

Universal Design for Learning: Is It for Everyone?

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Abstract Universal Design for Learning is a concept which liberates people from labels that separates them from the norm. It proposes teaching methods that compensates a need, similar to pushing a door opener when hands are occupied, a ramp for pushing a stroller or using an elevator instead of stairs. In the classroom, universal design for learning (UDL) incorporates numerous methods to differentiate instruction. Students are given multiple ways to express their understanding and mastery of what is taught. The multiple opportunities for engagement is the most important UDL principle. The ultimate goal of UDL is to vary approaches and strategies that differentiate and maximize learning.

Keywords: *differentiating, accommodating, engagement, multiple methods*

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Whenever I use an automatic door opener or pull my cart on a ramp at the university I secretly smile and think of universal design. I do not have a physical or cognitive handicap but I usually carry a heavy load of books on my way to my office so I use whatever I can find to facilitate my entry. What is universal design and how can we use it to help student in the learning process? The term “universal design” is borrowed from the architectural concept which called for curb cuts, ramps, automatic doors and other architectural features to be built into the design of buildings and the environment as adjustments for individuals who have difficulties accessing their destination. But these features in reality benefit many other groups who might need help such as cyclists, parents with strollers and you and me.

Universal Design for Learning (UDL) applies the same concept to learning creating a curriculum with numerous built in features to meet the learning needs of the diversity in our schools. Applied to education, this concept offers great promise in helping to improve educational outcomes for all students. As defined by researchers at the Center for Applied Special Technology [4], the “universal” in Universal Design for Learning (UDL) does not imply one optimal solution for everyone, but instead highlights the need for flexible, individualized content, assignments and activities, and assessments characterized by: multiple representations of information—as there is no single method for the presentation of information that will provide equal access for all learners; multiple methods of expression—as there is no single method of expression that will provide equal opportunity for all students; and multiple means of engagement—as there is no single way to ensure that all children are engaged in a learning environment.

Universal Design for Learning (UDL) incorporates numerous methods to differentiate instruction such as

attention to multiple intelligences, learning style, and personality preferences. The multiple means of representation, expression, and engagement is intended to accommodate instruction for diverse learners. Presenting information and ideas in multiple ways is an essential part of good teaching. This principle of UDL addresses diverse learning styles and provides multiple opportunities for students to grasp key concepts. The second principle of UDL is that students should be given multiple ways to express their understanding and mastery of what is taught. Instructional technologies offer new methods of communication and increased opportunities for students to demonstrate their knowledge and skills. The multiple opportunities for engagement is the third, and perhaps the most important UDL principle. The ultimate goal of UDL is to vary approaches and strategies that differentiate and maximize learning.

Inclusion of diversity can be a challenge in inclusive classrooms. Students differ from one another in many ways and present unique learning needs in the classroom setting, yet high standards are important for all students. Schools today service a wide array of “diversities”. These include learners with high incidence disabilities, or with low incidence disabilities, learners with gifts and talents and those who are culturally and linguistically diverse. In addition there are students at risk for success in school because of their socio/economic status or lack of parental involvement. Growing income inequality and the flight to suburbia has damaged the effectiveness of schools serving poor students [5]. Economic inequality now exceeds racial inequality in education outcomes [7].

By incorporating supports for students, it is possible to improve learning experiences for everyone, without the need for specialized labels down the line. For example, captioned video is of great help to students with hearing

impairments—but captions are also helpful to students who are learning English, students who are struggling readers, students with attention deficits, and even students working in a noisy classroom. I, personally, appreciate reading the subtitles on a TV screen at the airport. Fortunately, these supports are becoming increasingly available in digital multimedia learning environments. Universal Design for Learning is an educational framework that optimizes opportunities for all individuals to gain knowledge, skills, and enthusiasm for learning [8].

Making use of powerful computer technologies, teachers can create classroom activities that meet a wider range of learning needs so that all students can access curricular content and demonstrate their progress. Technology gives us the tools to accommodate instruction for learners who learn differently. Important UDL strategies however, address low tech as well as high tools. They may include various mnemonics for memory retention, accessing prior knowledge, anchoring, hands-on activities, field trips, graphic organizers, peer collaboration, visual aids and many more that have been used traditionally to teach and mentor any child.

One central idea of UDL is that as new curricular materials and learning technologies are developed, they should be designed from the beginning to be flexible enough to accommodate the unique learning styles of a wide range of individuals, including children with disabilities. Some examples of UDL include: accessible Web pages; electronic versions of textbooks and other curricular materials; captioned and/or narrated videos; word processors with word prediction; speaking spell checkers; talking dialog boxes; voice recognition; and picture menus [11].

Presenting information and ideas in multiple ways is an essential part of good teaching. The UDL principle of multiple expression addresses diverse learning styles and provides multiple opportunities for students to grasp key concepts. The second principle of UDL is that students should be given multiple ways to express their comprehension and mastery of a topic. Instructional technologies offer new methods of communication and increased opportunities for students to demonstrate their knowledge and skills. Getting students excited about learning by providing multiple opportunities for engagement is the third, and perhaps most powerful, UDL principle [6]. Shirley Burgstahler [3] explains that the principles of UDL are needed to provide guidance in the design of environments and products.

The following four guidelines were developed by David Rose, and Jenna Gravel, [9] and are organized according to the three main principles of UDL that address representation, expression, and engagement.

Guideline 1: Provide Options for Perception: Learning is impossible if information is imperceptible to the learner, and difficult when information is presented in formats that require extraordinary effort or assistance. To reduce barriers to learning, it is important to ensure that key information is equally perceptible to all learners by: 1) providing the same information through different modalities (e.g., through vision, hearing, or touch); 2) providing information in a format that will allow for adjustability by the user (e.g., text that can be enlarged, sounds that can be amplified). Such multiple

representations not only ensure that information is accessible to learners with particular sensory and perceptual disabilities, but also easier to access and comprehend for many others.

Guideline 2: Provide Options for Language, Mathematical Expressions, and Symbols

Learners vary in their facility with different forms of representation – both linguistic and non-linguistic. Vocabulary that may sharpen and clarify concepts for one learner may be opaque and foreign to another. An equals sign (=) might help some learners understand that the two sides of the equation need to be balanced, but might cause confusion to a student who does not understand what it means. A graph that illustrates the relationship between two variables may be informative to one learner and inaccessible or puzzling to another. A picture or image that carries meaning for some learners may carry very different meanings for learners from differing cultural or familial backgrounds. As a result, inequalities arise when information is presented to all learners through a single form of representation. An important instructional strategy is to ensure that alternative representations are provided not only for accessibility, but for clarity and comprehensibility across all learners.

Guideline 3: Provide Options for Comprehension

The purpose of education is not to make information accessible, but rather to teach learners how to transform accessible information into useable knowledge. Constructing useable knowledge, knowledge that is accessible for future decision-making, depends not upon merely perceiving information, but upon active “information processing skills” like selective attending, integrating new information with prior knowledge, strategic categorization, and active memorization. Individuals differ greatly in their skills in information processing and in their access to prior knowledge through which they can assimilate new information. Proper design and presentation of information – the responsibility of any curriculum or instructional methodology - can provide the scaffolds necessary to ensure that all learners have access to knowledge.

Guideline 4: Maximize Transfer and Generalization

All learners need to be able to generalize and transfer their learning to new contexts: Students vary in the amount of scaffolding they need for memory and transfer in order to improve their ability to access their prior learning. Of course all learners can benefit from assistance in how to transfer the information they have to other situations, as learning is not about individual facts in isolation and students need multiple representation for this to occur. Without this support and the use of multiple representations, information might be learned, but is inaccessible in new situations. Supports for memory, generalization, and transfer include techniques that are designed to heighten the memorability of the information, as well as those that prompt and guide learners to employ explicit strategies [9].

In addition to these four guidelines Rose and Gravel [9] offer strategies to increase students’ perception, options for linguistic and non-linguistic representation, options for comprehension and transfer and generalization. The

complete set of guidelines and strategies can be accessed via the internet for teachers to use in their classrooms. Teachers can additionally develop their own strategies keeping in mind the diversity of their students and their learning preferences. It is important to have ownership in alternative ways to enlist the learners' interest and provide strategies that teachers feel comfortable in using. Universal Design for Learning stresses self-regulation as an important part of learning. Learners differ in their abilities to self-regulate and maintain attention. Direct teaching of self-regulation is essential for learning to occur. We cannot assume that students are blessed with this skill neither that medication will completely eliminate this problem. Teachers can use various strategies to teach delayed gratification, self-control, and sustained attention keeping in mind the need for support and motivation.

I smile and agree with the saying that "labels are for jars and not for people." Universal Design for Learning (UDL) decreases the need for labels because it is designed to offer accommodation to whoever needs them. Negative labels can lower expectation for the student including teachers and parents and foster the perception that the student cannot do what is required. It can create a vicious cycle and sets up the student for failure. UDL focus attention on characteristics of design that can empower learner and sends a message of success.

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