

REPRESENTATION: Universal Design for Learning Principle

Universal Design for Learning (or UDL) is a way to “improve and optimize teaching and learning for all people based on scientific insights into how humans learn” (CAST, 2015). UDL considers the why, what and how of students’ learning.

One way to integrate universal design principles into your classroom is to provide learners with multiple means of **REPRESENTATION**. This particular UDL approach focuses on giving learners, or guiding learners to, content in a variety of formats. By providing key information in different ways, you can help your learners build important disciplinary knowledge and develop ways of thinking about course content.

TEACHING STRATEGIES

Multiple means of representation can help different groups of learners in different ways without watering down learning outcomes. Not every strategy will work in every classroom, or for every subject area—find the ones that you are comfortable with and that work for your discipline and learners.

1. Pre-teach important vocabulary terms in ways that connect to prior knowledge.

- Offer a glossary of key terms at the beginning of the course, unit, or week.
- Link to online resources where students can find definitions of key terms (e.g. subject encyclopedia through the library).
- Assign key vocabulary terms to students and ask them to teach these terms to the class.

2. Give learners resources like videos, animations and simulations that they can control in sound and speed.

- Record your lectures for students to review later using easy software such as Zoom.
- Use video resources available through SDSU Library or simulations on merlot.org as appropriate.
- Ask students to find and share helpful resources on the open web that may be useful for others.

3. Provide transcripts for video clips.

- Use a free subtitle tool — Zoom, YouTube, or Canvas Studio — to caption videos. Be sure to review any automatically-generated captions/transcripts and correct errors!
- Provide videos through SDSU’s Library resources, where captions and transcripts are included.

4. Highlight relationships between important components or ideas. (e.g. transition words in a text, links between ideas in a concept map)

- Use a concept map to highlight relationships between course ideas throughout the semester.
- Provide short videos that emphasize or highlight relationships between course concepts, especially when introducing new ideas.
- Have students respond to in-class or online prompts that ask them to connect key ideas or themes.

Broader principles from: National Center on Universal Design. (2014). Principle 1: Provide multiple means of representation. Retrieved from <http://www.udlcenter.org/aboutudl/udlguidelines/principle1>

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5. Point out the structural elements of a text to learners.

- Design class activities that scaffold students’ understanding of disciplinary text features with decreasing levels of instructor support.
- Provide short videos that highlight key text features for review and reference.
- Suggest that students use the Immersive Reader (text-to-speech tool) in Canvas or MS Word

6. Support learners in accessing and using multiple representations of the same information.

(e.g. formulas, word problems, graphs that reinforce the same ideas)

- Record lectures using Zoom, Mediasite, or Canvas Studio, and share recordings in Canvas.
- Provide links to text resources that address the same ideas and content for varying levels of learners.
- Use a variety of quantitative representations to demonstrate a single statistical or numerical concept (e.g. map, table, graph, formula).

7. Chunk information into smaller content to help learners develop their knowledge.

- Dissect course content into segments that can construct topical / conceptual units within a class. Explicitly highlight the connections between these content chunks.
- Use Canvas tools—such as modules or pages—to paginate or break up content.
- Break content into 15-minute chunks, with clear start/end points and short mental/physical breaks.

Other UDL practices that are especially helpful to learner groups often challenged by traditional classroom styles.	auditory impaired	students with anxiety	cognitively impaired	English language learners	extroverts	introverts	international students	non-proficient readers	non-traditional students	under-achieving students	visually impaired
1. Create resources with text that can be resized.											✓
2. Provide text/spoken equivalents of visuals.						✓	✓	✓		✓	
3. Use physical objects to show perspective/interactions.	✓			✓			✓	✓			
4. Hyperlink/footnote content.			✓	✓			✓	✓		✓	
5. Use visual resources to clarify vocab.	✓			✓			✓	✓			
6. Highlight connections between text and visual representations.	✓		✓	✓			✓	✓		✓	✓
7. Use many cultural contexts to ground new concepts.				✓			✓		✓		