



Professional Development Fact Sheet No. 2 UNIVERSAL DESIGN FOR LEARNING

What is Universal Design for Learning?

Universal Design for Learning (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 students with diverse needs and help them learn.

Traditional curricula are typically print-based and intended for the *average* learner. In trying to meet the needs of students with sensory, motor, cognitive, linguistic, and affective challenges, teachers often find themselves modifying print-based curricula. UDL is different from other approaches to curriculum design in that teachers begin the design process *expecting* the curriculum to be used by a diverse set of students with varying skills and abilities.

A universally designed curriculum is not heavily reliant either on print materials or on teacher presentations. Instead, it incorporates technology such as videos, DVDs, audio tapes, and Web sites; it also uses creative teaching strategies, such as cooperative, multisensory, and project-based learning. According to the Center for Applied Science and Technology (CAST), an organization dedicated to UDL research and development, UDL ensures that instruction includes the following:

- **Multiple means of representation**—using a variety of methods to present new information, including the use of technology;
- **Multiple means of expression**—providing learners with alternative ways to demonstrate what they know, e.g., verbally, in writing, and through demonstration; and
- **Multiple means of engagement**—tapping into learners' interests by offering choices of content and tools; motivating learners by offering adjustable levels of challenge.

The Roots of UDL

The universal design movement in learning has its roots in universal design in architecture. When legislatures began passing laws requiring better physical accessibility to public spaces, architects began to add features such as ramps, elevators, and wide doorways to existing buildings. Many of the early modifications were unsightly. Eventually, however, architects embedded accessibility features into their original designs. When the features were integral to the designs, they no longer detracted from aesthetics. The architects also discovered a surprising bonus: a broad range of people appreciated and used the new accessibility features. For example, with the addition of ramps and curb cuts, parents with baby strollers, elderly people, and delivery people found walkways and streets easier to negotiate. The concept that everyone benefits when designs incorporate the needs of every user became known as *universal design*.

Similarly in education, the general populace has enthusiastically adopted tools developed for people with disabilities, such as speakerphones, text-to-speech software, and voice recognition technology. When educators apply UDL to their practice, they create curricula that are inclusive of all learners.

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

- Cooperative learning (group work),
- Differentiated instruction,
- Performance-based assessment,
- Project-based learning,
- Multisensory teaching, and
- Theory of multiple intelligences.

UDL vs. Assistive Technology

UDL and assistive technology are not one and the same. Even those adult education programs that provide assistive technology will find that students benefit from UDL. For example, assistive technology-based programs provide learners with special tools to access print-based curriculum. This model, although extraordinarily helpful and learner-centered, still places the burden of adaptation on the *user*. In contrast, the UDL approach places the burden of adaptation on the *curriculum*. The UDL approach maximizes the use of technology, but does not eliminate the need for assistive technology. For example, a learner with visual problems who uses a magnifier to read computer screens will still need to use this assistive technology device in a UDL classroom. The benefit of a universally designed curriculum is that it serves *all* learners, whereas assistive technology serves only those students identified as having special needs.

How can Students Benefit from UDL?

Adult students benefit from two major aspects of UDL: (1) its emphasis on flexible technology, and (2) the variety of instructional practices, materials, and learning activities. English as a second language (ESL) students, older students, and those with disabilities appreciate the multifaceted ways content is presented as well as UDL features such as captions for videos and software, audio descriptions of images, and bold visual aids. Schools may lack adequate resources to meet the needs of special learners; UDL helps educators meet the challenge of serving those with special needs while enhancing learning for all.

How can Teachers Incorporate UDL into Teaching and Learning?

Teachers may wish to try the following strategies, based on *Teaching Every Student in the Digital Age: Universal Design for Learning*, by David H. Rose and Anne Meyer (2002).

Use multiple strategies to present content. Using a variety of instructional techniques can motivate and engage students. Teachers can enhance instruction through use of case studies, music, role play, cooperative learning, hands-on activities, field



trips, guest speakers, Internet-based communications, and educational software.

Use a variety of materials. To present, illustrate, and reinforce new content, teachers can use materials such as online resources, video clips, podcasts, PowerPoint presentations, audiotapes, DVDs, and e-books. Students also benefit from using manipulatives. For example, when students weigh and measure real objects, they are more able to grasp the concept of weights and measurement than when they are exposed to the concept only through books and discussion.

Provide cognitive supports. Teachers can give students organizing clues by saying, for example, *I have explained the four main points, and now I'm going to summarize them.* They can introduce new concepts by providing background (contextual) information and make background information engaging by using pictures, artifacts, videos, or other materials and methods that are not lecture-based. Teachers can *scaffold* students' learning (provide temporary support to reduce the complexity of a task) by providing a course syllabus, outlines, class notes, summaries, study guides, and copies of PowerPoint slides. Students benefit when teachers provide written and audiotaped lists of resources to help students locate background information at their level.

Provide opportunities for practice. Practice and experimentation help learners solidify their learning. It is essential for teachers to plan frequent, regular, defined time for students to explore and practice new concepts in a non-judgmental, safe learning environment.

Teach to a variety of learning styles. Building movement into learning, such as total physical response (TPR) exercises for ESL learners, is a powerful teaching strategy. Giving instructions both orally and in writing will engage students both auditorily and visually. Teachers may wish to consider using large visual aids and choosing bold fonts on uncluttered backgrounds for transparencies, slides, graphs, and charts.

Offer a choice of learning contexts. Effective instruction provides opportunities for individual, pair, and group work. Teachers also can consider distance learning, peer learning, and fieldwork.

Provide flexible opportunities for assessment. Students can demonstrate their learning by performing a checklist of steps, writing an action plan, stating what they have learned, drawing mind maps or charts, and expressing their learning through visual or performing arts.

What Additional Resources on UDL are Available?

The Center for Applied Special Technology (CAST) offers extensive UDL resources and strategies on its Web site, at www.cast.org.

The National Center for Accessible Media provides information and resources for expanding access to educational and media

technologies for special needs students, at <http://ncam.wgbh.org/aboutncam.html>.

The Teaching Every Student Web Site, at www.cast.org/Teachingeverystudent is designed for kindergarten through grade 12 teachers but can be informative for adult education teachers. It includes the full text of the book, *Teaching Every Student in the Digital Age: Universal Design for Learning*, by David H. Rose and Anne Meyer (ASCD, 2002).

Bridges to Practice: A Research-Based Guide for Literacy Practitioners Serving Students with Learning Disabilities, published in 1999 by the National Adult Literacy and Learning Disabilities Center, provides comprehensive information on teaching adults with learning disabilities, at www.nifl.gov/nifl/ld/bridges/about/project.html.

References

Balajthy, E. (2005, January/February). Text-to-speech software for helping struggling readers. *Reading Online*, 8(4). Retrieved June 20, 2007, from <http://www.readingonline.org/articles/balajthy2>

Burgstahler, S. (2006). Equal access: Universal design of instruction. *DO-IT, University of Washington*. Retrieved June 20, 2007, http://www.washington.edu/doit/Brochures/Academics/equal_access_udi.html

Hitchcock, C., & Stahl, S. (2003). Assistive technology, universal design, universal design for learning: Improved opportunities. *Journal of Special Education Technology* 18(4).

Meyer, A. (2006). *A practical reader in universal design for learning*. Cambridge, MA: Harvard Education Press.

Rose, D. H. (2001). Universal design for learning: Deriving guiding principles from networks that learn. *Journal of Special Education Technology* 16(1): 66-70. Retrieved June 20, 2007, from <http://jset.unlv.edu/16.2/asseds/rose.pdf>

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.

Rose, D. H., Meyer, A., & Hitchcock, C. (2005). *The universally designed classroom: Accessible curriculum and digital technologies*. Cambridge, MA: Harvard Education Press.

Developed by the California Adult Literacy Professional Development Project (CALPRO), under contract with the California Department of Education.

Fact Sheet Author: Sally Ianiro
Contributor: Anestine Hector-Mason
Reviewers: Amy Park
Catherine Green
Editors: Mary Ann Corley
Phil Esra

