arnold (Arnie) Berger: Saving students rush-hour headaches

Dr. Berger, an associate professor in the Science and Technology program at UW Bothell, is the degree coordinator of Bothell's new Bachelor of Science in Electrical Engineering. The program's capstone courses (BEE 495 and 496) are partially conducted online and are designed to simulate real-world consulting projects. Dr. Berger uses the meeting software WebEx "to do some teaching online, to give lectures. I use it with several of my capstone teams who cannot come to campus for our regular project status meetings."

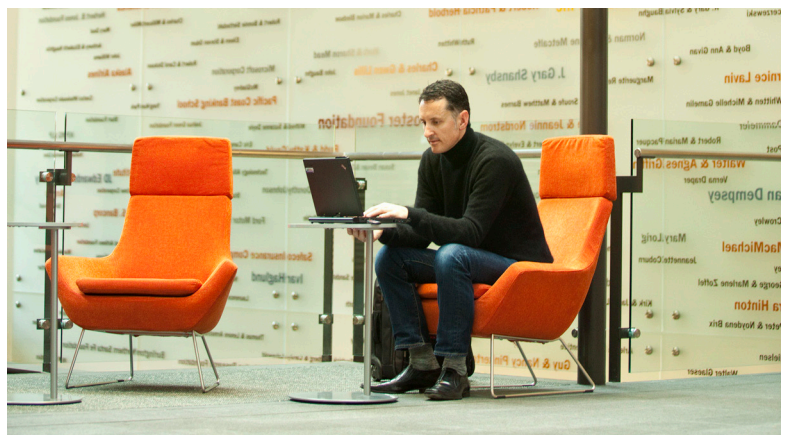
Benefits for students: "In terms of educational outcomes, online has a lot to offer. Particularly, I think, for the non-traditional students. Many of our courses here at Bothell are taught late afternoon, early evening, to accommodate adults. But where we are located (the intersection of SR-522 and I-405) is just a rush hour nightmare. Students are trying to get here from their jobs at the worst possible time of day. So anything we can do to make it easier for them to manage their lives and attend classes has got to be good."

Student performance: Once when he taught both online and face-to-face sections of a computer architecture course, he was surprised by the results. "The online students did slightly better overall than the students who were in the classroom with me. I found that to be really depressing!" In the capstone courses, he says, "They go from being a student to an engineer over the course of two quarters."

Efficiency: "For certain kinds of classes, such as lectures and project status meetings, there's really no difference between sitting in a room and discussing a project and doing it online. In fact, in some ways online is more convenient. Industry learned this years ago, when airline travel became very expensive and physically taxing."

Flexibility: He says that when using this technology it's important "not to have any rigidity, to use it as is appropriate. At different phases of a project, it makes sense to meet in person. Once it's going, meeting online is quite simple. At the beginning, face-to-face is more effective."

Advice: "You need people to help faculty bridge from traditional methods to technology, because you can't do it alone unless you're really, really savvy. Also, there needs to be a strong commitment from the university to support the effort. Without that commitment, you're on your own, and you're the one with the arrows in your back."





"It's not really about the technology."

Douglas Wills, Associate Professor, Milgard School of Business, UW Tacoma

Douglas Wills: No nostalgia for chalk and talk

Dr. Wills, an associate professor in the Milgard School of Business at UW Tacoma, has been flipping his economics classes — both for undergraduate and MBA students — for years. As a UW Tacoma Tech Fellow, he also developed an online "Introduction to Microeconomics" (TECON 200) class during summer 2012.

Benefits of flipping: "Flipping the classroom opened up possibilities that have made teaching much more exciting and rewarding. To go back to the standard chalk and talk (or more accurately now, 'PowerPoint and talk') with largely unengaged students is now inconceivable."

Benefits for the instructor: "I am much more involved in my classes, not only because the interaction with students is so much more useful and enjoyable, but there are so many more possibilities."

Advice: "If you're thinking of doing it to improve your teaching, then be prepared for a lot of investment of time and be prepared to innovate and experiment. There is a lot of value in learning from others about the technology (and no, it's not really about the technology) and basic principles of hybrid/online."

Why try it? "You only learn how to do this well by doing it."



"I find it difficult to have any meaningful discussion in a large class; frequently, just a few students participate and the majority are silent. By adding an online component where students worked in small groups, I believe more students were much more engaged in the discussion."

Nita McKinley, Associate Professor, Interdisciplinary Arts and Sciences, UW Tacoma

Nita McKinley: Increasing student participation by going online

Dr. McKinley, an associate professor of Psychology in the Interdisciplinary Arts and Sciences department at UW Tacoma, was a 2012 Tech Fellow and taught "Lifespan Development" (TPSYCH 220) as a hybrid course in 2012. She says: "For me, this was an intermediate step toward learning to do it online" and as of winter quarter 2013, she is teaching the course completely online. She adds that she plans to convert her class "Body Image and the Psychology of Appearance" (TPSYCH 405) to a hybrid course next year.

Benefits for students: "I find it difficult to have any meaningful discussion in a large class; frequently, just a few students participate and the majority are silent. By adding an online component where students worked in small groups (five to six people) to discuss a topic, come up with a position, and write a group position paper together, I believe more students were much more engaged in the discussion."

Student learning: "My impression was that more students were engaged in discussion. I also thought the papers produced were equivalent or better in quality to papers I get in other classes."

One successful approach: "I found the FAQ discussion board useful. It meant I didn't have to answer the same question multiple times by email. It did take some training on my part to get students to post questions rather than email me."

Why try it? "For me, developing the online course has been very exciting and challenging. I've enjoyed learning the technology and thinking about my teaching in new and creative ways."





Linda Martin-Morris: Flipping lecture content enlivens large classes

Dr. Martin-Morris, a principal lecturer in the Department of Biology at UW Seattle, has flipped her classroom for her large Biology courses. She uses the Tegrity lecture capture tool to create online materials and uses class time to assist student groups in synthesizing information.

Student reactions: “My students report enormous gains in confidence and understanding, but also that they feel they had to spend way too much time getting there.”

Her learning curve: “Quarter 1: scared and ineffective. Quarter 2: much better but still received a very challenging collegial evaluation. Quarter 3: I’ve got this down. I’m in quarter 4: still learning how to improve, which is fun.”

Assessment: “I am excited to assess more effectively, including longitudinally; how do these students perform in subsequent classes?”

Classroom dynamic: “Every day I walk into a very lively and exciting classroom that challenges me but challenges students at least as much. That’s exciting. Most days I have to remind students when class is over; that never happened when lecturing.”

Advice for others interested in flipping: “Do not over-lecture. Be ready for a little blowback. This type of learning is challenging for students and you have to be ready to sell it every single day.”

“Every day I walk into a very lively and exciting classroom that challenges me but challenges students at least as much. That’s exciting.”

Linda Martin-Morris, Principal Lecturer, Biology, UW Seattle



Alissa Ackerman: Criminal Justice...in 140 characters or less

Dr. Ackerman, an assistant professor of Social Work at UW Tacoma, was a 2012 UW Tacoma Tech Fellow. She has used Twitter in and out of the classroom to engage students in a broad conversation about criminal justice issues.

Twitter: “Setting up Twitter was the easy part for all. Operating Twitter was a little more difficult for students. I created a ‘how to’ document for them to follow, which seemed to shorten the learning curve. Within a week or two, most students were using Twitter effectively.”

Student reactions: “Student reactions have been mixed. Some students love the instant interaction.”

Benefits for students: “I believe that Twitter enhances student learning. This is especially true when I have invited ‘guest lecturers’ to class via Twitter. I have done this with authors of books, journalists, and other scholars. This allows students to benefit from the reactions of others in the field in real time. Another added benefit occurs when the students ‘tag’ authors of articles and the author responds directly to them.”

Brevity requires focus: “I believe that having to condense one’s thoughts into 140 or so characters provides focus. Some students welcomed this challenge, while others would much prefer the traditional essay.”

Leveraging social media expertise: “Students already know how to use social media, but learning how to do so in a professional and articulate way can only benefit them in the long run!”

Advice to other faculty interesting in using Twitter: “Be patient and have a lot of structure regarding what you want from students.”

Links: [How-to document about Twitter](#) Dr. Ackerman created for her students

“Students already know how to use social media, but learning how to do so in a professional and articulate way can only benefit them in the long run!”

Alissa Ackerman, Assistant Professor, Social Work, UW Tacoma



"Because of the large size of the classes and the physical separation of the students, the sheer amount of (attempted) learning and self-motivation is stunning. In the first day of my course, more people watched my course-introduction video than have ever taken one of my conventional courses."

Dan Grossman, Associate Professor, Computer Science & Engineering, UW Seattle

Dan Grossman: Creating a MOOC is like writing a textbook

Dr. Grossman, an associate professor in Computer Science & Engineering at UW Seattle, chose to make his first online class a MOOC. "[Programming Languages](#)" is a Coursera adaptation of a course he has taught several times already at UW. Dr. Grossman is also helping coordinate the adaptation of four other courses from UW Computer Science & Engineering to MOOCs, working with instructors and TAs to learn best practices for teaching MOOCs, and for the Coursera platform.

Why a MOOC? "For me, it is largely about being passionate about the course material and how to present it. Given this passion, why would I not want the largest rooftop I can find from which to shout?" More than 65,000 students signed up for "Programming Languages" on Coursera, and 3,500 completed the first two assignments. "I try to compare the impact to what I might have from writing a textbook; the ability to reach learners via videos, assignments, and an online community is exciting. It is an opportunity for UW and for me personally to exhibit educational leadership."

Educational value of MOOCs: "With so many students, some will have a transformative educational experience, others will learn very little, and most who express some interest will not end up participating. To compare it to a conventional course where students get personal attention, have significant financial investments, and have shared background as part of a coherent curriculum, is difficult. I instead prefer to compare it to writing a textbook. Just as many people touching a book do not read it and those who read it have a wide range of understanding as a result, the learning in MOOCs defies description."

Student reactions: "Because of the large size of the classes and the physical separation of the students, the sheer amount of (attempted) learning and self-motivation is stunning. In the first day of my course, more people watched my course-introduction video than have ever taken one of my conventional courses."

How he sees his role: "Like a book author, I am primarily making content available and providing learning opportunities. I do interact on the discussion forum as time allows, but it is often more as a firefighter than as a pedagogue."

Student learning: "The amount of student learning is difficult to judge, but even if we grant, as others would vigorously contend, that it significantly trails conventional courses, is that the right comparison? What if many of the students spending their evenings participating in my Coursera course are doing so instead of watching reality television or going shopping?"

Advice: "It can be deeply rewarding, but have no illusions. No matter what you do, many students will complain and many more will not finish."

"It is an enormous amount of work. To continue my favorite analogy, it is perhaps as much work as writing a textbook. Make sure you have a great course and a solid set of materials that will translate reasonably well to an online setting. Start early — months early."

"Work with TAs who share your passion for the material and for the excitement and novelty of MOOCs. I may be the talking head in the videos getting all the credit, but I have a small but unbelievably fantastic team keeping things afloat."

Links: Dr. Grossman's faculty [web site](#)



"It allows me to keep in touch with [students] while they're in the field. I'm not with them, but I know what they're doing."

Mabel Ezeonwu, Assistant Professor, Nursing and Health Studies, UW Bothell

Mabel Ezeonwu: Staying in touch with students in the field

Dr. Ezeonwu, an assistant professor in Nursing and Health Studies at UW Bothell, taught "Community Health Nursing" (BNURS 409B) as a hybrid course in Summer 2012. It's a work in progress, she says, "I'm still tweaking it a lot."

Why hybrid? "I just wanted to do something different. Something exciting, something that's not the status quo anymore."

Who are the students? "We do have a lot of non-traditional students. Students that are working a lot, that work full time, that have families. Some of them commute quite a bit."

Benefits for students: "It's good for them, but for some of them it's challenging because some of them are not that computer savvy. It is actually good in a way, on the other hand, because this is exposing them to the realities of life in the 21st century, that you have to get in the ball game. I haven't seen any negative responses. Students have really loved it. This model of teaching not only supports students' synthesis of in-class and out-of-class activities through critical thinking, it also increases student-to-student interactions, and encourages full participation by all students."

Student reactions: "Overall, I've seen positive attitudes about it, especially in terms of doing the actual interactions online. Those online components are always very interactive, and students tend to enjoy it, and I enjoy it too, so I think it's something positive."

The hybrid format: "It allows me to keep in touch with them while they're in the field. I'm not with them, but I know what they're doing." Dr. Ezeonwu noted that although she still talks to students in the field, additional online communication makes it easier for her to know exactly "what they're doing and what their difficulties are and some of the challenges that they face. It's no different from the face-to-face conversations we have in class, but we are doing it online, which makes it fun."

Online discussions: "Conversation is actually elevated to a much higher level. There are some students that are quiet students in class, that don't talk much in the classroom; I used to be one of them. But giving them this opportunity to do this online — you go out and discuss your activities, you discuss what you learned out there in the field, and come back and talk about it online — it gives everybody the opportunity to respond. That participation piece is huge for me. And not only that, the way that students are participating is much more solid because the online discussions are asynchronous. In other words, they are thinking. They are doing their homework before they talk online. It gives them a lot of time to be articulate in responding to my questions, as well as to their peers' questions."

Advice: "For hybrid you have to be very thoughtful. If you do something that doesn't work, you lose your students. So you have to be very careful in terms of engagement. You have to find a way to engage that conversation, and the level of engagement will depend on the kinds of questions you pose."

The power of perseverance: "The first time you try something new, it doesn't have to be perfect. My course has evolved over the quarters and over the few years I've done it, and so has my comfort level. I feel I can do this in my sleep now. So that's all about trying — you try it, you explore it, you do it, and it goes very well, which is great."



Martha Groom: Writing for Wikipedia raises the stakes and the quality of student writing

Dr. Groom is a professor of Ecology and Environmental Studies in the Interdisciplinary Arts and Sciences department at UW Bothell with an adjunct appointment in the UW Seattle Biology department. Six years ago, she began asking her students to create and edit Wikipedia entries and has continued to do so ever since. Why? Students benefited, she says, “Instead of a paper that only one person read and commented on, they could strive to meet standards higher than the typical entry, and have their efforts serve a common good.”

Why Wikipedia? “At that time, assigning students to post or edit entries on Wikipedia was a rare thing to do, but it provided a tangible, real world reinforcement of many principles of good research and writing habits that I, and all my colleagues, try to instill in our students.” These include:

- ▶ The importance of careful screening of and attribution for source material used in their synthesis
- ▶ Critical evaluation of competing ideas and presentation
- ▶ Thoughtful development of an argument and presentation of evidence
- ▶ Clear, concise writing

Student reactions: “Students found this an immediate challenge that pushed many to do stronger work than I had typically seen before. It was one thing to do a quick job for a term paper assignment, and another to put it out there for the world to see and judge. In interacting with the world of Wikipedians, many students had to confront challenges about their use of sources, their construction of a summary, or biases that were left unchallenged in their pieces. The larger Wikipedia community had precisely the same principles for what made for a ‘good’ post as we profs did — and these interactions added a layer that spoke far louder than grades and faculty comments on papers.”

Online assignments can help face-to-face class: “I rely on students doing a lot of reading out of class, but I also try to focus their work by giving them questions or tasks to complete before our discussion time in class. Sometimes that is by beginning the discussion online — to get the big ideas and concerns out there, or to share information the students have found before class so we do not spend time reporting, but instead spend our time in analysis and synthesis. Essentially, I am pushing for higher-order thinking in class, supported by the initial work comprehending and organizing ideas out of class.”

Her objective: “Helping students see the value in upping the quality of their work is my goal, and I still find that the very public and open nature of Wikipedia entries helps achieve this goal.”

Students see the value: “Students initially found the Wikipedia assignment intimidating, but I mostly got very positive feedback (including on anonymous evaluation forms). The fact that the assignment has a real-world outcome is most often mentioned, but others mention that it has helped them really understand the value of careful consideration of what makes an appropriate source, or other aspects of creating a sound synthesis of complex ideas.”

“Helping students see the value in upping the quality of their work is my goal, and I still find that the very public and open nature of Wikipedia entries helps achieve this goal.”

*Martha Groom, Professor,
Interdisciplinary Arts and
Sciences, UW Bothell*



"Many students said they found the reminders about due dates to be extremely helpful, and the other thing they specifically mentioned loving were the motivational texts. It gave them a little boost to study harder, or go find a study group to meet with."

Tracey Haynie, Lecturer,
Interdisciplinary Arts and
Sciences, UW Tacoma

Tracey Haynie: Keeping students on track with "electronic nudges" through their mobile devices

Ms. Haynie, a statistics lecturer in the Interdisciplinary Arts and Sciences department at UW Tacoma, is teaching the first online math classes at the Tacoma campus, with one section of pre-calculus, and another of section of introductory statistics. She notes, "As most people would agree, math is a tricky subject, and we knew it would be a challenge."

Keeping students on track: She has been piloting a tool called Persistence Plus, which gives students electronic 'nudges' via their mobile device — about due dates, upcoming quizzes and exams, and motivational text messages. She says, "The initial set up was not too difficult."

Student reactions: "I have only heard positive feedback from students. Many students said they found the reminders about due dates to be extremely helpful, and the other thing they specifically mentioned loving were the motivational texts. It gave them a little boost to study harder, or go find a study group to meet with."

Access: "With a growing number of military personnel and older students returning to earn a degree, we felt it was critical to offer them a variety of options to fit their schedules and lifestyles."

Advice: "Just try it! It doesn't have to be permanent, and if you try it and decide your students don't benefit from it, then you can scratch it."

Links: *Educause Review* online article about the pilot, "[Analytics, Nudges, and Learner Persistence](#)", by Tracey Haynie, Jill Frankfort, Kenneth Salim, and Colleen Carmean



Notes

1. For 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-uw>.

2. *The Chronicle of Higher Education* maintains an extensive website of news and trends on MOOCs, "What You Need to Know About MOOCs" at <http://chronicle.com/article/What-You-Need-to-Know-About/133475/>.