Slide 1

Reach Everyone and Teach Everyone with Universal Design for Learning

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Slide 2

On the screen is an image from the 1923 silent film *Safety Last*, where the star Harold Lloyd dangles from the face of a rapidly-disintegrating clock high above the street. As you are looking ahead to coming back into the classroom—but having to be prepared to continue with flexible teaching, should the need arise—what is your biggest concern about the interactions that you will have with your students?

We'll put 2 minutes on the clock for your responses; if you'd like to mute the audio while you are thinking and then turn it back on once the music is over, I will post a message in the **Chat** feature about when the music will stop. Remote friends, please share your response via the **Chat** feature; colleagues in the room, write down your response for yourself, and we'll pass the microphone. When the 2 minutes are up, we'll give voice to your responses and try to find some common themes.

[Music playing: "Deep Haze" © Kevin MacLeod (incompetech.com), used under CC BY 4.0 license]

Slide 3

On the screen is an image of students studying together in a classroom. One student has hands on a keyboard, everyone has a laptop, and one student is pointing to an off-camera screen where another student is projecting his computer desktop.

When we say "universal design for learning," this is what we mean: provide learners with multiple means of engagement, representation, and action & expression.

We can also simplify this to "plus one" thinking: if there is one way for an interaction to happen now, make just one more way.

Slide 4

Before we get into strategies, we should do a little defining of our terms. When we say "universal design for learning," we can think that we're referring just to learners with disability barriers in their environments.

Have you ever wondered why our disability-support office colleagues seem to be so overwhelmed lately? There are three good things happening that are causing that overwork.

First, we are, at least nominally, not discriminating against people based on their mental or physical characteristics. Yes, we have a long way to go yet. All the same, more—and more different—learners are part of our colleges and universities than at any time in the past. Second, 2008 marked the first generation of college learners in the United States who had spent their entire K-12 experience under the benefits of the Americans with Disabilities Act: we've had almost 15 years of serving university students whose prior experience included self-advocacy and more normalized help-seeking behaviors. We are still on that journey, too. And third, we've collectively identified a number of common accommodations—things like extra time on tests, alternative-format materials, interpreters in the classroom, and note-takers—that lower barriers effectively for people experiencing the most common barriers in our learning environments.

Now, let's flip this around. Why are our disability-services colleagues so busy? The majority of the accommodations they determine with the students whom they serve are for things that we could address in a systematic way. Need more time for tests and exams? Offer everyone untimed assessments. Need content in more than one format? Provide multiple formats to everyone. Need help taking notes and studying? Create a collective set of notes and study guides with the class.

Universal design for learning asks us to identify the places where we see patterns of barriers: lots of students requesting similar disability accommodations, everyone in the class getting a concept wrong on a test, getting the same question by email over and over about an activity's instructions. Once we know where the barriers are in our learning interactions, we can take purposeful steps to lower or eliminate those barriers.

On the screen is a pyramid, with UDL at the bottom to provide choices to the majority of learners, then special service based on large groups of learners, then a smaller segment for individual accommodations, and the top of the pyramid being personal assistance. While we will never get rid of the need to make one change, one time, for one person, we can dramatically lower the need for "everyday" affordances through the use of intentionally inclusive design models like UDL.

As our CAST colleagues said back in 2002, our goal is to "make it accessible and appropriate for individuals with different backgrounds, . . . abilities, and disabilities in widely varied learning contexts." After all, every student who is admitted to the university has the chops to be here and to succeed–we are a highly selective institution.

So we're not talking about lowering our standards or making our course content easier or simpler. Rather, we want to keep the rigor and challenge of our subject fields at a high level, and lower access barriers to being able to take part in the conversation in the first place.

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Slide 5	Five strategies for UDL	On the screen is an image of a hand with the five fingers spread apart, lit from behind. As we start our workshop, I'd like to suggest five specific things you can do to implement UDL in your teaching, service, and student-support interactions. Then, we'll broaden our scope and start applying the UDL principles of multiple means of engagement, representation, and action & expression to your own everyday work.

Slide 6

Strategy 1: start with text.
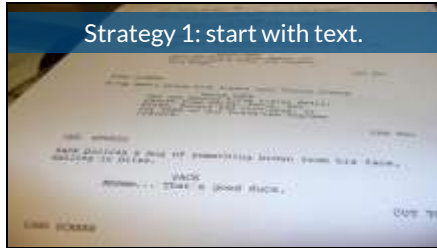
Strategy 1 is to start with text.

On the screen is an image of a script for a TV commercial. The writers are selling miniature meals inside those little coffee pods that go into your coffee maker. While I don't think I'll be putting 2 ounces of corn-dog flavoring into my Keurig any time soon, having a script is a very good idea. If you have a script, description, or other speaking notes, you automatically have a plus-one version when you create media based on it.

Build multiple paths based on a text foundation. This reveals gaps and needs. By scripting what you want to say, demonstrate, and emphasize, you also reduce the amount of off-topic content produced when you create other versions such as audio podcasts, screencasts, and video demos. We already have a lot of text: lecture notes, how-to documentation, process files, and the like. Pull information about the files that generate the most questions, emails, or even calls to the help desk, and start your UDL approach with those. This creates a solid foundation for plus-one access approaches.

Slide 7

Strategy 2: make alternatives.
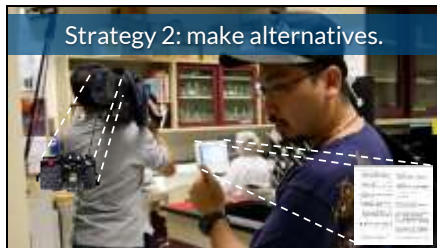
Strategy 2 is to create alternatives.

On the screen we see a chemistry professor in her lab, seated at a computer. Two students are in the lab with her. One gives us a thumbs-up signal because he knows that we can take the PDF that is on her computer screen and upload it to the LMS. "Born digital" PDFs can be read out loud or transferred to other formats. The other student in the lab has a video camera on his shoulder and is recording the professor talking about a course activity. There is an image of a still camera behind the student, because we can take still images from that video and place them alongside explanatory text in a word-processing document to reduce cognitive load and highlight important points.

Isn't that dumbing things down for learners? Well, yes . . . if you're doing it wrong. Keep the rigor and complexity high for the content itself; what we want to do is to lower barriers for access to the information in the first place.

At first, create just two versions of content/materials/interactions, then branch out as time and resources allow. Select first topics where people always have questions or always get the process mixed up. Create a text-only version and, say, a video-demo version of just those materials. For example, track the most common issues that students get wrong on tests and quizzes, causing you to re-teach. Starting with your existing materials on those topics, create brief explainer videos (captioned, of course), or augment the core text with images that explain or elaborate the text-only processes and ideas (and add ALT metadata descriptions for the still images). Then track the impact of offering the choice to learners who want more information: do you end up re-teaching less often?
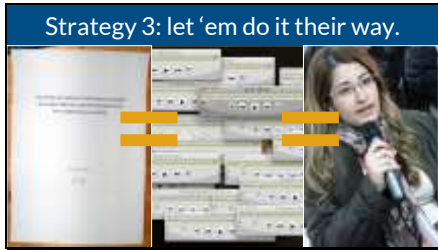
| Slide 8 | Strategy 3: let 'em do it their way. | Strategy 3 is to let 'em do it their way.

On the screen are three images: a traditional written report, a screen with audio player images, and a student speaking into a microphone. This strategy is all about how learners take action and express their ideas.

Think of the interactions you ask students to have in class—or that your support areas have with faculty members and students, such as consultations, help-desk calls, device troubleshooting, and software setup and support. This is what I mean by plus-one thinking: if there is now just one way that such interactions happen—both in terms of modality (in person, by phone, in interactive online environments) and in terms of process (scripted interactions)—add one more way. This can be as simple as adding a format option to an assignment, or, on the staff side, operating a mobile-phone help-line number that can accommodate both text messages and voice calls. |
| Slide 9 | Strategy 4: go step by step. | Strategy 4 is to go step by step.

When you learned to drive a car, where did they ask you to put your hands on the steering wheel for maximum control? Most of us will say "10 and 2," imagining that the steering wheel is the face of a clock. But they don't teach 10-and-2 to our teenagers—for them, the advice is now 9 and 3, at the sides of the steering wheel. Why so? Airbags. If the airbag has to deploy and your hands are near the top of the steering wheel, you'll break your wrists and give yourself a concussion. So, that a public-safety tip from me: 9 and 3 when you're driving, now.

Why are we talking about driver's education? Well, 10-and-2 is an outdated concept for driving, but it's a splendid way to think about how we chunk up the time in our learning interactions. 10 is ten minutes: share information, content, and demonstrations for 10 minutes. Then, 2 is two minutes: take a break from sharing and ask learners to take some kind of action for two minutes. While this isn't an iron rule, the ratio is about right for most things we want to learn, and it's the act of taking a break itself that helps provide space for encoding of new information.

Break processes into units, steps, and phases and create separate resources with segments that correspond to the logical breaks and scaffolding. For example, make seven sequential text-based documents that correspond to the learning management system (LMS) log-in process, and create videos to go along with the three most involved or most important pieces. This allows learners to re-consume short pieces repeatedly and saves your IT staff time when they update, add to, or re-order the content. The result is a continuous whole that can be experienced a little bit at a time, repeated for reinforcement and study, or even experienced from multiple starting points and self-selected paths through the materials.

Each segment should cover one concept, or one step in a process—so long as it is a self-contained unit. The advantage for learners is that they can consume the short segments (especially true with video) more easily on mobile devices, especially in low-bandwidth situations where content must be downloaded rather than streamed. |
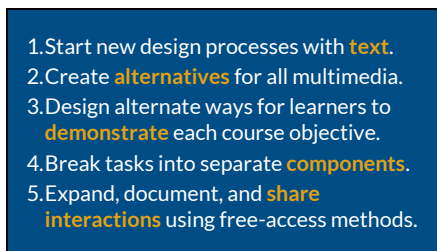
| Slide 10 | | Strategy 5 is to set content free.

Use tools that are accessible and easy for faculty colleagues and students to learn. A good example is creating a screen-capture video of a PowerPoint slide show with your own voice-over, and then hosting the result on a file-streaming site like YouTube. Whereas students would previously have needed PowerPoint to get the file and use it, now all they need is an internet browser. Students on phones and tablets can watch the video anywhere. Content is no longer tied to the clock, either: students can review, re-play, and interact at any time.

A word about captions: although time-consuming to create, captions provide such broad benefits that they are well worth the investment of time for multimedia content. One change of current common practices can help all of our learners immensely. Most of us are familiar with the phrase "closed captioned." This means that the captions do not automatically display when video is playing; users must select whether to display the caption text.

The opposite is "open captioned" content, where viewers see the caption text whenever the video is playing. By creating video content that relies on open captioning, people who view the video material do not have to take an action to get captions to display. Especially on mobile devices like tablets and phones, closed-caption controls in media-players may be small, challenging to use, difficult to find, or missing all together. The take-away for creating video files is to caption them whenever possible, or at least provide a transcript. |

Slide 11 content on the slide:

1. Start new design processes with **text**.
2. Create **alternatives** for all multimedia.
3. Design alternate ways for learners to **demonstrate** each course objective.
4. Break tasks into separate **components**.
5. Expand, document, and **share interactions** using free-access methods.

Here are those five steps again, for those of you who will be watching the recording and looking at the take-away handout for reference.

- Start new design processes with **text**.
- Create **alternatives** for all multimedia.
- Design alternate ways for learners to **demonstrate** each course objective.
- Break tasks into separate **components**.
- Expand, document, and **share interactions** using free-access methods.

Let's make some time to start applying UDL. Where in your interactions with learners are you already doing some plus-one techniques along these lines? Or where do you see opportunities to address "pinch points" where things regularly aren't going how you planned them?

We'll put 2 minutes on the clock for your responses; if you'd like to mute the audio while you are thinking and then turn it back on once the music is over, I will post a message in the **Chat** feature about when the music will stop. Remote friends, please share your response via the **Chat** feature; colleagues in the room, write down your response for yourself, and we'll pass the microphone. When the 2 minutes are up, we'll give voice to your responses and try to find some common themes.

[Music playing: "Rollin' at 5" © Kevin MacLeod (incompetech.com), used under CC BY 4.0 license]

Slide 12		On the screen is a table laden with food. There are tortilla chips, guacamole, various salsas, roasted corn, tortillas, black beans, and a "litre margarita" in a glass jar. This is take-away food that, I hope, puts you in mind of what you'll take away from this session.

Now that you have been part of our conversation, what is one thing that you will take away and try out, whether it's an idea or a practice?

We won't play any music for this lightning-round wrap-up. Shout out or chat-post *one* thing that you will take away from our time together, and we'll repeat as many of them as we can. |
| Slide 13 | | Thank you very much for being part of our session today. If you're curious to learn more about UDL and other teaching approaches, visit https://www.cast.org. I hope you've enjoyed our time together today, and I hope you'll try one thing in your own teaching, support, or design work.

Join me for our focused workshops throughout the day today: we'll look at UDL in support services, scaling up, and moving from emerging to expert practices. |

1. What do you already know about the term "Universal Design for Learning?"

2. What's one strategy you use now or might adopt to reach out to students on their mobile devices?

3. List current text-based elements of an existing course that you teach or design (or would like to).

4. Based on your list of text elements, what alternative formats do you have—or could you create?

5. For what assignments could you (or do you already) offer students choices about completion?

6. Where in your course could students "chunk up" their attention using the "10 and 2" principle?

7. What concepts in your course could you share by creating format-agnostic content?

8. To help you select places to start with UDL, about what parts of your course do students always a) ask questions about the content, b) get things wrong on tests & exams, and c) ask for alternative explanations?