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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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)](https://www.w3.org/WAI/wcag2aa) – Ideally, instructional content will be compliant at Level AA.
  - [Microsoft PowerPoint and Accessibility](https://support.office.com/en-us/article/microsoft-powerpoint-accessibility-help-in-1d793f97-52a2-4266-abbc-83a63d46da5a)
  - [WebAIM: Word and PowerPoint Accessibility Evaluation Checklist](https://webaim.org/evaluation/wordpowerpoint/)
  - [Blackboard and Accessibility](https://Blackboard.com)
  - [Canvas and Accessibility](https://canvas.instructure.com)
  - [Moodle and Accessibility](https://docs.moodle.org/33/en/)
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