

Teaching Workshop: Universal Design for Learning

Basic Principles and Applications

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https://doi.org/10.21606/drs_lxd2021.16.286w

Universal Design for Learning is a framework for accessible and inclusive teaching for people of all ability levels. It can help to make teaching and learning more accessible to people with mild to moderate learning disabilities as well as some level of physical disability by providing information and assessment in multiple formats.

The goals of the workshop will be:

- Identify basic principles of Universal Design for Learning (UDL)
- Understand how UDL can be used as a strategy for inclusive teaching
- Practice applying UDL principles to existing assignments/engagements

Keywords: accessibility, universal design, universal design for learning, inclusivity

Introduction

Universal Design for Learning, or UDL, is a powerful framework for designing and delivering more accessible coursework and to optimize teaching and learning for people of all ages and ability levels. It is based on scientific insights about how people learning, and offers multiple means of engagement, representation, and action/expression to allow for challenging, multimodal learning.

Universal Design for Learning is related to the field of Universal Design, which is known as the design of environments, products and services so that they will be accessible to the largest number of individuals possible regardless of age, gender, or ability level. Similarly, Universal Design takes the same idea of maximal accessibility and applies it to a framework for accessible teaching and learning.

Workshop Expectations

Technical Requirements & Materials

- A computer and internet bandwidth that can handle being on zoom and checking other websites at the same time.
- Pen and paper for notetaking
- 5-20 participants in an online, synchronous learning environment

Specific Aims

The goals of the workshop will be to:

- Identify basic principles of Universal Design for Learning (UDL). The basic three principles include Multiple Means of Engagement, Multiple Means of Representation, and Multiple Means of Action/Expression.
- Understand how UDL can be used as a strategy for inclusive teaching. This will include specific examples and discussion of how UDL can benefit individuals with different learning styles and preferences as well as different ability levels.
- Practice applying UDL principles to existing assignments/engagements. Workshop participants will



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have the opportunity to practice applying UDL principles to existing course assignments or modules.

Pre-workshop Prompts

Workshop participants will be asked to reflect on the following questions:

- Are you familiar with the term Universal Design?
- Are you familiar with the concept of Universal Design for Learning?
- Can you think of any past situations in which you were unable to participate fully in an activity due to physical limitations, learning barriers, or language barriers? How did this make you feel?
- Can you think of any past situations in which a student was unable to participate fully in your class due to a physical limitation, language issue, or a specific learning barrier? Were you able to accommodate them?

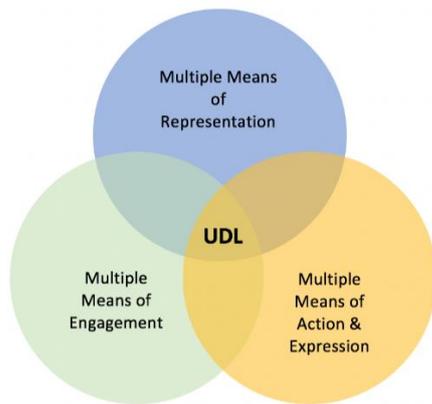


Figure 1. Basic Three Principles of Universal Design for Learning. Source: Hsiao-Yun Chu

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
Access	Provide options for Recruiting Interest (7) → • Optimize individual choice and autonomy (7.1) > • Optimize relevance, value, and authenticity (7.2) > • Minimize threats and distractions (7.3) >	Provide options for Perception (1) → • Offer ways of customizing the display of information (1.1) > • Offer alternatives for auditory information (1.2) > • Offer alternatives for visual information (1.3) >	Provide options for Physical Action (4) → • Vary the methods for response and navigation (4.1) > • Optimize access to tools and assistive technologies (4.2) >
	Provide options for Sustaining Effort & Persistence (8) → • Heighten salience of goals and objectives (8.1) > • Vary demands and resources to optimize challenge (8.2) > • Foster collaboration and community (8.3) > • Increase mastery-oriented feedback (8.4) >	Provide options for Language & Symbols (2) → • Clarify vocabulary and symbols (2.1) > • Clarify syntax and structure (2.2) > • Support decoding of text, mathematical notation, and symbols (2.3) > • Promote understanding across languages (2.4) > • Illustrate through multiple media (2.5) >	Provide options for Expression & Communication (5) → • Use multiple media for communication (5.1) > • Use multiple tools for construction and composition (5.2) > • Build fluencies with graduated levels of support for practice and performance (5.3) >
Internalize	Provide options for Self Regulation (9) → • Promote expectations and beliefs that optimize motivation (9.1) > • Facilitate personal coping skills and strategies (9.2) > • Develop self-assessment and reflection (9.3) >	Provide options for Comprehension (3) → • Activate or supply background knowledge (3.1) > • Highlight patterns, critical features, big ideas, and relationships (3.2) > • Guide information processing and visualization (3.3) > • Maximize transfer and generalization (3.4) >	Provide options for Executive Functions (6) → • Guide appropriate goal-setting (6.1) > • Support planning and strategy development (6.2) > • Facilitate managing information and resources (6.3) > • Enhance capacity for monitoring progress (6.4) >
Goal	Expert Learners who are... Purposeful & Motivated Resourceful & Knowledgeable Strategic & Goal-Directed		

Figure 2. Universal Design for Learning Guidelines. CAST (2018). Universal Design for Learning Guidelines version 2.2. Retrieved from <http://udlguidelines.cast.org>

Workshop Implementation

The workshop will consist of a narrated slide lecture over online platform (such as Zoom), interspersed with small group shares and working time, and will be synchronously taught. The focus will be on interactive learning and applications of new knowledge to participant's existing teaching materials.

There will be a worksheet, readings, templates, and prompts available for group activities which will be shared digitally as link. Participants can either work on the digital files online or they can print them out prior to the workshop if they prefer to take notes on a piece of paper.

Workshop Schedule

- Pre-workshop prompts: Refer to section above
- 20 minutes: Slide introduction
- 10 minutes: Q and A
- 15 minutes: UDL Examples
- 10 minutes: Q&A, small group discussion (for example using small group discussion rooms)
- 20 minutes: Individual activity (apply UDL to existing course assignment or module)
Participants will be asked to review an existing course assignment or module with respect to the Universal Design for Learning criteria. They will be asked to find opportunities to improve the assignment or module design in order to make it more inclusive by applying UDL principles.
- 15 minutes: Discussion and wrap up.
The discussion will invite participants to identify areas in which traditional teaching methods fail to accommodate a broad spectrum of students, and how UDL might help to bridge learning for a larger number of students.

Expected Outcomes

Workshop participants will be able to recognize the basic three principles of Universal Design for Learning and will have practiced applying them to existing courses to increase accessibility within the UDL framework. These principles, as indicated in the diagram above, are Multiple Means of Representation; Multiple Means of Engagement; and Multiple Means of Action and Expression. In the workshop, we will cover specific examples of these three principles as applied to existing or imaginary case studies of teaching.

Participants will be able to recognize potential barriers to broad access that can be mitigated in part by applying UDL principles, and they will have the opportunity to apply UDL principles to their own existing teaching practice in the "individual activity" section described above. As such, participants will be able to apply critical thinking with respect to UDL immediately to their own teaching practice.

Design Educators as Agents of Change

Teaching across a diverse body of students has been recognized as an important value in twenty-first century education. As the world becomes more global, and we teach to ever more varied populations with different racial, ethnic, gender, economic, and language backgrounds, with different learning styles and ability levels, Universal Design for Learning provides a powerful and proven set of methods for more inclusive teaching across the dimensions.

How does UDL represent Design Educators as change agents? If design educators do not recognize the importance of inclusive teaching and learning according to the principles of Universal Design, then design education cannot be said to be truly equitable. This includes teaching in ways that enfranchise and empower the largest possible number of students regardless of ability level, learning style, and/or physical requirements. By implementing UDL principles in teaching and learning environments, curricular designs, and classroom activities, design education can become more inclusive and empowering to all students regardless of age, gender, or ability level.

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<https://doi.org/10.1177/0888406412446178>

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