

Universal Design for Learning (UDL)

A PRIMER FOR EDUCATORS

WHAT IS UNIVERSAL DESIGN FOR LEARNING?

“Universal design” means design for everyone. **Universal Design for Learning (UDL)** is a framework that draws from the fields of neuroscience, learning sciences, and cognitive psychology to leverage everything we know about how humans learn best, while also responding to the vast diversity between learners. The UDL framework guides the design of learning spaces that can accommodate learners’ differences. When implemented effectively, UDL provides flexibility in ways learners access and engage with course materials and demonstrate learning outcomes.




If we distilled the rationale for UDL into one simple thought process, it might look something like this:



UDL is a bit like bowling. To learn why, watch UDL scholar Shelley Moore deliver a [short and fun talk](#) about the thought process that underlies Universal Design for Learning. Although she is referring to K-12 education in this video, her point holds true in higher education.

Go Deeper: Why UDL?

The following resources are optional. Feel free to choose one or more to explore if you would like to learn more on this topic.

-  [Removing Barriers with Universal Design for Learning](#) (41:06) (Teaching in Higher Ed Podcast, August 8, 2019)
-  CAST (2018). [UDL and the learning brain](#)
-  Gronneberg, J. and Johnston, S. (2015). [7 Things You Should Know About Universal Design for Learning](#).

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LEARNER VARIABILITY

Learners come to Humber with a range of lived experiences and ever-changing variables that affect their academic success and classroom interactions. Here is a brief list of just some of the factors that affect **learner variability**:

- Level of stress
- Quality and quantity of sleep
- Amount of study time
- Whether they have had enough to eat
- Physical health (long-term and temporary)
- Mental health (long-term and temporary)
- Social marginalization (affected by factors like race, class, and gender identity)
- Cultural context
- Age/maturity
- Access to resources and technology
- Language skills
- Previous knowledge/experience
- Safety and support at home

These factors have a profound effect on learners' ability to succeed, and they are also subject to change at any time without us knowing about it.

Reflect: What's in Your "Backpack"?



Have you ever had a headache? Most of us have, and many of us will have had one while at school or work before. How did that headache affect your ability to learn? Likely, quite a bit—and not for the better. But, if you take a pain reliever, you may find that you're back in top form just twenty minutes later.

Learner variability can be just like this scenario. Humans all carry with them an invisible array of dynamic factors that impact their ability to learn at a given moment. Imagine that we all have invisible backpacks full of different learning-related variables that we all carry as we move through our day.

Now, take a moment to reflect. If you were to unpack your "backpack" of learning variables at this exact moment, what would you find inside?

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RESPONDING TO LEARNER VARIABILITY

Reflect: Recall a Learning Struggle

Can you think of a time that you struggled to master something? If you're like many, perhaps you got stuck while building an Ikea bookshelf! Or, maybe you encountered a subject in school that tended to be a bit confusing. Please think about this time in your life now. How did you feel as a learner who was struggling? What would have helped you to succeed?

It is vital that we as skilled educators accommodate learners so they can successfully learn and show us what they have learned, but this task becomes very challenging when we remember the vast diversity of learner variables in any given classroom. For most of us, class sizes and limited resources make it impossible to create individualized plans to meet the ever-changing needs of our learners.

At Humber, the team in Accessible Learning Services (ALS) works to ensure that many students receive the accommodation they need. However, ALS is usually most helpful when learners have persistent conditions, such as chronic mental health or disabilities. Furthermore, many barriers to learning are not adequately diagnosed or considered eligible for accommodations. Even if the accommodations system were to be radically expanded, it can never hope to address every barrier for every learner, leaving some learners to fall through the cracks of the system.

Furthermore, for learners, there can be negative associations with requiring individual accommodations, including feeling ostracized and decreased self-esteem. This is because accommodation implies the problem is with the learner, not with the course's design.

Alternatively, if we intentionally design our learning experiences more effectively, we can include more people from the start—in the initial design of our lessons and assessments—and reduce the need for accommodations.

Consider the difference between a ramp and a set of stairs—everyone can use a ramp, but some cannot use stairs. If we create the ramp from the start, there is no need to make accommodations for those who cannot use the stairs.

Universal Design for Learning helps us make curriculum design choices that are more like ramps than stairs!

If you like, conclude this topic by watching a [video summarizing what you have just learned](#), while also including short comments from real post-secondary students who report about their first-hand experiences as learners in UDL classrooms.








Figure 1 by Unknown Author, Licensed under CCBY-SA-NC

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Go Deeper: Learner Variability

The following resources are optional. Feel free to choose one or more to explore if you would like to learn more on this topic.

-  [The Myth of Average: Todd Rose at TEDxSonomaCounty](#) (18:26) (Video by TEDx Talks, Jun 19, 2013)
-  [Learner Variability & UDL](#) (3:30) (Video by Liz Reale, Dec 10, 2017)
-  [Learner Variability](#) (3:01) (Video by UDL-IRN, Apr 12, 2018)
-  [Removing the Barriers: Planning for ALL!](#) (6:52) (Video by Five Moore Minutes, Oct 7, 2021)
-  Pape, B. (2018). [Learner Variability Is the Rule, Not the Exception.](#)

THE THREE PRINCIPLES OF UDL

The UDL framework rests on three **principles**. Let's take a look now:

		
Multiple Means of Engagement	Multiple Means of Representation	Multiple Means of Action and Expression
We try to engage learners' interest in many different ways so that everyone is motivated to learn.	We communicate what is being taught in many different ways so that everyone can understand.	We offer several pathways through learning, and encourage learners to demonstrate their learning in different ways.

Now, watch this [short video on the three principles and how they work in the brain](#). You'll also learn about some practical ways to implement each principle of UDL in the classroom. Pay close attention before you attempt the exercise below.

Apply: The Principles

Choose which UDL principle each teaching activity most closely aligns with. (Hint: If you have difficulty, try watching the video again starting at 2:55.)

1. Provide recordings of virtual classes.
2. Ask students to contribute ideas for learning activities and topics
3. Provide lots of low-stakes assessment
4. Use text, media, visuals and infographics in learning materials.
5. Allow students to write text or share original videos on discussion boards

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The UDL Guidelines and Checkpoints

Each of the three core principles of Universal Design for Learning also has an associated set of **guidelines** and **checkpoints**, which help educators to use the principles to guide their practice. Let's take a closer look:

- **Guidelines** represent teaching and learning areas for putting the principle into practice.
- **Checkpoints** are specific instructional strategies that can be used within a guideline area.

The UDL principles, guidelines and checkpoints are published by CAST in a handy graphic organizer. Watch this [short video about the graphic organizer](#) and how to read it.

Introducing CAST

The UDL principles, guidelines and checkpoints are developed and published by a group called CAST. In their own words, CAST's purpose is to "bust the barriers to learning that millions of people experience every day." CAST works toward this goal by helping educators apply insights from the learning sciences and emerging practices to learning design and implementation. You can [learn more about CAST on their website](#).

CAST is currently at work gathering feedback from a focus group of post-secondary aged students with the aim of revising the UDL guidelines and checkpoints through an equity lens. Yes, just like the mindset it promotes, UDL itself is fluid and evolving.

Explore: The Guidelines

Now, download the UDL guidelines graphic organizer yourself:

↓ CAST (2018). [Universal Design for Learning guidelines, version 2.2](#)

Can you locate the following information in the downloaded file?

1. The three principles of UDL
2. The guidelines
3. The checkpoints
4. The goals

If you have any difficulty locating any of this information, please rewatch the video linked above. Or, if you would like additional information about how the graphic organizer is constructed, please visit [The UDL Guidelines](#) on the CAST website.

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



How should you use the UDL Guidelines graphic organizer in your practice? It's as easy as 1-2-3...

1. Skim the list of guidelines and note at least one area that you think can be applied in your lesson.
2. Look at the checkpoints in the area(s) you identified. Choose at least one that you can implement.
3. Design your lesson with the selected guideline(s) and checkpoint(s) in mind.

When designing and planning a lesson, begin with Engagement, and then simply repeat steps 1, 2 and 3 for Representation and for Action and Expression.

Go Deeper: The Guidelines of UDL

The following resources are optional. Feel free to choose one or more to explore if you would like to learn more on this topic.

-  CAST (n.d.). [The UDL Guidelines](#)
-  UDL-IRN (2011). [Critical Elements of UDL in Instruction](#) (Version 1.2).
-  National Center on Accessing the General Curriculum (n.d.). [UDL Guidelines Checklist](#).
-  [Universal Design for Learning \(Part 2\): UDL Guidelines](#) (4:40) (Video by Center for Excellence in Teaching and Learning at OU, Jul 14, 2017)
-  [UDL Guidelines Structure](#) (3:44) (Video by National Center on Universal Design for Learning, Nov 22, 2010)

PUTTING UDL INTO PRACTICE

Universal Design for Learning is meant to simplify the daunting prospect of designing teaching for *all* learners. However, if you are new to UDL, it can seem a bit intimidating until you gain confidence using the framework. You may feel a bit overwhelmed or out of your depth.

If this happens to you, please pause and ask yourself: what *one thing* can I choose to add to my practice today?

If you choose just one thing to implement, you are still taking a decisive and significant step forward. This approach could mean that you choose only one guideline, or one checkpoint to add to an existing lesson plan—and that's okay. Then, when you feel ready, choose the next thing that you can add. You should not feel that you need to throw everything away and start from scratch.

The result of this **“plus one” approach** is that your practice of UDL is iteratively layered on top of your current practice. You can take intentional and purposeful steps towards your goal of universal design without becoming overwhelmed and throwing up your hands in defeat. Effective teaching for all learners is a lifelong journey, not a crash course!

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More Training

Innovative Learning provides more in-depth training on the UDL framework and practical workshops for learning to design with UDL in mind. Please contact [Innovative Learning](#) to learn about these opportunities.

Join the UDL Community of Practice!

Humber faculty are invited to join and participate in the UDL Community of Practice—a community for Humber faculty interested in sharing ideas, resources, and strategies related to UDL and learning more about their colleagues' experiences integrating UDL into their teaching context.

To join the [Community of Practice](#), please sign up.

Ready for What's Next?

Innovative Learning recommends the following books which provide a much more nuanced examination of UDL in the context of higher education. Check out any of these books to take your understanding to the next level:

- Black, Jodie & Moore, Eric J. (2019). *UDL Navigators in Higher Education: A Field Guide*. CAST Publishing.
- Fitzgerald, Andratesha. (2020). *Antiracism and Universal Design for Learning: Building Expressways to Success*. CAST Publishing.
- Novak, Katie. (2022). *UDL Now! A Teacher's Guide to Applying Universal Design for Learning*, 3rd ed. CAST Publishing.