

# Universal Design

## Overview

The term *universal design* was coined by architect Ronald L. Mace to describe the concept of designing products and the built environment in an aesthetically pleasing way that maximizes usability for everyone, regardless of their age, ability, or status in life.<sup>1</sup> Universal Design for Learning (UDL) applies this concept of inclusive design to the educational setting. UDL research shows that each student learns in a unique manner, so a one-size-fits-all approach is not effective.

## How does UDL apply to the classroom?

Traditional education caters to the “average student” with its teaching methods and materials. Outliers, such as those who are gifted or those who have a disability, are often neglected. UDL focuses on variability instead of uniformity. It encourages educators to be flexible in their goals, methods, materials, and assessments. Curricula based on UDL principles eliminate the need for costly and time-consuming after-the-fact changes.<sup>2</sup>

## What are the principles of UDL?

	Principle I: Provide Multiple Means of Representation (The “What” of Learning)	Principle II: Provide Multiple Means of Action and Expression (The “How” of Learning)	Principle III: Provide Multiple Means of Engagement
Provide Options for...	<ul style="list-style-type: none"><li>• Perception</li><li>• Language, expressions, and symbols</li><li>• Comprehension</li></ul>	<ul style="list-style-type: none"><li>• Physical action</li><li>• Expression and communication</li><li>• Executive function</li></ul>	<ul style="list-style-type: none"><li>• Recruiting interest</li><li>• Sustaining efforts and persistence</li><li>• Self-regulation</li></ul>
Examples	<ul style="list-style-type: none"><li>• Use images and text to illustrate ideas</li><li>• Provide digital formats that allow the learner to enlarge text or change fonts or colors</li><li>• Caption videos</li></ul>	<ul style="list-style-type: none"><li>• Use multiple formats such as paper, electronic, and multimedia</li><li>• Allow various modes of expression—writing, verbal, or project-based</li><li>• Facilitate scaffolding of ideas to promote higher-level learning</li></ul>	<ul style="list-style-type: none"><li>• Incorporate relevant examples for a variety of learners</li><li>• Increase skills in self-regulation and self-determination</li><li>• Provide self-assessment exercises<sup>2</sup></li></ul>

## How can UDL be incorporated?

UDL incorporates and supports many current research-based approaches to learning: cooperative learning groups, performance-



based assessments, project-based learning, multisensory teaching, and the theory of multiple intelligences.

Instructors should consider presenting information in a variety of formats, such as online resources, videos, podcasts, PowerPoint presentations, and e-books, instead of just the standard lecture format. Instruction can be enhanced through the use of case studies, music, role play, hands-on activities, field trips, guest speakers, and educational software. The assessment methods should also be flexible. Students can demonstrate learning through oral and visual presentations instead of the standard written test.<sup>3</sup>

## How does UDL work with ADA accommodations?

When curriculum is designed around UDL principles there is much less need for additional accommodations, since the materials are created with accessibility in mind.

On a daily basis we use ramps, curb cuts, and automatic doors. Anyone with a bicycle, baby stroller, or rolling cart uses these “accessibility” features to more easily navigate the environment. Although each feature was designed to accommodate wheelchair users or others with mobility-related disabilities, we all benefit.

For deaf individuals, incorporating UDL principles may mean ensuring that auditory information is also available in a visual format. Captioning videos is another example of universal design. Many people think captions are only for deaf individuals, but they benefit everyone, including those whose first language is not English, those in noisy settings, and those who are unfamiliar with the vocabulary. In addition, instructors can post transcripts created from the captions, which gives all students comprehensive notes of the video content, including those who do not have a strong enough Internet connection to view the video properly.

## Related Resources

- CAST: About Universal Design for Learning:  
[www.tinyurl.com/CASTaboutUDL](http://www.tinyurl.com/CASTaboutUDL)
- National Center on Universal Design for Learning:  
[www.udlcenter.org](http://www.udlcenter.org)
- Washington DO-IT Center: Center for Universal Design in Education:  
[www.tinyurl.com/doitcenterUDE](http://www.tinyurl.com/doitcenterUDE)

Additional resources on this subject may be available at [www.nationaldeafcenter.org/resources](http://www.nationaldeafcenter.org/resources).

## References

- <sup>1</sup> The Center for Universal Design. (2008). About the Center: Ronald L. Mace.  
Retrieved from [www.tinyurl.com/CUDronmace](http://www.tinyurl.com/CUDronmace)
- <sup>2</sup> The National Center on Universal Design for Learning. (n.d.). UDL Center: Together we can change the world. Retrieved from <http://www.udlcenter.org>
- <sup>3</sup> LINCS. (n.d.) Teaching excellence in adult literacy.  
Retrieved from <https://lincs.ed.gov/state-resources/federal-initiatives/teal>



This document was developed under a grant from the U.S. Department of Education, OSEP #HD326D160001. However, the contents do not necessarily represent the policy of the U.S. Department of Education, and you should not assume endorsement by the federal government.

© 2019 National Deaf Center on Postsecondary Outcomes, licensed under Creative Commons BY-NC-ND 4.0 International

Additional resources can be found at [www.nationaldeafcenter.org](http://www.nationaldeafcenter.org)