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How UDL Can Make Learning Work for All Your Students

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AHEAD

Introduction

Universal Design for Learning (UDL) is a set of principles and guidelines for curriculum development that give all individuals equal opportunities to learn.

UDL aims to improve the educational experience of all students by introducing more flexible methods of teaching and assessment to cater for the huge diversity of learners now participating in higher education. This approach is underpinned by research in the field of neuroscience and the learning sciences and is designed to improve the learning experience and outcomes for all students. The basic idea is simple but backed by decades of research – that all of us learn differently, have different life experiences and demands, and differing physical and cognitive strengths, and so a variety of teaching and learning approaches with choice and flexibility built in are required to reach and motivate everyone.

This presentation will explore the origins of UDL, provide an introduction to its 3 key principles, encourage participants to examine the diversity within their own classrooms and offer practical take-aways for those seeking to explore further and get started on their own UDL journey.

Origins of UDL

To understand the origins of UDL, it is first important to understand that it's values are influenced by Universal Design (UD) thinking itself. The concept of Universal Design (UD) was originally developed as an inclusive approach to architecture, design, and the built environment, and its underlying principles propose that any inclusive environment needs to be considered from the very outset to ensure its success. The UN Convention on the Rights of People with Disabilities ratified by Ireland in 2018 defines Universal Design as "the design of products, environments, programmes and services to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design". To examine a very common example of a Universal Design solution encountered in our everyday life, many buildings with a raised entrance will provide both a set of steps and a graduated ramp entry. Users of the building have a choice on which mode of entry is most suitable for them at that moment in time.

For many users, the steps provide the quickest and most convenient point of entry, but for a certain cohort of people, access would not be possible without the ramp e.g. people with mobility disabilities, elderly people with mobility restrictions etc. Additionally, the benefit of the design

which builds in the choice and flexibility of entry is felt by a multitude of users e.g. delivery staff using trolleys, users temporarily on crutches due to accident, parents operating buggies or walking with small children.

Universal Design solutions like this that build in flexibility and choice, and cater to the variability in our societies are common place in our everyday lives for example automatic doors, adjustable car seating, seat-belt design etc.

Development of Universal Design for Learning Principles and Guidelines

Over time, the values underpinning UD have been applied to the development of a number of educational frameworks, including Universal Design for Learning (UDL). The Universal Design for Learning framework was developed in the early 1990s by Harvard based organisation CAST and based on research in neuroscience, cognitive psychology and the learning sciences. Neuroscience research indicates that there are three key networks of the brain which require stimulation for us to learn effectively and that these networks are stimulated in different ways in different people. CAST took this research and mapped it to supporting research in the learning sciences to develop three key principles calling on educators to provide:

- Multiple Means of Engagement – The 'Why' of Learning relating to the Affective Networks of the brain
- Multiple Means of Representation – The 'What' of Learning relating to the Recognition Networks of the brain
- Multiple Means of Action and Expression – The 'How' of Learning relating to the Strategic Networks of the brain

Over the proceeding decades a set of accompanying guidelines was developed and updated, further mapping effective instructional practice identified through research in the learning sciences to the principles, forming what is now known collectively as the UDL Framework. One of the core themes of the learning sciences research underpinning the guidelines is one of the most widely replicated findings in educational research: that learners are highly variable in their response to instruction.

Other core research themes which informed the development of the guidelines are the literature on the zone of proximal development, scaffolding, mentors, and modelling.

UDL's empirical base in neuroscience provides a solid foundation for understanding how the learning brain intersects with effective instruction and this alignment is further extended and clarified by the guidelines and checkpoints.

UDL Practice

What makes UDL different from other universal design based educational frameworks is its focus not just on access to learning, but it's ultimate aim for students to develop a mastery of learning itself and become 'Expert Learners'. The three key principles all have individual goals relating to this overarching aim – to create expert learners who are:

- Purposeful and Motivated
- Resourceful and Knowledgeable
- Strategic and Goal Directed

What the implementation of UDL principles looks like in practice can vary from one instructor to another and is influenced by many factors such as the instructor's skillset, the discipline being taught, the instructor's level of UDL understanding and their work with other educational theories and practice. UDL implementation can be an exciting journey for educators to take because implementation is not a box ticking exercise where UDL is achieved by doing X, Y or Z – rather it prompts educators to use the weight of their own expertise and experience to design more inclusive experiences for their learners using UDL as a lens.

This presentation will provide some real world examples of UDL in practice and signpost practical resources for participants to further explore. It will call on participants to reflect on their own practice using the UDL framework and to consider using the UDL framework to guide to design and redesign of their programmes going forward.

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