

### Overview

The term "universal design" was coined by the architect Ronald L. Mace to describe the concept of designing all products and the built environment to be aesthetically pleasing and usable to the greatest extent possible by everyone, regardless of their age, ability, or status in life. <sup>1</sup> Universal Design for Learning (UDL) expands this inclusive design into 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 is based on the concept of the "average student", and teaching methods and materials are designed accordingly. Outliers, such as those who are gifted or those with a disability, are often neglected or ignored. UDL focuses on variability instead of uniformity. It encourages educators to be flexible in their goals, methods, materials, and assessments. Curricula created using 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: Providing Multiple Means of Representation (the "what" of learning)**

Perception

Language, expressions, and symbols

Comprehension

Examples include:

- Using images and text to illustrate ideas.
- Providing digital formats that allow the learner to enlarge text or change fonts or colors.
- Captioning videos.

**Principle II: Providing Multiple Means of Action and Expression (the "how" of learning)**

Physical action

Expression and communication

Executive function

Examples include:

- Use multiple formats such as paper, electronic, and multi-media.
- Allow various modes of expression—writing, verbal, or project-based.
- Facilitate scaffolding of ideas to promote higher level learning.

**Principle III: Providing Multiple Means of**

Engagement

Recruiting interest

Sustaining efforts and persistence

Self-regulation

Examples include:

- Incorporate relevant examples for a variety of learners.
- Increase skills in self-regulation and self-determination.
- Provide self-assessment exercises. <sup>2</sup>



# Accessibility

## How can UDL be incorporated?

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

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For individuals who are deaf or hard of hearing, 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 of captions as being only for individuals who are deaf and hard of hearing, but they benefit everyone. Captions benefit those whose first language is not English, those in noisy settings, those who are unfamiliar with the vocabulary, and many more. In addition, instructors can post transcripts that are created from the captions, so all students have comprehensive notes of the video content. Students who do not have a strong Internet connection can still access the content via a transcript.

## Resources

CAST

<http://www.cast.org/our-work/about-udl.html#.VykQMDArKUK>

National Center on Universal Design for Learning

<http://www.udlcenter.org/>

Washington Do-IT Center

<http://www.washington.edu/doiit/programs/center-universal-design-education/overview>

## References

<sup>1</sup>

The Center for Universal Design. Retrieved from [https://www.ncsu.edu/ncsu/design/cud/about\\_us/usronmace.htm](https://www.ncsu.edu/ncsu/design/cud/about_us/usronmace.htm)

<sup>2</sup>

The National Center on Universal Design for Learning. Retrieved from <http://www.udlcenter.org/>

<sup>3</sup>

Teaching Excellence in Adult Literacy. Retrieved from: <https://lincs.ed.gov/state-resources/federal-initiatives/teal>