International Journal of Research in Special Education

E-ISSN: 2710-3870 P-ISSN: 2710-3862 IJRSE 2022; 2(1): 18-22 © 2022 IJSA

www.rehabilitationjournals.com Received: 17-11-2021

Received: 17-11-2021 Accepted: 22-12-2021

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Universal design for learning

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Abstract

UDL is an approach to curriculum design that can help teachers customize curriculum to serve all learners, regardless of ability, disability, age, gender, or cultural and linguistic background. UDL provides a blueprint for designing strategies, materials, assessments, and tools to reach and teach students with diverse needs. Universal Design for Learning (UDL) gives all students an equal opportunity to succeed. This approach to teaching and learning offers flexibility in the ways students access material and show what they know. Universal Design for Learning (UDL) also looks for different ways to keep students motivated. The goal of UDL is to use a variety of teaching methods to remove any barriers to learning. It's about building in flexibility that can be adjusted for every person's strengths and needs. That's why UDL benefits all learners. UDL is an approach to teaching aimed at meeting the needs of every student in a classroom. It can be helpful for all kids, including kids with learning and thinking differences.

Keywords: Universal design learning, opportunity, flexibility, barriers, multisensory teaching, learning skills

Introduction

The term Universal Design refers to a movement in architecture and product development that aims to make places and things more accessible to individuals with disabilities. Many adaptations for people with disabilities benefit a variety of users. For example, ramps and curb cuts make it easier for parents with baby strollers, elderly people, and delivery people to negotiate walkways and street. Similarly, closed captions on television and movies can be appreciated not only by the deaf and hard of hearing, but by people who can read them in noisy environments. They can also be used as support for listening comprehension by viewers learning the language. The concept that everyone benefits when designs incorporate the needs of every user has become known as universal design. UDL extends this concept to education by applying advances in the understanding of how the brain processes information to the design of curricula that accommodate diverse learning needs.

Under the UDL Umbrella the good news is that UDL is not in conflict with other methods and practices. It actually incorporates and supports many current research-based approaches to teaching and learning, such as the following:

- Cooperative learning (group work)
- Differentiated instruction
- Performance-based assessment
- Project-based learning
- Multisensory teaching
- Theory of multiple intelligences and
- Principles of student-centered learning
- Equitable opportunities for all
- Access to all aspects of learning
- Mythical "average" student
- Design curricula to meet the varied instructional needs of all

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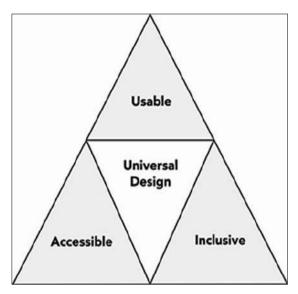


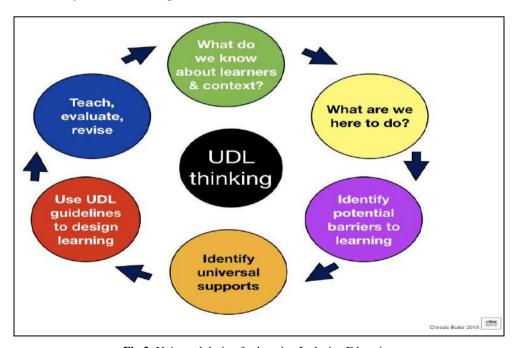
Fig 1: Universal design in education: principles and applications



Fig 2: Accessibility of Universal Design

Providing students with multiple means of perceiving, comprehending, and expressing their learning allows students to engage with the material in a way that most benefits them, and also encourages students to engage with material to improve in areas in which their skills are not as strong. Universal design for learning (UDL) is a teaching approach that works to accommodate the needs and abilities of all learners and eliminates unnecessary hurdles in the learning process. This means developing a flexible learning environment in which information is presented in multiple ways, students engage in learning in a variety of ways, and students are provided options when demonstrating their learning. UDL is similar to universal instructional design and universal design for instruction. All three advocates for accessible and inclusive instructional approaches that meet the needs and abilities of all learners. Designing a course to accommodate a wider variety of needs may eliminate potential learning barriers or unnecessary learning obstacles.

- Provide Options for Perception Based on the premise that learner's access information differently, this principle means providing flexible and multiple ways to present information. For example, using PowerPoint as a visual supplement to your lecture.
- Provide Options for Expression Since learners vary in their abilities to demonstrate their learning in different ways, this principle means providing flexible and multiple ways to allow students to express their knowledge or demonstrate their skills. For example, providing students an option of writing a final exam or submitting a final assignment.
- Provide Options for Comprehension Students are motivated to learn for different reasons and vary in the types of learning activities that keep them engaged. This third principle means providing multiple ways for engaging in course activities. For example, engaging students in both group work activities and individual work, as opposed to engaging students only in individual work.



 $\textbf{Fig 3:} \ Universal \ design \ for \ learning \ Inclusive \ Education$

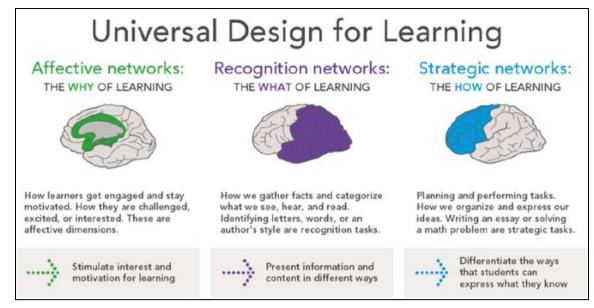


Fig 4: Universal design for learning: Center for educational innovation

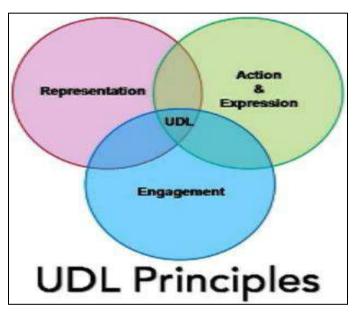


Fig 5: Universal design for learning: educational principles

3 main principles of UDL

UDL is a framework for how to develop lesson plans and assessments. It's based on three main principles:

1. Engagement

- Look for ways to motivate learners and sustain their interest. Here are some examples:
- Let people make choices
- Give assignments that feel relevant to their lives
- Make skill building feel like a game
- Create opportunities for learners to get up and move around

2. Representation

Offer information in more than one format. For example, the instructor could provide a worksheet along with:

- Audio, which could be as simple as saying the written directions out loud
- Video showing how to solve one of the problems
- Hands-on learning

3. Action and expression

Give learners more than one way to interact with the material and to show what they know. For example, they might get to choose between:

- Taking a pencil-and-paper test
- Giving an oral report
- Making a video or a comic strip
- Doing a group project

UDL helps all learners. But here are some of the ways it may be especially helpful to the 1 in 5 kids and adults who learn and think differently:

- Makes learning more accessible in general education classrooms, which is where most kids who learn and think differently spend most or all of the school day.
- Presents information in ways that adapt to the learner, instead of asking the learner to adapt to the information.
- Gives students and workplace trainees more than one way to interact with material. UDL builds in flexibility that can make it easier for learners to use their strengths to work on their weaknesses.

 Reduces stigma. By giving a variety of options to everyone, UDL doesn't single out the few who receive formal accommodations for a disability.

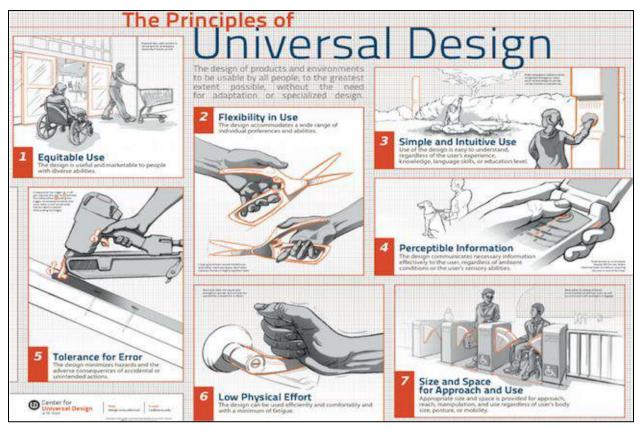


Fig 6: Learn to create Accessible of Websites with the universal design: Interaction Design Foundation

Conclusion

This UDL IC was created to offer practical recommendations intended to assist and guide general and special education teacher preparation programs as both general and special education teachers instruct students with diverse needs, including students with Page 29 of 38 disabilities. This assistance and guidance will better prepare teachers to effectively instruct the range of learners in their classrooms. The principles of UDL can be applied to a course's overall design as well as to the specific instructional strategies and materials used while teaching a course. The principles can be incorporated into lectures, group work, learning activities, field work, discussion, and demonstrations to make learning more accessible and more effective for all learners. UDL provides flexible approaches to instruction that can be adapted to the individual needs of students across the learning spectrum. Teachers can create a more nurturing, equitable and inclusive space by using five strategies. These include the three UDL principles (multiple means of representation, multiple means of action and expression, and multiple means of engagement) as well as reflecting diversity in teaching and supporting the social justice goals of fellow teachers. However, implementation of UDL also presents challenges. Teachers may require more professional development on the topic, especially if they have been out of school for a while. The method requires the creation of an accessible curriculum, which may require the input of multiple teachers and central office staff. Additional funding and technology resources, depending on how UDL is implemented, might also be needed. Administrators may wish to begin by implementing the approach in certain

courses or by combining special education and general education classes for certain elements of instruction, such as a multimedia presentation of the concept of the lesson, in order to judge the potential benefits and challenges of this method of instruction in their school environment.

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