



# Planning and Designing Your College Course

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# Universal Design in Courses: Beyond Disabilities

*Thomas J. Tobin*

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 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 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 (Willing & 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 they 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 Cell Biology 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 Cell Biology 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 per 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 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 Cell Biology 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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*Planning and Designing Your College Course* is a comprehensive guide to getting your face-to-face, online, and hybrid courses ready for launch. Compiled from 50 articles that originally appeared in *The Teaching Professor* and *Faculty Focus*, it offers insights and practical advice on all major aspects of creating a course, including

- broad design and redesign;
- crafting an effective syllabus;
- developing assignments that maximize learning and assessments that accurately gauge that learning; and
- making the course accessible for all learners, including through the principles of universal design for learning.

Whether you're a new faculty member, an experienced teacher looking to revitalize a too-familiar class, or an instructional designer, this book will become a go-to resource.

Featuring a foreword from the longtime editor of *The Teaching Professor*, Maryellen Weimer.

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