



UDL Intersections

Universal Design for Learning and Digital Technology

Many teachers are unsure as to whether they can actually implement Universal Design for Learning (UDL) because they have limited access to technology or limited fluency in its use. Also, some educators wonder whether technology is central to UDL or whether UDL is a pedagogical framework that goes beyond technology. In other words, is UDL about technology, or about teaching? The purpose of this brief is to describe the relationship between UDL and digital technology and to highlight their intersections.

What do we mean by digital technology?

The term ‘digital’ technology usually invokes visions of computers - which is certainly one mode for accessing digital context. Digital media also include mobile devices, such as cell phones, gaming technology, social media, and data analytics. Once text is digital, it can be displayed in several ways. Content can be displayed using a variety of media - onscreen, or via speech, graphic images, video, animation, simulations, or any combinations of these. Digital text can also be translated and transformed (e.g., text-to-speech, speech-to-text, text-to-American Sign Language (ASL), text-to-Braille).

What is Universal Design for Learning?

Universal Design for Learning (UDL) is based on the evidence from neuroscience that no two brains learn in the same way; learner variability is the rule. The UDL Guidelines (see the National Center on UDL: <http://udlcenter.org/>) provide a structure to support the design of curriculum to address this neurological variability. By providing multiple means of representation, action and expression, and engagement in the curriculum from the beginning, all students can become *expert learners* which

includes being resourceful, strategic, and purposeful towards a goal. UDL is about pedagogy.

Intersections

From the beginning, UDL has been associated with digital technology for good reason: the power and flexibility of digital technology greatly enhances the ability to individualize and customize the learning experience. Digital technologies allow for variability among learners and learning environments and encourage flexibility. An obvious advantage of digital technologies is that the presentation of content can be altered in a variety of ways to suit individual needs and interests (e.g., changes in type face, font size, font color, sound volume, presentation rate). Also, the difficulty of information can be altered: images can be turned on or off and main ideas can be highlighted. The networked nature of digital media adds further flexibility, including inserting hyperlinks as supports (e.g., multimedia explanations, maps, interactive images, and encyclopedias) and communicating with peers and mentors via email or web blogs.

According to Rose, Gavel and Domings (2010), digital technology is an important aspect in the implementation and optimization of UDL. Nevertheless, the UDL principles and guidelines may be applied to successfully teach *all* students without digital technologies. Using traditional non-digital media requires teachers to create or assemble a large assortment of materials and options. However, the core components of the curriculum—its goals, assessments, media, materials, and teaching methods—remain essentially as they always have been. The teacher’s challenge is to offer sufficient options. In summary, digital technology is not the goal of UDL; it is merely one of its means.