



Inclusive from the Start: The Universal Design for Learning Framework

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Agenda

- Learner Variability, Universal Design, and Universal Design for Learning (UDL)
- Examples of UDL in Higher Education
- UDL Professional Development

Learner Variability, Universal Design, Universal Design for Learning



Learner Variability

- We are each unique in how we learn
- One-size-fits-all approach may not work for all learners

Universal Design

- Design products **from the start** to be accessible and usable

Curb Cuts



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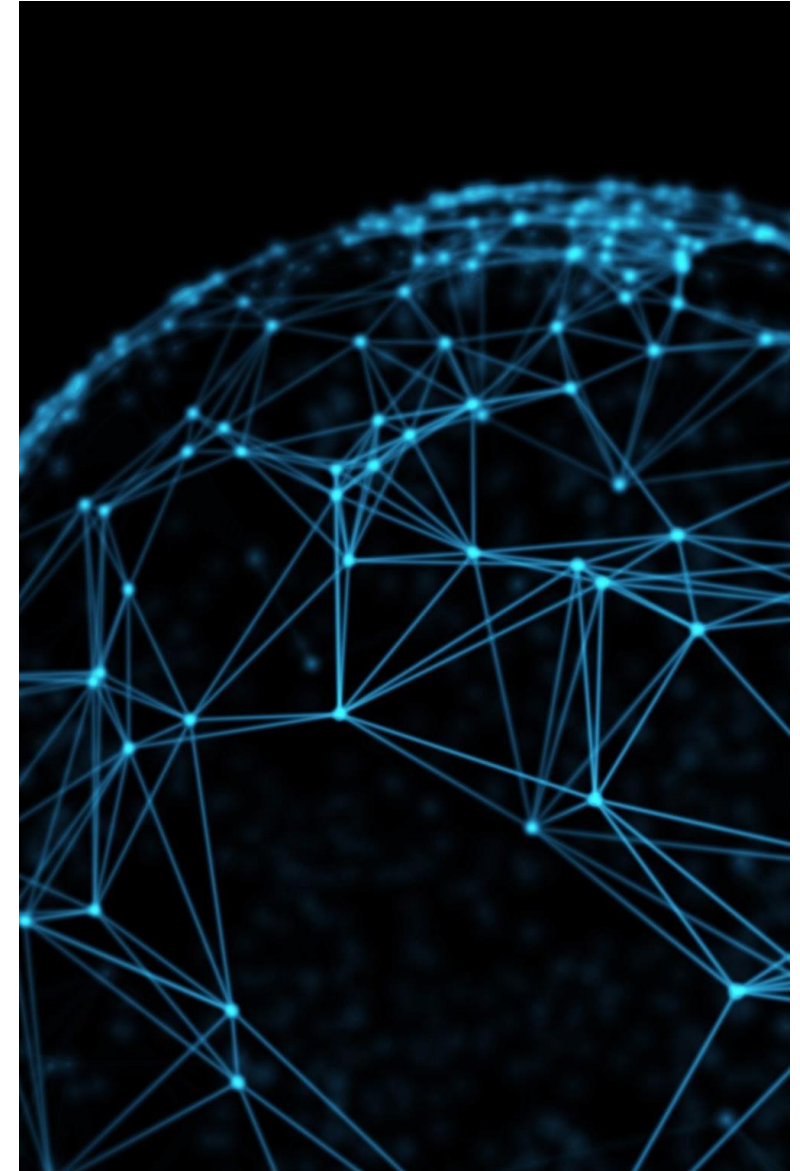
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Universal Design for Learning

- Design **instruction** from the start to be accessible, usable, and more inclusive

Accessibility, Usability, and UDL

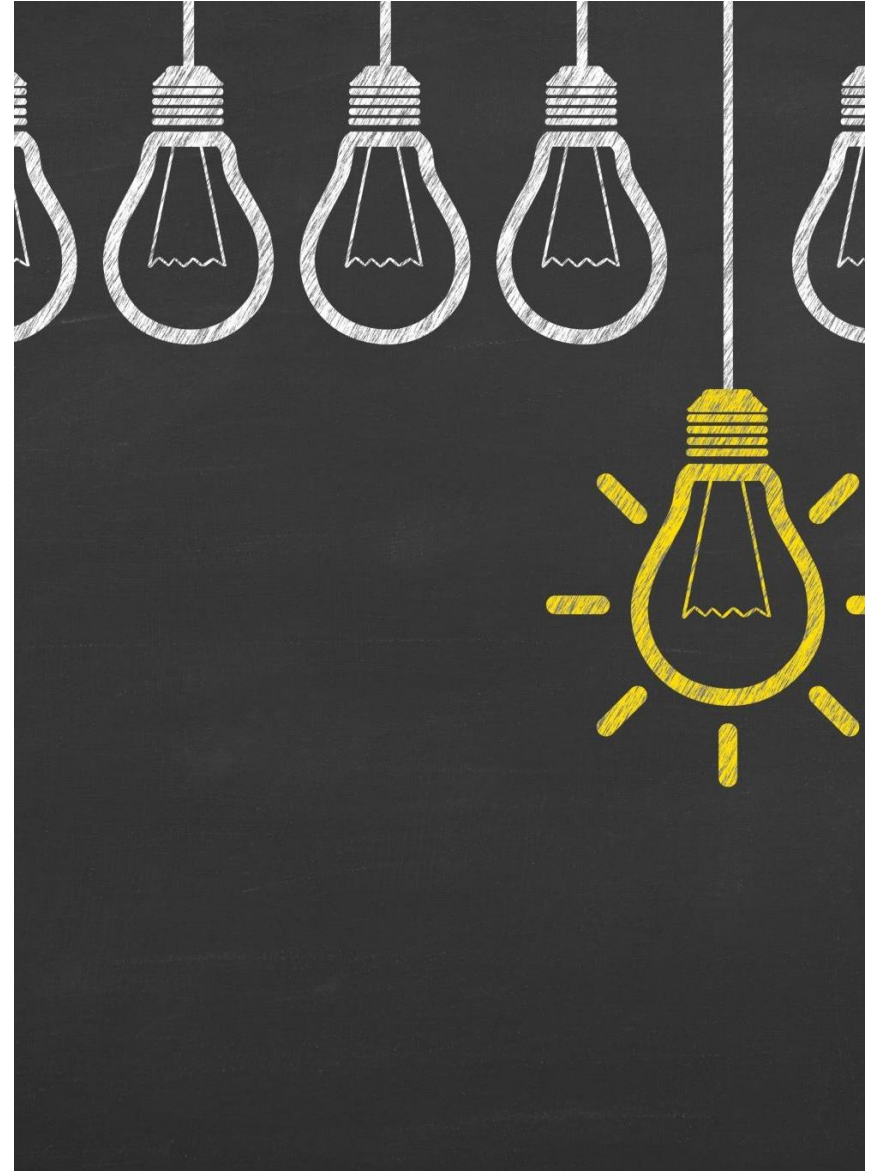
- **Accessibility**: The extent to which information can be perceived by all
- **Usability**: The extent to which a product can be used by all
- **Universal Design for Learning**: Designing from the start to ensure a wide range of learners can access and use instruction



Three Principles

- Multiple Means of Representation
- Multiple Means of Action and Expression
- Multiple Means of Engagement

UDL = Flexibility



Multiple Means of Representation: Mathematics

- Activity: Students are introduced to eigenvectors, vector spaces, and linear transformations
- Barrier to Learning: These are concepts that can be difficult for students to grasp
- UDL Solution:
 - Videos showing plots of these concepts on a 3D plane
 - Provide an oral description of video content
 - Guided notes page for the entire lesson
- Fall 2021: Physical Wood and Plastic Manipulatives

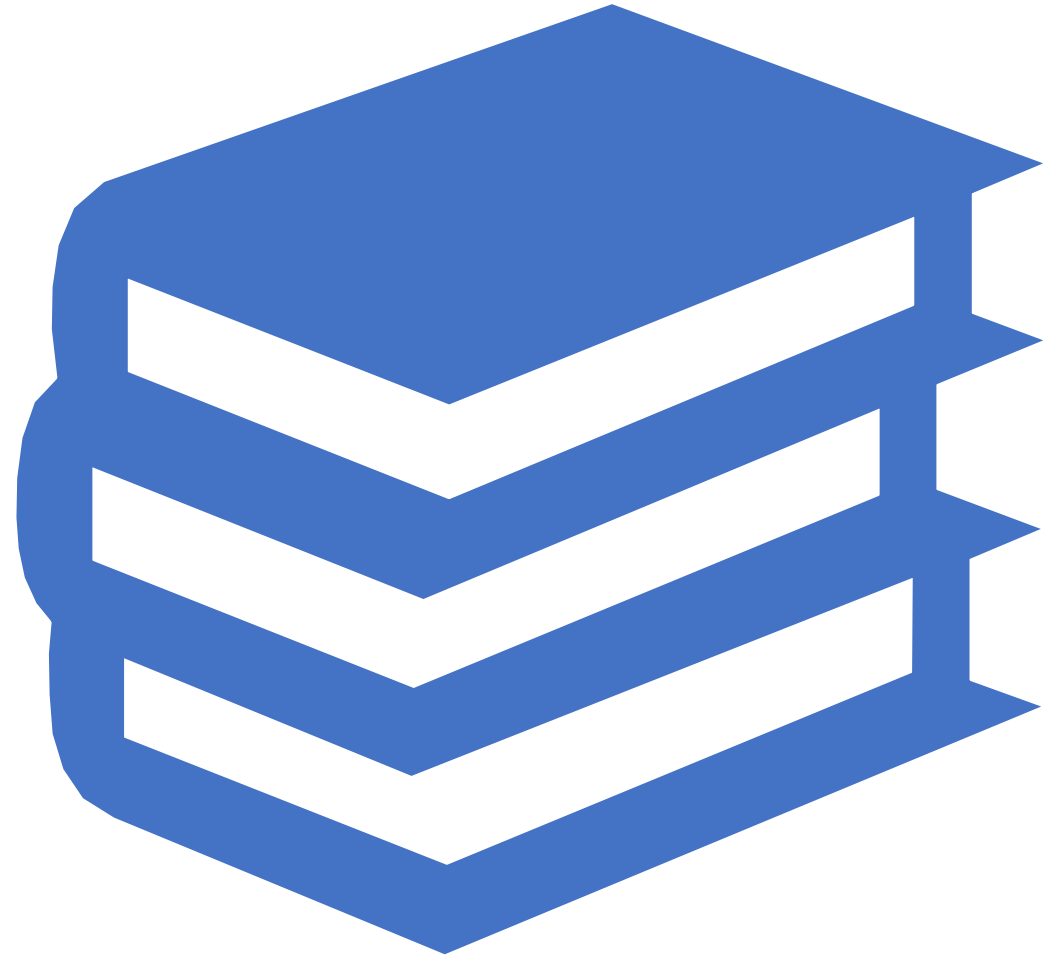
Multiple Means of Action and Expression: Human Services

- Activity: Listening Skills, Ethics, Generalist Skills
- Barrier to Learning / Problem: Students were less successful on the written exam for this unit. Instructor felt it was not exciting to teach.
- UDL Solution:
 - Your Professional Identity project
 - Guided notes pages for textbook readings and class discussions

Multiple Means of Engagement: American Sign Language

- Quiz: Adjectives of emotion
- Barrier to Learning / Problem: Limited representation
- UDL Solution:
 - Revised quiz
 - Includes famous speakers of the target language
 - More diverse representation
 - Full-color page, laminated

UDL Professional Development



UDL Academy (2016 – 2019)

- Faculty Coordinator of UDL Academy (2016-2019)
- Funded by the Onondaga Pathways to Careers project through a grant from ODEP (US Dept of Labor)
- Comprehensive Summer Training
- Fall Project



SUNY UDL for Student Empowerment

- SUNY UDL for Digital Learning Environment Implementation
- SUNY UDL Workshops



Conclusion

- UDL = Flexibility
- UDL professional development can lead to a more inclusive learning environment





Thank you

Questions?

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Additional Resources and UDL Examples



UDL Academy Example 4: American Sign Language

- Activity: Students learn campus buildings vocabulary from a walking tour of the campus
- Barrier to Learning / Problem: Some students are unable to take part in the walking tour
- UDL Checkpoint 2.5: Illustrate through multiple media
 - Instructor created a captioned video of the walking tour and posted to YouTube
- Serves additional purposes:
 - Students who cannot complete walking tour have an equivalent experience
 - Used as advance organizer
 - Saves time when a class is canceled for snow

UDL Academy Example 5: American Sign Language

- Activity: Students described their best friend while a classmate drew a picture with colored pencils
- Barrier to Learning / Problem: Some students might find it challenging to complete the drawing
- Checkpoint 5.1: Use multiple media for communication
 - Students have choices: Pencil drawing, use phone or tablet to create a Bitmoji or Sims character, propose another idea
- Serves additional purposes:
 - Students of all abilities can take part
 - Helps all students feel more comfortable
 - More interesting and engaging for everyone

UDL Academy Example 6: Reading/Integrated Learning Studies

- Activity: “Common Read” novel and discussion
- Barrier to Learning / Problem:
 - Students would not read the text before class
 - Lack of engagement during classroom discussions
- UDL Checkpoint 7.2: Optimize relevance, value, and authenticity
 - Series of 6 worksheets to guide reading
 - Focus on application of text to students’ lives
- UDL Checkpoint 2.1: Clarify vocabulary and symbols
 - Guided learners through new vocabulary in the text

UDL Academy Example 7: Physical Therapy

- Unit of instruction: Wound care
- Barrier to Learning / Problem: Challenging material, insufficient pre-requisite knowledge
- Multiple UDL-based solutions implemented:
 - Formative assessment measures
 - Students set goals and complete reflective journal assignments
 - Physical examples to supplement images in book
 - Warning slides for visually disturbing images
 - Clarified challenging vocabulary
 - Quiz boards

Additional Resources - Accessibility

- **Accessibility Resources**
- [WCAG \(Web Content Accessibility Guidelines\)](#) – Ideally, instructional content will be compliant at Level AA.
- [Microsoft Word and Accessibility](#)
- [Microsoft PowerPoint and Accessibility](#)
- [WebAIM: Word and PowerPoint Accessibility Evaluation Checklist](#)
- [Blackboard and Accessibility](#)
- [Canvas and Accessibility](#)
- [Moodle and Accessibility](#)

Additional Resources – Accessibility (continued)

- [National Center on Accessible Educational Materials – Higher Ed and AEM](#)
- [National Center on Accessible Educational Materials – K-12 and AEM](#)
- [National Center on Accessible Educational Materials – Workforce Development and AEM](#)

Additional Resources – Universal Design for Learning

- **Universal Design for Learning Resources**
- [CAST: About Universal Design for Learning](#)
- [UDL Guidelines](#)
- [UDL Guidelines Downloads](#)
- [UDL On Campus](#)
- [UDL Theory and Practice](#) (freely available e-book, registration required)
- [Reach Everyone, Teach Everyone: Universal Design for Learning in Higher Education](#) (Thomas J. Tobin and Kirsten T. Behling)

Additional Resources – Universal Design for Learning (continued)

- [Colorado State Access Project UDL checklist](#)
- [Colorado State University UDL Quick Tips:](#)
- [University of Arkansas Little Rock Ten Steps Toward Universal Design of Online Courses](#)
- [Learning Designed UDL Credentials](#)

Additional Resources - Captioning and Other Resources

- [Speed up Accurate Captions on YouTube](#) (Eric Moore, University of Tennessee – Knoxville)
- [WebAIM Captions, Transcripts, and Audio Descriptions](#)