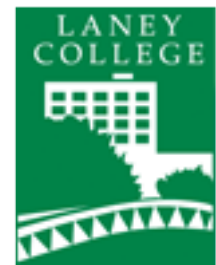# MAKING YOUR ONLINE COURSE ACCESSIBLE

A workshop for

Peralta Community College District &

Laney College

April 21, 2017

Kevin Kelly, EdD

# Introductions and getting started

Please introduce yourself and answer the following question in one sentence:

What is your biggest question or concern about making your online course accessible?
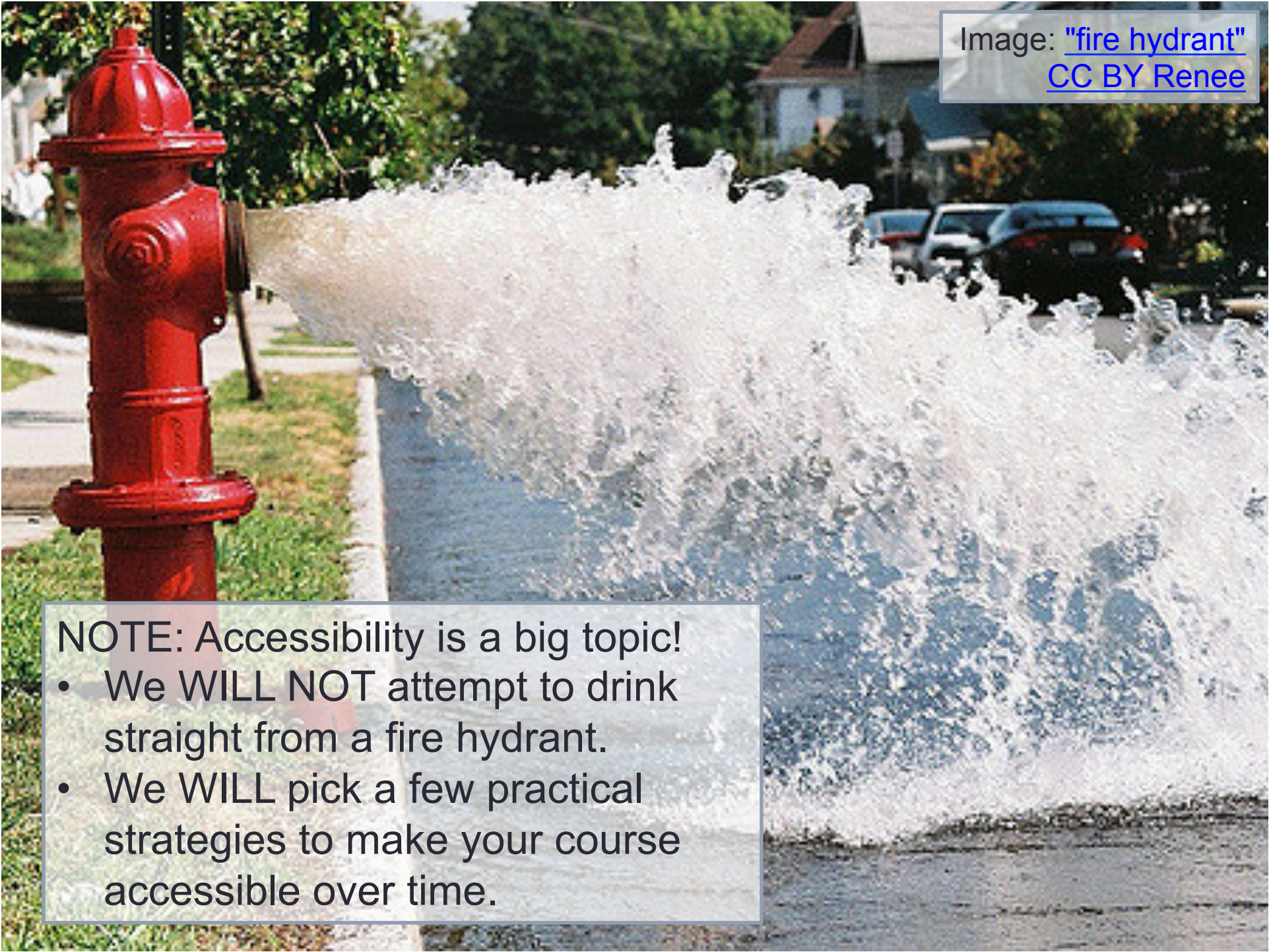
NOTE: Accessibility is a big topic!
- We WILL NOT attempt to drink straight from a fire hydrant.
- We WILL pick a few practical strategies to make your course accessible over time.

# Session Objectives

In this train-the-trainer session you will:

- **Become familiar with various accessibility concepts** related to teaching and learning online;

- **Assess the accessibility of common online course elements**—instructional materials, learning activities, and assessment strategies;

- Begin to **make an online course more accessible**; and

- **Discuss challenges** to **and benefits** of making online courses accessible.

# Become familiar with various accessibility concepts

- Types of learning needs & accommodations
- OEI Rubric sections related to accessibility
- Approaches to accessibility

# What do we mean by accessibility?



Image: "web accessibility word cloud"
CC BY Jil Wright

# Learning needs & accommodations

| Needs | Accommodations |
|---|---|
| Visual impairments | Screen readers, audio descriptions |
| Hearing impairments | Captions, transcripts for media, sign language interpreter |
| Speech impairments | Augmentative and Alternative Communication devices |
| Mobility impairments | Using keyboard only (no mouse) |
| Cognitive and learning disabilities | User control of content and presentation, e.g., being able to hide/show content |

# OEI Rubric – Accessibility sections

## D.3 Technical Accessibility

- Follow guidelines (508, WCAG) to create materials
- Provide alternate media accommodations
- Use formatting & structure for all materials
- Create materials that work with accessible programs
- Create accessible assessments

## D.4 Accommodations for Disabilities

- Make essential learning activities accessible
- Use LMS settings for individual accommodations
- Provide and explain links to tech support and student support
- Create inventory of instructional materials

CALIFORNIA COMMUNITY COLLEGES
ONLINE EDUCATION
INITIATIVE

# Approaches to accessibility: Universal Design for Learning (UDL)

- UDL Mantra: "**Teach every student**"
  - Students with and without disabilities
  - Students with varying access to technology
  - Students with English as a second, third, or fourth language
  - Students with crazy schedules
  - Students with different learning preferences

- UDL emphasizes individualizing the students' learning experience as much as possible

- UDL focuses on four main aspects of course development
  - Objectives, Content, Activities, Assessment

# Universal Design for Learning (UDL) principles

- **multiple means of representation** to give learners various ways of acquiring information and knowledge
- **multiple means of engagement** to tap into learners' interests, challenge them appropriately, and motivate them to learn
- **multiple means of expression** to provide learners alternatives for demonstrating what they know

Provide Multiple Means of
**Engagement**
*Purposeful, motivated learners*

Provide Multiple Means of
**Representation**
*Resourceful, knowledgeable learners*

Provide Multiple Means of
**Action & Expression**
*Strategic, goal-directed learners*

Image:  National Center on UDL

# Assess the accessibility of online course elements

- Content / instructional materials
- Instructional activities and assessment strategies
- Online environments

# Accessibility of course content

- Files
  - Common file types:
    - PDF, RTF, DOC, XLS, PPT
  - Common issues:
    - inaccessible files, students don't have specific software
  - UDL solutions:
    - use Optical Character Recognition (OCR) software to create text-based documents, save files in multiple formats, provide links to free viewers and readers
  - Support:
    - http://www.foothill.edu/fga/accessibility
      - Choose the Documents tab to get tips on making accessible files
      - Choose the Tools tab to find tools to test accessibility

# Accessibility of course content

- Content pages: webpages & Moodle/Canvas pages
  - Common issue:
    - inaccessible websites, webpages, or LMS pages
  - UDL solutions:
    - use descriptive links to help students with screen readers (e.g., "Syllabus – Biology 345 – download PDF" instead of "click here"), separate content from presentation (CSS) for faculty web sites

  - Common issue:
    - only one content format, no supports
  - UDL solutions:
    - provide alternative content formats (e.g., concept maps), tag content appropriately and allow users to tag whenever possible, provide links to supports (e.g., varying levels of content granularity, tools like online dictionaries)
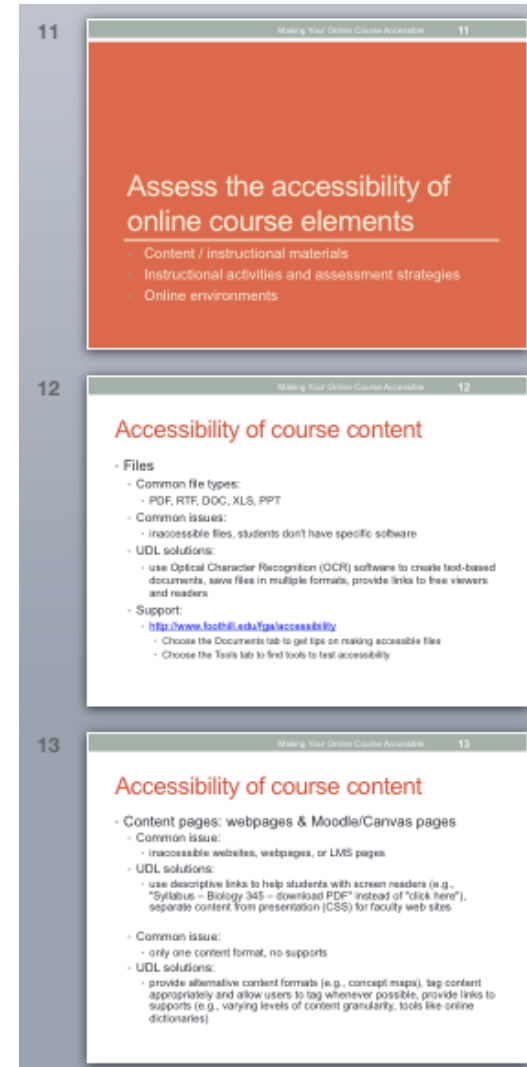
# Accessibility of course content

- ## Multimedia: Video
  - ### Common video types and players:
    - Types: Streaming (live or archive), Progressive Download (archive); Players: Flash video, QuickTime, Real, WindowsMedia
  - ### Common issues:
    - no captioning, inaccessible players, student access to high-speed connectivity
  - ### UDL solutions
    - find captioning solutions, research accessible players, provide audio only & low-bandwidth, avoid auto-play option



Image: 3Play Media

# Accessibility of course content

- ## Multimedia: Video
  - ### Common video types:
    - Screencasts, lecture capture
  - ### Common issues:
    - Content orientation
  - ### UDL solutions
    - Remember to start the audio recording for each slide with "On slide X we see …" or "Now let's turn to slide Y. …"

# Accessibility of course content

- Multimedia: Audio (podcasts and more)
  - Common audio types and media:
    - Types: Streaming (live or archive), Progressive Download (archive); Media: MP3, MP4, AIFF, WAV
  - Common issues:
    - inaccessible players or environments (e.g., iTunes U)
  - UDL solutions:
    - provide multiple formats, provide files via accessible alternatives

# Accessibility of course content

- Multimedia: Animation
  - Common types:
    - Flash, Captivate, Camtasia, Maya
  - Common issues:
    - no captioning, inaccessible players, poor tab order, no keyboard control
  - UDL solutions:
    - provide text transcripts, avoid continuous looping, avoid rapid movement, avoid auto-play

# **Guided Practice Activity** (10 min): Make course content accessible
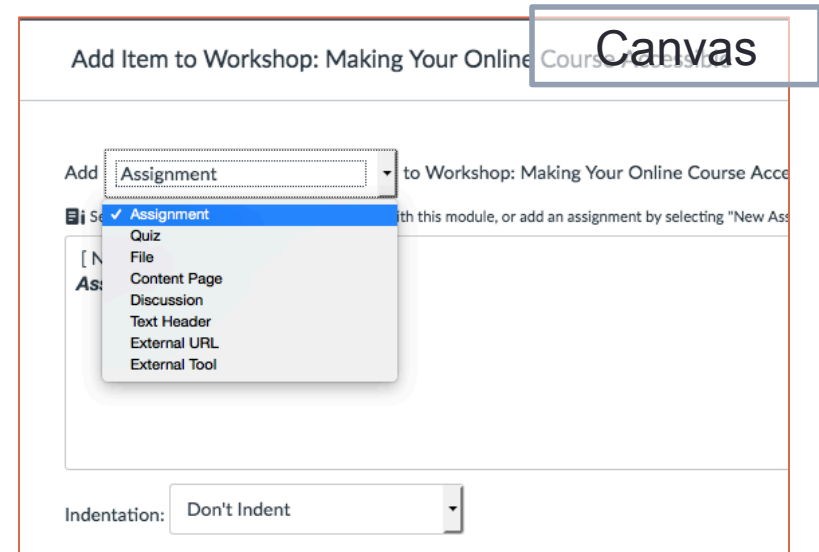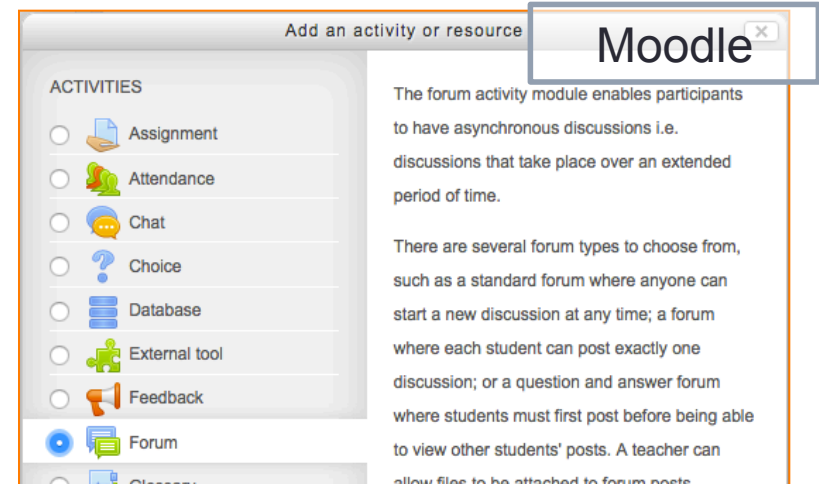
- Pick a course material from one of these categories:
  - Files (e.g., PDF, Word, Excel, PowerPoint, infographics)
  - Content pages (created in LMS, external webpages)
  - Multimedia (e.g., self-created audio, video; external audio, video; animations; simulations)

- Review for accessibility issues

- List what you have to do, if anything, to make it accessible

# Accessibility of course activities

- Individual activities
  - Common types:
    - forums, chats, wikis
  - Common issues:
    - only one tool choice, only one level of performance, no motivation, unclear context
  - UDL solutions:
    - blog / journal, online quiz tool (within LMS or separate), wiki, discussion forum, discipline-specific software, text-to-speech / voice-recognition software; use accessible tools
    - create multiple levels (scaffolded support as help, optional readings for advanced learners)

Moodle

Add an activity or resource

ACTIVITIES

- Assignment
- Attendance
- Chat
- Choice
- Database
- External tool
- Feedback
- Forum
- Glossary

The forum activity module enables participants to have asynchronous discussions i.e. discussions that take place over an extended period of time.

There are several forum types to choose from, such as a standard forum where anyone can start a new discussion at any time; a forum where each student can post exactly one discussion; or a question and answer forum where students must first post before being able to view other students' posts. A teacher can allow files to be attached to forum posts

Canvas

Add Item to Workshop: Making Your Online Course Accessible

Add  Assignment  to Workshop: Making Your Online Course Acce

- ✓ Assignment
- Quiz
- File
- Content Page
- Discussion
- Text Header
- External URL
- External Tool

Indentation:  Don't Indent

# Accessibility of course activities

- Small and large group activities
  - Common Issues:
    - inaccessible tools and/or activities
  - UDL solutions:
    - blog / journal with reply feature, wiki, discussion forum, online peer review software (e.g., Calibrated Peer Review), chat / IM, online meeting space (e.g., elluminate, Breeze)
    - facilitate activities (e.g., chat) to allow students with screen readers to participate equally

# Accessibility of course activities

- Small and large group activities
  - Common Issues:
    - using jargon or special characters—such as :-) –that may not work for screen readers or non-native speakers, lack of adequate knowledge to use tools effectively for learning
  - UDL solutions:
    - add policies re: jargon to syllabus and enforce during activities; provide resources related to using new tools and work with disability center to assess tool accessibility

# **Guided Practice Activity** (10 min): Make course activities accessible

- Pick a course activity from one of these categories:
  - Discussion or group discussion
  - Live video conference or chat
  - Wiki pages

- Review for accessibility issues

- List what you have to do, if anything, to make it accessible

# Accessibility of course assessments

- Individual activities
  - Common types:
    - Quizzes, assignments
  - Common issues:
    - only one way to demonstrate skill or knowledge
  - UDL solutions:
    - assign online quizzes for students to demonstrate understanding before writing essays, have students upload assignments to LMS or complete ePortfolio artifacts
    - allow students to choose from multiple formats to demonstrate knowledge (e.g., essay, presentation, video) using same rubric criteria
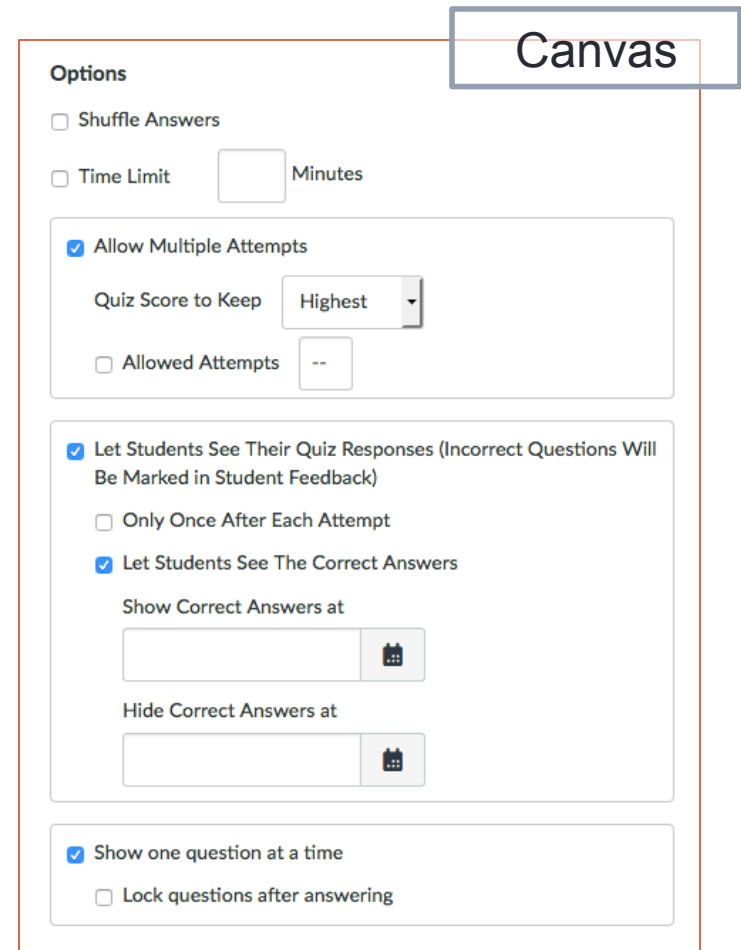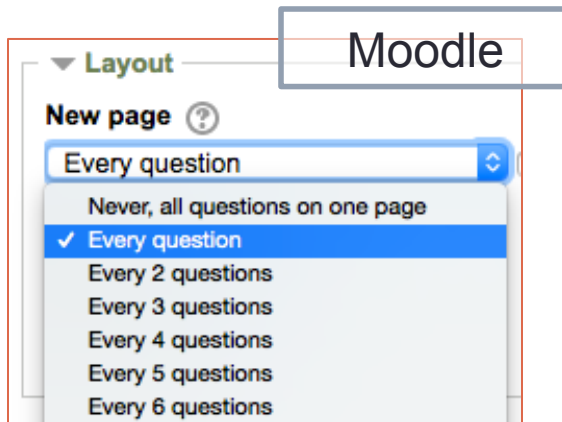
# Accessibility of course assessments

- Individual activities
  - Common issues:
    - no practice or support structures
  - UDL solutions:
    - create rubrics with students and provide before assignment begins, use rubrics and peer review assignments to provide levels of support, create links to support sites (e.g., ALEKS intelligent tutoring for math) and campus support units (e.g., writing center)

# Accessibility of course assessments

- Assessment activities
  - Common issue:
    - Too much content on a page of online quiz questions
  - UDL solutions:
    - Limit number of quiz questions that display on each page (e.g., 1-3 questions per page)

Canvas

**Options**

☐ Shuffle Answers

☐ Time Limit [ ] Minutes

☑ Allow Multiple Attempts

Quiz Score to Keep [ Highest ⌄ ]

☐ Allowed Attempts [ -- ]

☑ Let Students See Their Quiz Responses (Incorrect Questions Will Be Marked in Student Feedback)

☐ Only Once After Each Attempt

☑ Let Students See The Correct Answers

Show Correct Answers at

[          ] 📅

Hide Correct Answers at

[          ] 📅

☑ Show one question at a time

☐ Lock questions after answering

Moodle

▼ Layout

**New page** ⓘ

[ Every question ⇕ ]

Never, all questions on one page
✓ Every question
Every 2 questions
Every 3 questions
Every 4 questions
Every 5 questions
Every 6 questions

# **Guided Practice Activity** (10 min): Make course assessments accessible

- Pick a course assessment from one of these categories:
  - Quizzes
  - Assignments
  - Rubrics

- Review for accessibility issues

- List what you have to do, if anything, to make it accessible

# Discuss challenges to and benefits of making online courses accessible

- Challenges
- Benefits

# Challenges and benefits

## Challenges

- Awareness
- Preparedness
- Workload
  - Use UDL approach for all new materials
  - Revise existing materials piecemeal or in groups
- Cost
  - Software (e.g., OCR)
  - Time (e.g., captioning, transcribing)

## Benefits

- Additional learners supported by accommodations
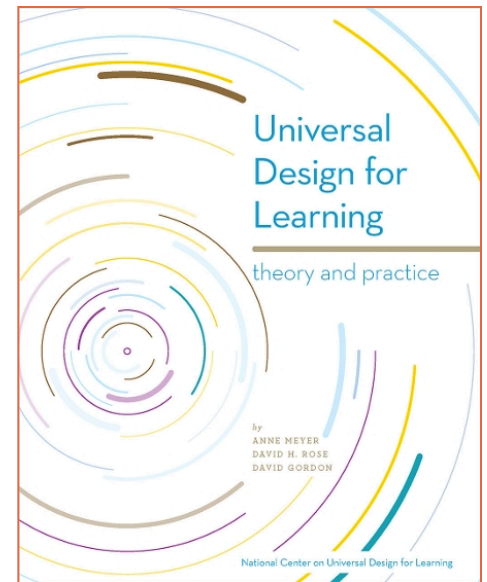
# Additional resources

# Additional Resources – CCC system

- @ONE webinar (free)
  - [Designing for Educational Equity and Accessibility](#)
  - Thursday, April 27, 2017, 12-1 pm

- CCC Online Education Initiative
  - [Accessibility Support](#)

# Additional Resources - UDL

- Center for Applied Special Technology (CAST): Universal Design for Learning

  - http://www.cast.org/our-work/about-udl.html

- Book: *Universal Design for Learning: Theory and Practice*

  - http://udltheorypractice.cast.org/

- EnACT - Sonoma State University

  - http://enact.sonoma.edu/udl

# Additional Resources - technology

- Developing websites for users with cognitive/ learning disabilities

  - http://juicystudio.com/article/cognitive-impairment.php

- Dive Into Accessibility - Easy step-by-step guide to improving the accessibility of your site or blog

  - http://diveintoaccessibility.info/

- PDF Accessibility

  - http://www.alistapart.com/articles/pdf_accessibility

# Thank you!

Contact me with questions

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