This introduction to universal design for learning (UDL) talks about variability, a key concept underpinning UDL, then describes the concept of UDL and its three principles of enactment, representation, and action and expression.

An Introduction to Universal Design for Learning (UDL)

Inclusion through variability

The last decade has seen many changes in Irish education. These changes have embraced more inclusive approaches to education and challenged teachers to design and teach lessons that are suitable for a more diverse range of students than were in our classrooms two decades ago.

A recent study (Flood & Banks, 2021) suggests that universal design for learning (UDL) is gaining momentum in Ireland as a way for the system and teachers to meet this challenge. Relative to Irish secondary education, it provides examples of UDL emerging through our use of learning outcomes across sectors, the Framework for Junior Cycle's (Department of Education, 2015) flexible pathways, and its use of classroom-based assessments.

This introduction to UDL talks first about variability, a key concept underpinning UDL, before describing the concept of UDL and its three principles of enactment, representation, and action and expression.

From categories of need to variability

Variability is a dominant feature of UDL because it is the dominant feature of the nervous system (Meyer et al., 2014; CAST, 2018b). There is no single way that a brain will respond to the learning environment. Because there is no 'average' brain and therefore no 'average' student, we need to stop planning, teaching, and assessing based on that idea.

While categories of need played a significant role in gaining resources for students for over a decade, we know that our students are so much more than a label. The new model of allocation for teaching resources recognises this and removes the need for labelling by giving autonomy to schools on how they use their resources (Department of Education, 2017).

This opportunity to 'unlabel' our students reduces the risk of developing fixed mindsets about groups of students, making inaccurate assumptions

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about them (Posey & Novak, 2020), or indeed offering only some students a particular strategy that could benefit many, because it is considered a support for a particular group.

Variability recognises not only the diversity in a group of students but also the variability within each student. It considers the 'jagged profile' (Rose, 2016) as a more comprehensive way of identifying a holistic view of our students' strengths and areas for support. This jagged-profile approach to variability pays attention to context and the environment that facilitates intentional design to remove barriers to learning.

For teachers, the fear may be how to design for the variability of a class of up to 30 students. The UDL Guidelines and associated checkpoints correspond to the nervous system and brain structure to help teachers address the predictable variability in learning that we know will be present in any environment (Meyer et al., 2014; CAST, 2018a).

UDL encourages moving away from thinking about our students and lesson design in terms of ability and disability, to thinking in terms of this variability. Through this UDL mindset, students are not labelled by their disability, social background, gender, race, and so on. It is not 'just for' the student with special educational needs: it is for every student.

What is UDL?

Universal design for learning is a change in mindset and a framework for inclusion. UDL is a proactive approach to learning, teaching, and assessment design that supports the varied identities, competencies, learning strengths, and needs of every student in our classroom and school community. The UDL Guidelines are the tool to support the enactment of inclusive practices.

UDL is about ensuring that a variety of pathways (choice and flexibility) are offered to students for understanding content; that goals are clear and specific to the expected outcome; and that student assessment is flexibly designed to enable every student to demonstrate their knowledge, values, understanding, and skills in a variety of ways (Meyer et al., 2014). In this light, UDL has the potential to promote the engagement and independence of our students to become what Meyer et al. describe as 'expert learners'.

In UDL, barriers to learning are the environment, curriculum, and context, not the student. These barriers can be removed by designing intentionally for predictable variability. As we strive to create meaningful and purposeful learning experiences for every student, with the goal of developing expert learners, UDL highlights three design principles that provide a map for teachers: engagement, representation, and action and expression.

The UDL Guidelines offer recommendations, or checkpoints, for enacting each UDL principle. Let's look at these guidelines more closely.

Multiple means of engagement

We know that students differ greatly in the ways they can be engaged or motivated, and that external factors can impact on this. Here we need to ask ourselves: How can and will our students engage?

To facilitate student engagement, we need to consider variability. Various elements can influence individual variation in how students engage, including neurology, culture, personal relevance, subjectivity, and background knowledge. In reality there is not one means of engagement that will work best for every student in every context.

Some will be immediately turned off by the task or topic. Others will be interested and ready to participate straight away. Some will tire easily and lose interest because of the physical or cognitive effort involved in achieving the learning goal. Others will look forward to the practical elements. If we provide multiple, intentionally designed options for engagement, then we will offer a way in for each student.

Multiple means of representation

We know that every student perceives and comprehends the information presented to them differently. Here we need to ask ourselves: How will students perceive the content we present? And then: How do we present our content in a way that provides access for each of our students to engage with the learning?

Like engagement, there is not a one-size-fits-all means of representation. Some will not have sufficient access through text and will process information better through visual or auditory means. Others will enjoy independently exploring the content. Some will work better if they can access instructions in stages as they work through the content or task.

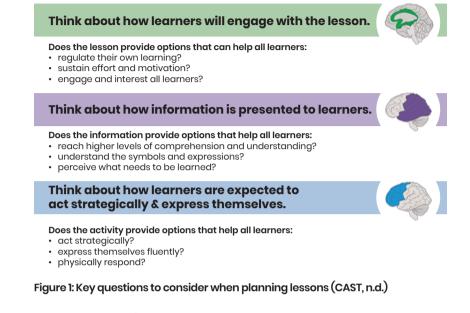*Multiple means of action and expression*

We know that every student navigates their learning environment and expresses what they know differently. Here we need to ask ourselves: How can our students best act on their learning and demonstrate their knowledge, understanding, skills, and values? And are we giving students the opportunity to show their best selves?

Again, there is no one perfect means of action and expression. It is about being clear on the goal of the task and providing those intentional options to students that enable them to achieve. Some will not know how to start a task or how to express themselves clearly, or they may be unable to plan their actions. Others will have a system for planning their actions and will easily craft an essay, project, or presentation to display their knowledge. Some may be able to express themselves well in writing but not speech, and vice versa. Thus, if only one act of expression is offered to students, they may feel they will not accomplish the task well – and we're back to engagement.

UDL offers key questions to consider when planning lessons. Teachers might find them helpful as they begin their own UDL journey – see Figure 1.

But providing intention or the correct 'multiple means of' can happen only if we are clear about the goal.

Key questions to consider when planning lessons

Think about how learners will engage with the lesson.

Does the lesson provide options that can help all learners:
- regulate their own learning?
- sustain effort and motivation?
- engage and interest all learners?

Think about how information is presented to learners.

Does the information provide options that help all learners:
- reach higher levels of comprehension and understanding?
- understand the symbols and expressions?
- perceive what needs to be learned?

Think about how learners are expected to act strategically & express themselves.

Does the activity provide options that help all learners:
- act strategically?
- express themselves fluently?
- physically respond?

Figure 1: Key questions to consider when planning lessons (CAST, n.d.)

Does UDL work?

While much of the research to date on UDL is based in neuroscience, there is emerging evidence that UDL is influencing teacher change and practice. Evidence-based research on student outcomes is, as yet, limited (Capp, 2017; Flood & Banks, 2021). But the available research is promising and shows UDL's potential to have a positive impact on student outcomes.

UDL requires us to reflect on the following questions when planning for learning, teaching, assessment, and student success:

1. Why should our students care about the learning goal in front of them? (*engagement*)
2. How can students build their understanding of the learning goal in front of them, and how are we supporting this? (*representation*)
3. What options are we providing for our students to truly communicate and demonstrate their knowledge, understanding, skills and values? (*action and expression*)

If we use the UDL guidelines to help us address these questions, then we should see improved student outcomes. But, like all endeavours, this takes time.

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Pictured at the launch of the Leaving Cert Results Helpline in September 2021:

Norma Foley, Minister for Education | **Mai Fanning,** President, National Parents Council Post-Primary (NPCPP) | **Katherine Donnelly**, Irish Independent | **Emer Neville** (seated), President, Irish Second-Level Students' Union (ISSU)