

Universal Design for Learning

Scenario

Shannon is a faculty rep to a committee seeking to reduce the number of withdrawals from the college's intro courses. Because these high-enrollment courses tend to have multiple requests for accommodation from students with disabilities, the committee calls Diana Jones, a consultant on the Americans with Disabilities Act. Diana recommends Universal Design for Learning (UDL), an approach that builds in accommodation for students with learning differences while offering affordances that improve engagement and performance for all students. The committee decides to redesign one history course as a pilot.

Diana works with a course designer and the instructor. The course will offer all students options for access to class materials, including a text-to-speech textbook and captioned videos. Students will have many opportunities to engage with content and demonstrate their learning. Students can work online or in class, individually or in groups. They can move from topic to topic in a linear path and take online assessments at their own pace, or they can demonstrate mastery by writing a blog post, making a presentation, or leading a class discussion.

When students are polled about the course design, many note the value of the flexibility in learning activities and testing. Kristina writes, "I have a visual perception disorder, and I read very slowly. In this class I didn't feel different. Anyone can get a text-to-speech textbook or see an outline of future lessons online for extra prep. I usually take exams in a separate room, but in this class my team and I built an alchemy lab and wrote a play about Renaissance medicine. That was more interesting than a test, and I didn't feel set apart."

At semester's end, the college finds that grades were 12 percent higher than in the other intro history courses. Requests for special accommodation dropped to zero, and course withdrawals were halved. With so small a sampling, the committee agrees the results are not definitive, but they plan to convert three more courses and, if all goes well, eventually the entire introductory curriculum. The committee recognizes that redesigning courses requires supports including learning communities for faculty, assistance from instructional designers, and resources to guide the process.

1 What is it?

Universal Design for Learning is **a framework for the design of materials and instructional methods that are usable by a wide range of students**. The term was adapted from the concept of universal design in architecture, where considerations of physical access for individuals with disabilities are incorporated into the original design rather than added later. Based on research in neuroscience and other disciplines, UDL recognizes that individual learning patterns differ and that learning systems should accommodate variability among learners from the outset. The approach encourages flexible conditions that ensure access and participation by all students, without lowering expectations or standards. One aim of this approach is to provide full access to students with special needs, particularly through the provision of supportive technologies such as captioned video or text-to-speech options. But UDL offers significant affordances for all students, allowing them to benefit from learning presented through multiple sensory avenues and a variety of conceptual frameworks.

2 How does it work?

UDL design principles take **a holistic approach to learning in which curriculum, procurement, the LMS, and university policy work together to support the needs of all learners**. The research and development organization CAST (Center for Applied Special Technology), which pioneered UDL, provides detailed, web-based implementation resources for faculty, curriculum developers, and course designers. These resources include research-based guidelines, discussions, and specific recommendations for establishing instructional goals, materials, methods, assessments, and policies. UDL-based learning environments give students a variety of options to demonstrate mastery and numerous opportunities for active engagement in the learning process.

3 Who's doing it?

A number of institutions have embraced UDL, including the University of North Carolina System, which has incorporated UDL into its College STAR initiative. This program addresses learning differences and disabilities by

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building resources and models to share with other institutions and instructors. For some populations on participating campuses, the application of UDL has proved especially promising. At East Carolina University, for example, a STAR program for students with identified learning disabilities resulted in a 90% retention rate, higher than the retention of the university as a whole. Colorado State University has established a three-year UDL initiative through the ACCESS Project, which makes UDL support available through its ACCESS website for faculty, students, and student advocates. Instructors can find help teaching a class that includes students with disabilities, and students with learning differences can find self-advocacy resources.

4 Why is it significant?

UDL mechanisms that support equal access for all students can be incorporated into program initiatives from the outset, avoiding the need for retrofits. Many institutions turn to UDL initially as a tool for meeting the legal requirements of ADA compliance and optimizing the tools of assistive technology. But UDL's focus on reducing physical, cognitive, and organizational learning barriers goes beyond students with disabilities and provides support for students who learn best with experimentation or who progress faster with learning options that do not depend heavily on reading. Thus, **designing to accommodate differences helps learners across the spectrum.** The UDL framework sets high standards for all students and applies flexible means so that each learner finds appropriate learning challenges and supports. In this way, it helps faculty maximize desirable challenges (such as high achievement standards) and minimize undesirable ones (such as frustration and boredom). UDL also includes assessment because learners differ in how they best express themselves and demonstrate learning. As a result, UDL discourages using a single form of assessment, recommending instead that several options be available for students. In the best learning environments, where students are exposed to multiple learning paths, various means of expression, and numerous opportunities for engagement, they may come to recognize their own best approaches for self-education and sustainable learning.

5 What are the downsides?

UDL challenges the status quo. This could mean that **faculty, designers, and administrators face difficult conversations as they integrate UDL into the learning environment.** The introduction of assistive technologies can mean changes for procurement staff that could involve a reevaluation of

current practices. The assistive technologies, once acquired, could put pressure on the IT department as new technologies are integrated with the LMS and other system-level hardware and software. In some cases, UDL could have a chilling effect on technology adoption if faculty members discover that an exciting new software application is not accessible to all students. A campus-wide adoption of UDL can be expensive, and a full picture of the costs and benefits of UDL—including the retention of students who might otherwise not return—should be developed. Finally, supporters must make clear that UDL does not lower expectations but opens new learning pathways that can help more students meet existing expectations.

6 Where is it going?

Early research about the influence of UDL is positive, with evidence suggesting improvements in student engagement and measures of learning. But more research should be conducted into the effects of UDL in higher education. UDL has applicability beyond course-related learning activities, extending, for example, to student support services, such as how to present financial aid programs so that all who need them can access them and accomplish needed tasks. UDL may also become more broadly implemented in campus life, including work placement, campus community life, and programs that support travel abroad.

7 What are the implications for teaching and learning?

Adoption of UDL can help an institution commit to a broader range of students, cultures, abilities, and backgrounds. For faculty, the prospect of teaching effectively to all learners is rewarding, particularly when it is visibly demonstrated that more students are able to succeed. Although the principles of UDL apply to all learning environments, blended and on-line contexts might especially benefit from UDL because of the range of options available in technology-enhanced education. Unlike programs that target specific disabilities or learning needs, which tend to separate such students from the rest of the class, **UDL provides an approach with many paths to learning that benefits all students** without forcing them to self-identify as needing unique support. While the approach can involve some rethinking and investment, it has been effective in addressing such troubling issues such as student apathy, sinking enrollment, and rising dropout rates. It does this by ensuring that students across the campus have equal access to learning and equal opportunity to participate in their own education.