Occupational Therapy and
Universal Design for Learning

Universal design for learning (UDL) addresses access to learning and the curriculum for all students, not just those identified as having disabilities. Just like universal design in architecture, UDL applies the principles of equal access, flexibility, simplicity, perceptibility, and efficiency to both the educational environment and to the process of teaching and learning. The educational curriculum and training of occupational therapy practitioners includes knowledge and skills related to task and activity analysis, environmental adaptations and modifications, and assistive technology, which makes them uniquely qualified to guide others in the application of UDL within educational settings.

What is Universal Design for Learning?

Federal education law defines UDL as:

> …A research-based framework for designing curriculum—including goals, methods, materials, and assessments—that enables all individuals to gain knowledge, skills, and enthusiasm for learning. Universal design for learning provides curricular flexibility (in activities, in the ways information is presented, in the ways students respond or demonstrate knowledge, and in the ways students are engaged) to reduce barriers, provide appropriate supports and challenges, and maintain high achievement standards for all students, including those with disabilities. (Higher Education Opportunity Act, 2008)

Rose and Meyer (2002) developed the principles of UDL based on brain research that describes the process of learning as the interaction of three neuronal networks: the recognition, strategic, and affective networks. The **recognition network** helps identify patterns of sensory information, or the **"what"** of learning. The **strategic network** helps plan, execute, and monitor how we think and move, governing **"how"** we learn. Finally, the **affective network** determines the importance and meaning of what we're learning and thus engages us, determining **"why"** we learn, or why not. Classroom learning generally consists of presenting information to students (the what), expressing and demonstrating that information by students (the how), and engaging with the learning process (the why). UDL emphasizes the use of multiple and flexible ways of representing, expressing, and engaging with information so that all students can participate and find success in learning—drawing on their own unique combination of strengths, weaknesses, and preferences. Recent updates in the guidelines for UDL focus less on disability and more on the diversity and variability of learners across the lifespan (Hall, Meyer, & Rose, 2012).

What Does UDL Look Like, and Why is it Important?

UDL promotes the use of both mainstream and specialized technology to provide students and educators with flexible options for accessing information. For example, students who have difficulty reading printed text because of a visual impairment or reading disability might benefit from using the digital version of a novel or textbook on a computer or text reader that can read aloud. Those students just learning English or who have language processing disorders might find help in comprehending text by using embedded word definitions, concept explanations, foreign language translations, or animated coaching features. In addition, students who have difficulty turning pages may use adapted switches to navigate through a digital text.

Likewise, students who have difficulty demonstrating their learning through writing or speaking can use a variety of computer tools, like spell- and grammar-checking, word prediction, or speech-to-text software, and concept-mapping tools to respond to assignments. Both low- and high-tech strategies for goal setting, planning, and implementing

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strategies for school work can help students who have difficulty staying on course to complete educational tasks.

Evidence-based strategies for enlisting students' maximal engagement and participation in learning include scaffolding, which is explicitly tying new information to what a student already knows; providing options for individual choice and autonomy; and giving students tools for managing frustration. Occupational therapy practitioners look at the student's skills and barriers to performance, the environment and context, and the learning task itself, then make appropriate modifications or provide supports to facilitate learning.

The Occupational Therapy Role in UDL

Occupational therapy practitioners work in a variety of educational settings to support the participation of children and youth in a wide range of academic and non-academic activities. The support that occupational therapy practitioners provide includes direct service to students, as well as training and consultation with parents, educators, administrators, and other school staff. Of the many tools that practitioners can use in this role, one of the most powerful and far reaching is knowledge of the principles and strategies of UDL.

An important role for school-based occupational therapy practitioners includes consultation to educators and administrators in addition to direct services to students with disabilities. In addition, school-based occupational therapy practitioners support the general population of all children, with and without disabilities, by identifying and recommending flexible options for teaching and learning activities. This includes the ability to observe and assess students' performance skills and patterns, evaluate the influence of context and environment on performance, and analyze activity demands.

Knowledgeable and experienced occupational therapy practitioners can provide training to educators, parents, other related services personnel, and students in the use of mainstream and assistive technologies. They can demonstrate how to use the flexible features of computer operating systems and applications to change the appearance of computer displays, the speed of response, features of keyboard and mouse inputs, and mode of visual or auditory output. They can recommend specialized hardware and software for reading and writing, and help students access the range of academic and social networking opportunities. Occupational therapy practitioners can also identify features of the environment that support or interfere with students' ability to benefit from classroom activities and recommend strategies to enhance participation.

Conclusion

Occupational therapy practitioners can play an important role in supporting implementation of UDL principles in the educational setting. They utilize their knowledge base, activity analysis, and adaptation skills to recommend, train in, and apply technology and other methods to facilitate learning and performance in the context of the classroom.

References

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Rose, D. H., & Meyer, A. (2002). *Teaching every student in the digital age: Universal Design for Learning.* Alexandria, VA: Association for Supervision and Curriculum Development. See also www.cast.org.

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Occupational therapy enables people of all ages live life to its fullest by helping them to promote health, make lifestyle or environmental changes, and prevent—or live better with—injury, illness, or disability. By looking at the whole picture—a client's psychological, physical, emotional, and social make-up—occupational therapy assists people to achieve their goals, function at the highest possible level, maintain or rebuild their independence, and participate in the everyday activities of life.