ONLINE CL@SSROOM

IDEAS FOR EFFECTIVE ONLINE INSTRUCTION

Universal Design in Online Courses: Beyond Disabilities

By Thomas J. Tobin, PhD, MSLS, PMP

The concept of universal design for learning (UDL) was initially developed in order to provide equal access to learning opportunities for students in face-to-face courses. It has since been adapted for many learning situations, including online courses. However, there is still a widespread perception that UDL is appropriate only as an accommodation for learners with disabilities. Faculty members are usually not clear about when to adopt universal-design strategies, what kind of work UDL entails, and what benefits come out of the process for students and instructors.

A tale of two professors

Professors Carrie Oakey in the music department and Gene Poole in the biology department wanted to enhance their existing online courses beyond the usual lecture notes and a few PowerPoint presentations. They went to the university's teaching and learning center and learned that the law requires accessibility options for nontext multimedia: usually captions or a text-only version.

Professor Oakey and a staffer from the teaching-and-learning center recorded two videos: one of herself and her graduate students playing a Bach concerto, and another of a graduate student singing a Bach cantata. Oakey uploaded the videos into Week 3 and Week 6 of her online Music 101: The Art of Listening course and created two assignments, asking her students to write a two-page response paper about each performance. Oakey wondered how she would create captions or other access methods for the videos, because the audio content is the whole point of experiencing the videos.

Professor Poole brought one of his 80-slide PowerPoint presentations to the teaching-and-learning center, where he worked with a staffer to chop up the content into eight 10-slide modules. In order to add an audio component, Professor Poole wrote out a script of what he would say while each slide was displayed to students; then, Poole recorded his audio from the script. The teaching-and-learning center staff created eight movie files that contained Poole's slides, his voice-over, and closed captions (based on

What Is Universal Design for Learning?

Universal design for learning is a framework for designing multiple ways for learners to experience content, interact, and engage. The Center for Applied Special Technology (CAST) puts UDL's three principles this way:

- *Multiple means of representation*, to give diverse learners options for acquiring information and knowledge

- *Multiple means of action and expression*, to provide learners options for demonstrating what they know

- *Multiple means of engagement,* to tap into learners' interests, offer appropriate challenges, and increase motivation (CAST, 2013)

Poole's script). Poole uploaded the eight movies into Unit 3 of his online BIO 337: Cell Biology course, along with the scripts themselves to act as text-only alternatives. He then set up a discussion forum to ask his students to write their descriptions of the processes that Poole had outlined in his videos. Poole spent nearly six hours doing the recording, editing, and selecting processes to create one total hour of finished movies, and he wondered whether his investment of so much time would be worth it if he were to update the rest of his materials in a similar way.

Beyond disabilities

Universal design for learning goes beyond just assisting those with disabilities and offers benefits for everyone involved in the online learning environment. By representing information in various ways, an online course designed via UDL provides multiple paths through the course: students can start by watching a short video clip of their professor, print out the text-only version while they are working on an assignment, and then watch the video again with captions turned on while they are studying after the kids have gone to bed.

UDL in online courses also solves what might otherwise be a big problem: noncomputer devices. More online learners today own mobile devices (such as smartphones and tablets) rather than computers (desktops and laptops) (Smith et al., 2011). When profs provide versions of content that are bandwidth-friendly (e.g., text-only scripts or caption sets), learners can consume the content based on their devices' capabilities. Providing multiple versions also frees learners

from being dependent on one specific application in order to work with the materials (e.g., requiring students to have PowerPoint versus hosting a short video of the same content on YouTube).

Universal design also fosters creativity and choice for all online learners. By offering students alternative ways of responding to assignments, profs can move beyond the usual "write an essay" method of demonstrating the skills and knowledge that learners acquire. Even providing one alternative for each assignment expands learners' paths through the course. For example, students might write a traditional essay or produce and submit a video that meets the same content requirements.

UDL also helps keep online learners engaged and motivated—two areas crucial to online student retention. Online students who stop participating cite disengagement with the material as a primary reason, second only to time-management issues (Willging and Johnson, 2009). In universal design, online courses are "salted" throughout with messages and content that ties current activities back to prior learning and forward to terminal course objectives. By showing learners why they are performing course tasks, UDL-rich online courses guide all students to be more involved in constructing their own learning.

And, of course, UDL benefits learners with disabilities, who, when they are permitted to select their own paths through the course materials, are better able to experience the content, demonstrate their knowledge, and stay on task.

Back to our two profs

So, what about Carrie Oakey and Gene Poole? The videos of music performances in Oakey's Art of Listening course couldn't be transcribed into text. The aim of UDL is not to create a text version of all multimedia but to offer multiple paths to the content where it's possible. Because the audio is the key component of each performance, and because Oakey's goal is for students to develop a critical ear, the very definition of her course precludes full participation by a learner with a hearing disability.

In this case, Oakey isn't required to create an accommodation at the level of her course. However, if a hearing-disabled learner wanted to fulfill an arts course requirement, there should at least be another course that he or she could take.

Oakey's assignment (write a two-page response paper), though, could be expanded using UDL principles. Perhaps students could write the two-page paper or record a three-minute audio or video response. Again, as long as the alternatives share common requirements and objectives, having the choice benefits all learners.

Poole's PowerPoint-to-video conversions for the Cell Biology course required a significant amount of effort on his part and on the part of the staffers who assisted with the conversion. However, it's a one-time cost. Poole can share the shorter media items semester after semester; when content or methods change, he will need to rerecord only a short item, not the entire hour of content.

Poole's students benefit too, because they can consume the videos in small bursts, which helps with motivation and engagement. In fact, to provide multiple reinforcements for his students, Poole might wish to ask students to view only the first few videos and then come back into the online course to practice in a simulation, take a quiz, or respond in a discussion.

The payoff for both professors is that using UDL principles in their online classes allows them to move away from merely presenting information and toward allowing learners to choose their own way to move through the material; demonstrate their skills; and engage with the content, with one another, and with the prof.

Epilogue

On the 56 bus, a student in the Cell Biology course is watching a video snippet on her smartphone. Her commute to work used to be time for catching up on Facebook, but now she has 30 minutes twice a day when she can study for class. Being able to "go to class" during her commute means that she has more time at home for her family.

In a pub near the university, several graduate students in the Art of Listening course are gathering to record their video response to the Bach concerto that Carrie Oakey shared with the students. It's a version of the same concerto—with one of these students playing the role of on-camera reporter and the remaining students performing the piece as they have transcribed it for a rock-and-roll band.

In a town 130 miles from the university, a student in the Cell Biology course rolls his wheelchair over to his computer and logs into the course. He watches a few of Gene Pool's videos, takes a self-review quiz, and posts his ideas about the upcoming research project into a class discussion forum—just like everybody else in the class.

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For more information

On February 6, 2014, Tom will lead the Magna Online Seminar "Using Universal Design to Support All Online Students." For information about this seminar, see www.magnapubs.com/catalog/using-universal-design-to-support-all-online-students/.

Tom Tobin is an advocate for learners across the ability spectrum. He has been designing and teaching online courses for 20 years, and he lectures and publishes on accessibility, copyright, online evaluation, and on project management in higher education. His latest book, Evaluating Online Teaching, *is currently in press with Jossey-Bass.* @

Start Your Class with a Video Welcome

By John Orlando, PhD

College faculty focus their job training on learning their subject matter. But subject matter expertise is one of the least important elements that a teacher brings to the table. After all, nearly everything faculty members know about their subjects can be found in some public form somewhere.

Your real value as a teacher is the relationship that you establish with your students. You can look at a student's work, diagnose his or her problems, and provide feedback and advice in a form that he or she can understand in order to improve performance.

But accepting this feedback requires a degree of rapport between teacher and student. Adult students in particular want instructors to show their humanity, because they view instructors as colleagues and coinvestigators.

This is why it is critical to establish a rapport with students. The best way to build this rapport is with a video about the class or yourself. A video humanizes you in your students' eyes and opens them to the learning relationship.

Webcam

There are two ways to create a video. One is to simply record yourself speaking to a webcam. This format is best used to discuss the course. You should motivate students by talking about why the course is important, what they will get out of it, and what makes it interesting. This is a chance to connect with students by showing your enthusiasm for the subject matter and teaching.

The big advantage of webcam recordings is that they are easy to make. Just use your webcam software to record yourself, speaking to the camera as you would to a student sitting in front of you. The disadvantage is that you can't edit the recording without a jarring head movement for the viewer. This means that you need to use a mistake-free shoot, which will probably require multiple takes.

Digital biography

The second option is to combine audio narration with imagery to take your audience on a journey through your life. This format is ideal for a personal biography because you can include images of the places you have been and the things you have done. The advantages of digital storytelling are that it is much more visually appealing than a webcam recording and that it doesn't require any "acting." It also allows for more creativity, and the result can be edited. The disadvantage is that it is more time-consuming to produce.

In either case you can post your video to your online classroom if it allows video. If not, put it on YouTube.

Creating a webcam video

Here are some tips for making a webcam video:

- **Speak to the camera, not the monitor.** Many people make the mistake of looking at the monitor while filming, which creates the impression that they are speaking to the viewer's chest, which can make viewers uncomfortable. You're going to have to just remember what you want to say and speak to the webcam without notes.
- **It's OK to look away.** Looking away creates variety and keeps your audience's attention.
- **Be yourself.** Try imagining that you're speaking to a live audience. Maybe even tape a photo of an audience just below your webcam. Remember to vary your voice and facial expressions just as you would in front of your class.
- **Here's a sample: *www.youtube. com/watch?v=muAI6o0FWEo&fe ature-youtu.be*.** Use what you like, and ignore the rest.

Creating a digital biography

Here are some tips for making a digital biography, as well as a tutorial (*http://youtu.be/ k0bAgKVI8FY*) on how to put it together.

- **Use images, not bullet points**. Use images to illustrate your ideas. Bullet points just distract and confuse the reader.
- **Start by recording the narrative.** The narrative determines pacing, so you always want to record the narrative first in something like Audacity and then layer on the images afterward.
- **Focus on your personal, not professional, biography.** Talk about your personal life and interests. If you do mention your professional work, weave it into a context that would be of interest to your students.
- **Add transitions between images.** Simple transitions such as fade-ins and fade-outs keep your audience's attention.
- **Here's a sample: *http://youtu.be /S1q8oOce-AA.*** Use what you like, and ignore the rest.

John Orlando has 15 years' experience in online education. He is the associate director of training at Northcentral University and serves on the Online Classroom editorial advisory board. @

Evaluating Discussion Forums for Undergraduate and Graduate Students

By Gloria P. Craig, EdD

The discussion forum is an essential part of online courses. It's where students interact, reflect, exchange ideas, and expand their knowledge base. The quality of the discussion forum depends on the ability to develop a sense of community, the clarity of the discussion questions, and the use of a grading rubric that includes standards of performance.

Sense of community

Cobb (2011) found that relationships, comfort, and community are important factors in undergraduate student success. She recommends establishing forums for student introductions, instructor involvement in the forums, and acknowledging students' points of view.

Mayne and Wu (2011) found that the following strategies increase student satisfaction with an online course and positively influence perceptions regarding social presence and group interaction: personal emails and biographical and personal information from the instructor, an introduction with specific course instructions, an inclusive syllabus with student and instructor expectations clearly outlined, assignment rubrics, links to helpful tutorials or resources, and an informal place for students to chat.

Another way to promote community is to provide a question-and-answer forum. This facilitates student exchange of information that does not require instructor input, enabling students to mentor one another.

Small group sizes (with no more than 10 students per discussion forum group) also can promote social presence and community. According to Schellens and Valcke (2006), small discussion groups have higher levels of knowledge construction than larger groups do. They also found that students want specific discussion forum guidelines and want the forums to be graded to enhance the level of responsibility.

Clarity of discussion questions

To be meaningful, discussion questions need to be correlated with the course readings and learning outcomes for each module. Students are more likely to understand learning outcomes that are directly connected with an assignment (forum, quiz, or paper).

Most discussion questions focus on the basic levels of thinking of Bloom's Taxonomy to evaluate students' understanding of the content in each module and their ability to explain ideas or concepts. Some questions may direct students toward higher levels of thinking, requiring them either to apply the information from the module to a workplace situation or to compare and contrast particular issues (analyzing). To promote higher levels of thinking, ask students to critique one another's posts (evaluating) and direct them to pose a question related to the topic of discussion (creating) to further stimulate discussion in the forum (Overbaugh and Schultz, n.d.).

In undergraduate courses, have students respond to the initial prompt and include rationale and references. Then have them reply to fellow students with substantial constructive feedback (remembering and understanding). Encourage students to respectfully consider the opinions of others, agree or disagree with those opinions, and provide rationale based on references or workplace experience (applying, analyzing). After all the students have posted and replied, post a closing post for the forum that acknowledges students' points of view, addresses any areas that need further clarification, and adds new content to augment understanding of the topic of discussion.

Hold graduate students to the same criteria as undergraduate students, but also have them include questions with their posts to further stimulate discussion. This leads to a higher level of thinking. Also consider requiring graduate students to handle their posts that include questions as individual forums. Have them take on the role of instructor, replying to other students and posting summaries for their forums (evaluating). The instructor would then read all the posts, including questions and summaries, and post a closing message as described above for undergraduate students.

Grading rubric with standards of performance

Use analytic grading rubrics for online discussions. Analytic grading rubrics have two major components: levels of performance and a set of criteria. Levels of performance can include terms such as *exemplary, proficient, basic*, or *below expectations* or can include numbers. Points can be attached to the levels of performance and distributed based on the total number of points allowed for a post in the discussion forum. Criteria depend on the learning outcomes for the course, but may include the following:

• Demonstration of an understand-

Helping to Motivate Adult Online Learners

By Rob Kelly

When Sheri Litt became dean of arts and sciences at Florida State College's Open Campus, one of her priorities was to address the issue of online learner satisfaction and success. "We started looking at the data," Litt says. "We looked at students' comments on surveys to find out what they were disappointed with in their online courses. And a lot of comments [said, in essence,] 'I felt my instructor didn't care' or 'I felt my instructor would just log in once every six weeks' or 'It would take an entire semester for the instructor to grade an assignment, and [he or she] didn't really give me any feedback so I could develop my skills.'" Based on this qualitative approach, Litt and her colleagues developed a set of best practices that have improved student motivation, satisfaction, and success.

Relevance

The majority of online learners at FSC's Open Campus are age 25 or older. One of the principles of teaching adult learners is the idea of relevance. "[They ask,] 'What can I learn in my class that won't just be for a grade but also can be something that I can take away, something that will be useful to me as an adult?'" Litt says. "When you have an adult population, they don't want to do something because they have to. They want to understand why it's important and how it relates to them as adult learners."

Flexibility

Another characteristic of adult learners is the need for flexibility. "Among our faculty, we try to shift the culture so that when working with adult learners, it's not one size fits all. Flexibility is really the key,"
says Amy Moore, program manager for instruction. "We want our instructors to be mindful of the fact that our online learners are preoccupied with other things going on in their lives, and while we want to make sure that they are learning, if a student is having some personal issues, we should allow the student to submit an assignment late rather than being unyielding and rigid."

Presence

Developing relationships with students is an important part of student motivation. To this end, the first forum is dedicated to providing an opportunity for students to introduce themselves, sharing their goals and interests. "We ask that our faculty respond to every single student in that first discussion post, and not just with 'Nice to meet you' but with follow-up questions that show an interest in the students, because we believe that students who know their instructor is going to take an interest in them are more likely to stay in the class," Litt says.

Synchronous interaction is another way to help facilitate this relationship. "We encourage our faculty to have virtual office hours during which they're available through some synchronous method such as Skype, chat, or Blackboard Collaborate, so that students are able to reach them in real time, because it's important for students to feel, at least during office hours, that they can actually find a human being behind the computer. It also seems to help faculty get to know students as individuals and respond to their needs," Moore says.

Feedback

Students need personalized feedback from the instructor. "If we have instructors who are just
grading or even using a rubric but not providing personalized feedback, students have little to take away from the course," Moore says.

Providing feedback can be a workload issue for instructors. This is why online classes are capped at 40 participants (24 for writing-intensive courses).

Faculty are expected to respond to students' questions within 24 hours via email or some other communication method and to grade and provide substantive individualized feedback on assignments within seven days.

In the discussion forum, instructors are asked to respond to three or four student posts each week and then to summarize the outcome of the discussion in an announcement at the end of the week.

Early alert

To help prevent students from falling behind and perhaps dropping the course, instructors check the grade book to determine whether each student is keeping up with the work.

"When a student misses an assignment, the instructor emails the student with a message such as, 'I see you haven't been participating in the past week. Is there anything going on? Is there anything I can do to help?' We've found that in classes in which we piloted this approach, the success rate increased from 40-something percent to 70 percent. There was this incredible improvement in terms of student success, just based on those small differences that the instructors made in the course by communicating with students both on a large scale and individually. It has helped keep students from falling off the map and losing their motivation," Moore says. @

Reading Tips for Online Learners

By Kasia Polanska, PhD

We instructors often take it for granted that students read the materials we assign to them. If we have evidence that they do not—for example, when their posts on the class forums are completely off topic or demonstrate they do not understand the material—we may take these as signs that the student is not engaged and is unwilling to do the work. These are, after all, students who in their day-to-day life text, tweet, and post. As my librarian friend put it, "Many students do know how to snack, but they do not know the pleasure of sitting down for a meal" when it comes to reading.

Whatever the reasons are, I find that there is another explanation for why students do not read what is assigned and, as a result, do not do well in the class and do not learn. The truth is that we assign a lot of text—text that is very familiar to us but is completely new and strange to many of our students. As a result, students often become overwhelmed when first presented with dense academic articles or even textbook material. This is especially true about nontraditional students who have not had much (or any) exposure to this kind of writing and to the abstract concepts—and I would argue that many of our online students fall under this category. By nontraditional students, I mean older students, first-time students, students who work, students who have children and families, disabled students, and so on.

For students who are not used to the type of material that is very detailed and contains many unfamiliar concepts, it is easy to "lose the forest for the trees" and feel overwhelmed unless they approach the readings in an organized way. These students quickly become discouraged and may stop reading altogether.

Many of us instructors take it for granted that students know how to read for understanding, but I find that this is not necessarily the case. In order to lessen their anxiety and make class readings less intimidating, a few years ago I put together a document containing tips on how to read in a focused way. I share these tips with my online students, who seem to appreciate this basic but useful help. This advice is based on

> **I found it counterproductive to pretend that students have an unlimited amount of time, energy, and patience to read and reread the sizeable amount of written material assigned to them. At the same time, I do not think that we should necessarily cut down on the readings.**

my own experience with reading. As a graduate student at Stanford University, I was sometimes expected to read up to 500 pages a week of dense academic text. Not only was I not familiar with many of the concepts, I am also not a native English speaker, which added another layer of difficulty. To make it all manageable and avoid frustration, I developed a way to approach these readings in a more focused and productive way.

Here are the steps in approaching class readings that many students may find helpful:

First, read the assignment or the instructor questions for the online forum carefully before reading the assigned article or chapter. After you do that, decide which question or topic you find the most interesting and familiar. This will not only help you decide which question you want to respond to, but it will also help you read in a more focused way.

Second, take a good look at the article's or chapter's topic; then read the abstract (if available) and all the headings and subheadings.

Third, read the introduction to and conclusion of the article or chapter. They are usually organized into separate sections. Even if that's not the case, the introduction and conclusion are usually identifiable. The conclusion, in particular, will give you a sense of where the author wants to take the argument. This will give you a "framework" for reading, and make it easier to focus on the most important parts of the reading and to not get lost in the details or the complexities of the description, discussion, and analysis.

Fourth, start reading the article or chapter and, as you read, identify the section or sections that relate to the question to which you plan to respond. As you go through the reading, it is a good idea to underline or highlight (on paper or electronically) the most relevant parts or sections. Look for short "catchy" quotes that you can then incorporate into your paper or use as a discussion forum response.

Finally, read the entire paper or chapter and keep in mind that you will not necessarily understand every single concept. Do not get stuck on a single word, sentence, or section, but make a note of them so that you can get back to anything that is per-

ing of the topic of discussion through critical thinking, higher-order thinking, and uniqueness of contribution
- Community building through collaboration and connection with other students
- Proper netiquette and mechanics of writing
- Timeliness and participation with posts/replies

See my analytic discussion forum grading rubric for undergraduate students here: www.magnapubs.com/files/newsletters/oc/figure-1-analytic-discussion-forum-grading-rubric-for-undergraduate-students.pdf and my graduate rubric here: www.magnapubs.com/files/newsletters/oc/figure-2-analytic-discussion-forum-grading-rubric-for-graduate-students.pdf.

Hold undergraduate and graduate students to the same standard in regard to netiquette, including language, spelling, and grammar, but modify the type and number of required references to suit the edu-cational level. For example, undergraduate students may be required to include supporting references from their reading assignments, but Truemper (2004) suggested that the expectation for graduate students should be to include references from research journals.

The number of replies may need to be adjusted to suit the size of each discussion group. Typically, eight to 10 in a group is sufficient for a discussion that demonstrates interaction, reflection, exchange of ideas, and expansion of the knowledge base related to the topic of discussion. The number of points assigned to a discussion forum will also depend on the amount of responsibility assumed by the students. If students are required both to include a question to further stimulate discussion and to facilitate their forums by providing a summary, then additional points may be assigned to the discussion forum grading rubric. Last, the timeliness of the posts and replies can be negotiated with students, as many adult learners have busy schedules.

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plexing if you have some extra time after you finish reading the entire piece.

After following these steps, the student should have enough familiarity with the material to be able to complete the assignment.

I also remind students that as they get used to reading academic articles and have a continuing exposure to some of the same or similar ideas and arguments, reading these articles will become easier and less time-consuming.

As a sociology instructor, I found it counterproductive to pretend that students have an unlimited amount of time, energy, and patience to read and reread the sizeable amount of written material assigned to them. At the same time, I do not think that we should necessarily cut down on the readings. As a graduate student, I once asked one of my professors if she believed that any students are truly able to read and absorb 500 pages of text per week. She smiled and said that she hopes they will read as much as they can, even if only 300 pages. But, she added, if she assigned 300, then they might only read half of that. This really made me think. Now, in my almost 10 years' practice as an online instructor, I understand that instead of pushing students to do the impossible or setting them up for failure, we have the responsibility to provide tools to help them manage their schoolwork in the most productive way. By providing these tips, we are also supporting them in developing good reading habits that will last beyond the online classroom.

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