Applying The Basics of Universal Design for Learning to Your Syllabus and Course

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Today’s Presenters!

Rachael Bower
Director/PI ATE Central
University of Wisconsin-Madison

Sam Catherine Johnston
Director of Postsecondary and Workforce CAST
Poll: What is your reason for joining us today?

A. I am new to accessibility and want to learn more about the topic

B. I have students with disabilities enrolled in my courses and want to learn how to create accessible content for them.

C. I lead others who develop content and want to provide my team with tips and resources on accessibility

D. Other: Please share in the chat
ATE: Advanced Technological Education

- NSF Funding – focus on technician education; program development; professional development; community colleges
- Approximately 311 projects & centers currently funded
- Not just a funding program; a true community
- Variety of cross-cutting support for community members baked into the program
About ATE Central

ATE Central’s primary purpose is to amplify the impact of ATE.

ATE Central offers:

• Information hub and portal
• Resource collection
• Services and tools
• Outreach and dissemination
• Annual Spotlight Series
AEM Center Mission and Goals

Provides expert technical assistance to increase the availability and use of high-quality accessible materials and technologies

Stakeholders include:

- Early Childhood Programs (EC)
- States and Districts (K-12)
- Institutes of Higher Ed (IHEs)
- Workforce Development and Workplace Agencies (WF)
- Publishers and Developers
- Parent Centers
CAST Mission and Goals

CAST is a multifaceted organization with a singular ambition: **Bust the barriers to learning** that millions of people experience every day.

We do this by helping educators and organizations apply insights from the learning sciences and leading-edge practices to educational design and implementation.
Poll: What is your current role?

A. I belong to an ATE project or center

B. I am seeking ATE funding

C. I am at a non-ATE institution

D. Other: Please share in the chat
Objectives

• Understand how accessibility fits into the Universal Design for Learning framework
• Provide examples of the application of the four POUR principles in the context of a syllabus
• Identify AEM Center and CAST resources for further learning about universally designed educational materials
Your syllabus is your road map

How might you adapt your syllabus to address the changes in how teaching and learning happen in your context? Please share your answers in the chat.
Know the destination
Universal Design for Learning

A framework based on scientific insights into how humans learn that seeks to optimize instruction in order to allow every person to become an expert learner.
“The purpose of education is not to make information accessible, but rather to teach learners how to transform accessible information into useable knowledge.”

Introduction to the UDL Guidelines (CAST, 2012)
3 Layers of UDL Guidelines

**CREATING ACCESS:** Universal Design and AT

**MAKING LEARNING MEANINGFUL:** Build Learning Skills

**BUILDING INDEPENDENCE:** Internalize Learning Behaviors
Questions?
Access Layer

CREATING ACCESS: Universal Design and AT
Functional Definition of Accessibility (US DOE OCR)

A person with a disability can:

- acquire the same information
- engage in the same interactions
- enjoy the same services

in an equally effective, equally integrated manner, and with substantially equivalent ease of use

as a person without a disability.
POUR on the Accessibility: WCAG

Web Content Accessibility Guidelines 2.1

POUR
Perceivable | Operable | Understandable | Robust

National Center on Accessible Educational Materials
#aem4all
Accessibility Statement

• In addition to your institution’s accommodations language, consider including a statement in your syllabus that describes accessibility/UDL supports
• Enhances usability
• Communicates a welcoming environment
Model Accessibility in your Syllabus

• Understand POUR: Perceivable
• Can everyone see and hear the content?
• How: Include alternative text for visuals, captions & transcripts for videos
POUR: Videos

- Video can be a powerful medium for conveying information and for connecting. See: [UDL on Campus Video Resource](#)

- Captions and transcription can make the content from video accessible to everyone. See: [How to Create Captions in Youtube](#)

- Audio descriptions added post production for details: who is in the room, expressions, space description. See: [NCAM CADET](#)
Using Videos in Your Syllabus

- Faculty introduction
- Introducing activities for the week
- Demonstrating a skill or practice
- Providing feedback
- Social media
- Other ideas – please post in the chat
Accessibility Practices for POUR

- Images should have alternative text. Complex images should have image descriptions
  - Understand the purpose of the image
  - Start with a broad overview, the big picture
  - Focus on a few relevant details and describe any important relationships.
See: [Images resource](#)
Using Images in Your Syllabus

- Presenting course materials
- Introducing activities for the week
- Demonstrating a skill or practice
- Links to social media
- Other ideas – please post in the chat

Alt Text: Brazil Mechatronics Team at the World Skills Competition in 2009 in Calgary, Alberta Canada
POUR: Can everyone navigate your syllabus?

- Can everyone navigate the content with ease?

How: Use styles for section headers, create descriptive links

Understanding POUR - The Basics of Universal Design for Learning
- Wednesday, March 25, 2020
- To access the archived recording & slides links please see below.
  - Playback YouTube Recording
  - Webinar Slides
Ensuring your Syllabus is Operable

- Apply styles to indicate section headings (should be descriptive and unique)

**Textbook**

*Foundations of Algebra, 3rd Ed. (2010)*
by Ross, Messier, & Kram
If you need an accessible version of this text, please contact the Disability Support Services office.

**Course Web Site**

All students must log onto the course web site several times each week. Here you will be able to engage in online discussions with classmates, submit assignments, and view your grades and progress.
Leveraging Resources: Creating Accessible Materials from the Start

Designing for Accessibility with POUR

Many of the learning materials educators use in the classroom are self-created. This has been made possible by the greater availability and improved ease of use of authoring tools. These tools now often include options for adding accessibility into the content creation workflow, and standards such as the Web Content Accessibility Guidelines (WCAG) provide guidance for how to do so. WCAG, which is now at version 2.0, is the international standard for making web content accessible. It is the foundation for many national accessibility laws, including Section 508 in the U.S.

The WCAG guidelines are written in technical language that can be confusing to even veteran developers. Fortunately, they can be distilled into a set of simpler principles, as captured by the acronym POUR, that define four qualities of an accessible user experience.
Questions?
### Build Layer

**The Universal Design for Learning Guidelines**
- **Provide multiple means of Engagement**
  - Affective Networks: The “Why” of Learning
- **Provide multiple means of Representation**
  - Recognition Networks: The “What” of Learning
- **Provide multiple means of Action & Expression**
  - Strategic Networks: The “How” of Learning

<table>
<thead>
<tr>
<th>Access</th>
<th>Recruit Interest</th>
<th>Perception</th>
<th>Physical Action</th>
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<tbody>
<tr>
<td></td>
<td>Optimize choice and autonomy</td>
<td>Offer ways of customizing the display of information</td>
<td>Vary the methods for response and navigation</td>
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<tr>
<td></td>
<td>Optimize relevance, value, and authenticity</td>
<td>Offer alternatives for auditory information</td>
<td>Optimize access to tools and assistive technologies</td>
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<tr>
<td></td>
<td>Minimize threats and distractions</td>
<td>Offer alternatives for visual information</td>
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<tr>
<th>Build</th>
<th>Sustaining Effect</th>
<th>Self Regulation</th>
<th>Comprehension</th>
<th>Executive Functions</th>
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<tbody>
<tr>
<td></td>
<td>Heighten salience of goals</td>
<td>Promote expectations and beliefs that optimize motivation</td>
<td>Activate or supply background knowledge</td>
<td>Guide appropriate goal-setting</td>
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<td></td>
<td>Vary demands and pacing</td>
<td>Facilitate personal coping skills and strategies</td>
<td>Highlight patterns, critical features, big ideas, and relationships</td>
<td>Support planning and strategy development</td>
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<td>Foster collaboration</td>
<td>Develop self-assessment and reflection</td>
<td>Guide information processing and visualization</td>
<td>Facilitate managing information and resources</td>
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<td>Increase mastery-oriented feedback</td>
<td>and symbols</td>
<td>Maximize transfer and generalization</td>
<td>Enhance capacity for monitoring progress</td>
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**MAKING LEARNING MEANINGFUL: Build Learning Skills**
Choice is essential

- Learn a new accessibility practice to improve how you deliver materials and share materials remotely. This will give your learners choice in how to engage.

- Think about how each of your students can connect with you in the current situation.
  - How might I reach this person?
  - How might I be of help?
  - What choices can I offer for how to connect with me both "live" and not?
Communication choices in your syllabus

• Offer more than one way to reach you
• Provide a demonstration on how to use a communication technology
• Use accessibility practices in the technologies you choose. See: Web Conferencing Resource
Communication choices in your syllabus (cont.)

Be proactive and **send out a statement asking if students require any accommodations** to participate remotely such as Communication Access Realtime Translation (CART). Captioning should always have its own chat window.

Speaker(s) should **use her/his webcam and have good lighting** so users can see them speaking.

**Introduce yourself before you speak** and have students do the same.

**Pace the delivery** so that students have time to digest what you are saying (and what you are sending) especially if they are looking at something while you are talking.

adapted from [DeafTec Communication](https://www.deeftec.com)
(In)Dependence Layer

BUILDING INDEPENDENCE: Internalize Learning Behaviors
Social to Self Model of Self-Regulation

- Self-regulation and executive functioning will need to be addressed within new structures for teaching and learning. See: Executive Functioning in Online Environments resource.
Strategies to make problem-solving visible

Stuck Station - A standalone video recording station that students visit to explore strategies to get “unstuck”.

Can provide prompts to help students record frustration, iterations, troubleshooting. Students can reflect on each others strategies.

A low-tech alternative - create a thread in your discussion board, on slack or elsewhere to describe problem-solving.

Playful Assessment Beyond Rubrics Toolkit
Resources and Contact

- CAST
- UDL on Campus
- AEM Center
- AEM Resources for Distance Education
- UDL Guidelines

Contact:
Sam Catherine Johnston Director of Postsecondary and Workforce Development
sjohnston@cast.org or @SamCJohnston1
Connect with ATE Central

- Visit us at atecentral.net
- Email us at info@atecentral.net
- Ring us - 608-262-6587
- Follow us @ATECentral