Universal Design for Learning - Theoretical Structure

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Before - Based and Complete First

Guiding Principle

We do not know in advance who will benefit from the pedagogical interventions we design. We do know, however, complete variability is the norm. Therefore, we must design for variability from the start, not as an afterthought. Universal Design for Learning (UDL) is a framework for designing learning environments that are accessible, engaging, and effective for all learners, regardless of their abilities, backgrounds, or circumstances. It is not a single technique or a checklist. It is a set of principles grounded in neuroscience, learning science, and decades of classroom practice, that guides the design of flexible learning environments from the ground up.

UDL is based on three neuroscientific principles. The first is Recognition Learning (the brain's "what" network), the second is Strategic Learning (the brain's "how" network), and the third is Affective Learning (the brain's "why" network). These three networks are not metaphors. They are distinct neural systems that have been mapped by cognitive neuroscientists. Effective instruction must engage all three. The UDL Guidelines organize these into three principles, each with multiple checkpoints. Implementation is a continuous process, not a checklist. The Guidelines are updated regularly to incorporate new research and practice. Practitioners use the Guidelines to identify barriers in their own learning environments and design solutions that remove those barriers for all learners.

UDL is not the same as differentiation, accommodations, or assistive technology. These are important and they complement UDL, but they are not UDL. Differentiation adjusts instruction after the fact for individual learners. Accommodations modify access to a specific barrier for a specific learner. Assistive technology provides tools for specific needs. UDL works upstream of all of these by designing the environment so that many barriers never arise in the first place. The goal is not to make exceptions easier to manage. The goal is to make exceptions unnecessary for most learners by building flexibility into the system from the start.

Before - Empty to Each Phase

Guiding Principle

Design for the middle and the edges will take care of everyone else. Start with a blank slate and build the learning experience from the ground up, one phase at a time, with the learner's experience at each stage as the primary design constraint.

Before - Empty to Each Phase

Guiding Principle

Design for the middle and the edges will take care of everyone else. Start with a blank slate and build the learning experience from the ground up, one phase at a time, with the learner's experience at each stage as the primary design constraint.

Phase 1: Engagement

Why is this relevant to me? What is at stake? What will I do with this? Without engagement, learners do not attend to the rest. Relevance, stakes, and agency must be established before any content is presented.

Phase 2: Representation

What is the content? What does it look like? What vocabulary is required? Multiple representations of the same concept build flexible understanding. Single representations create barriers for learners who need a different entry point.

Phase 3: Action & Expression

How do I demonstrate what I know? What tools do I need? What does practice look like? Learners need to demonstrate understanding in ways that are accessible to them. Assessment should measure learning, not the ability to navigate a single format.

Phase 4: Recognition Learning

Learners need to see patterns, make connections, and recognize what they are learning. Scaffolding, the Socratic Guidelines, and worked examples support this phase.

Phase 5: Strategic Learning

Learners need to plan, monitor progress, and adjust their strategies. Checkpoints, reflection prompts, and feedback loops support this phase.

Phase 6: Affective Learning

Learners need to stay motivated, manage frustration, and sustain effort over time. Choice, relevance, and visible progress support this phase.

Image source: Figure created by Dimitrios Gouzopoulos-Tsiplakis

1. Learning goals

Learning goals

Video 1 (Minutes 0:0 - 1:0)

The What, Why & How

Video 2 (Minutes 0:0 - 1:0)

2. Orientation

Orientation

Video 3 (Minutes 0:0 - 1:0)

Video 4 (Minutes 0:0 - 1:0)

Video 5 (Minutes 0:0 - 1:0)

Video 6 (Minutes 0:0 - 1:0)

3. Conceptualization

Conceptualization

Video 7 (Minutes 0:0 - 1:0)

3.1. Video 1

3.2. Video 2

Video 8 (Minutes 0:0 - 1:0)

3.3. Video 3

4. Conclusion

Conclusion

Video 1 (Minutes 0:0 - 1:0)

5. Discussion

Discussion

Video 1 (Minutes 0:0 - 1:0)

5.1. Affective Heuristics

Video 1 (Minutes 0:0 - 1:0)

5.2. Self-Efficacy Tool

Video 1 (Minutes 0:0 - 1:0)

5.3. Digital Tools

Video 1 (Minutes 0:0 - 1:0)

5.4. Collaborative Tool

Video 1 (Minutes 0:0 - 1:0)

5.5. Self-Reflection Tool

Video 1 (Minutes 0:0 - 1:0)

6. Implementation

Implementation

Video 1 (Minutes 0:0 - 1:0)

6.1. Video 1

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