A Comprehensive Guide to Applying Universal Design for Learning

A Comprehensive Guide to Applying Universal Design for Learning

A collection of three UDL workbooks

Dr. Seanna Takacs; Junsong Zhang; Helen Lee; Lynn Truong; and David Smulders

BCCAMPUS
VICTORIA, B.C.

Contents

Accessibility Statement 1

For Students: How to Access and Use This Book 5

About BCcampus Open Education 7

Universal Design for Learning: A Practical Guide

Section 1.1: Why UDL Matters 11
Section 1.2: UDL: A Quick Start 13
Section 1.3: Opportunities & Challenges 15
Section 1.4: Your Ideal Students 17
Section 2.1: User-Centred Design 19
Section 2.2: UDL for Instructors and Students 21
Section 2.3: Using Case Studies 23
Section 2.4: Design Thinking 25
Section 2.5: Wallet (Re)design Activity 27
Section 3.1: What is UDL? 29
Section 3.2: UDL Priorities 31
Section 3.3: The UDL Framework 33
Section 3.4: Engagement 35
Section 3.5: Representation 37
Section 3.6: Action & Expression 39
Section 3.7: The Overlaps 41
Section 3.8: UDL Myths 43
Section 3.9: UDL and Accommodation Planning 45
Section 4.1: Case Studies 47
References 51

Universal Design for Learning: Strategies for Blended and Online Learning

Section 1.1: Curricula as Disabled 55
Section 1.2: Learning as Strategic and Contextual 57
Section 1.3: Multiple Paths to Success 59
Section 1.4: Thought Experiment 61
Section 2.1: Understanding Barriers in a Digital Age 63

Section 2.2: Addressing Barriers in Blended and Online Learning 65
Section 2.3: An Example of Blended Learning 67
Section 2.4: Applying UDL to Blended Learning 69
Section 2.5: An Example of Online Learning 71
Section 2.6: Applying UDL to Online Learning 73
Section 3.1: UDL Strategies for Blended and Online Learning 75
Section 3.2: Case Studies 81
References 85

Assessment Design: Perspectives and Examples Informed by Universal Design for Learning

Section 1.1: Reassessing Assessments 89
Section 1.2: Individual and Institutional Approach 91
Section 1.3: UDL-Informed Assessment 93
Section 2.1: Key Factors for Assessment Design 95
Section 2.2: Assessment Methods and Examples – Exams and Assignments 99
Section 2.3: Assessment Methods and Examples – Presentations and Simulations 101
Section 2.4: Assessment Methods and Examples – Authentic Assessment 103
Section 2.5: Assessment Methods and Examples – Multimedia and E-Portfolio 105
Section 2.6: Assessment Methods and Examples – Collaborative and Peer 107
Section 2.7: Reflection on Assessment Methods 109
Section 3.1: Adopting a UDL-Informed Assessment Plan 111
Section 3.2: Sample Assessment Plan Components Part 1 113
Section 3.3: Sample Assessment Plan Components Part 2 115
Section 3.4: Reviewing the Sample Assessment Plan with UDL Principles 117
References 119

Versioning History 121

Accessibility Statement

The Centre for Teaching, Learning, and Innovation, a department within the Justice Institute of British Columbia, is committed to making our resources accessible and usable to our learners. As educators we value the community of sharing and accessibility both to improve our own capacities and to help others improve theirs.

Accessibility of This Textbook

The web version of this resource Universal Design for Learning: A Practical Guide has been designed to meet Web Content Accessibility Guidelines 2.0, level AA. In addition, it follows all guidelines in Appendix A: Checklist for Accessibility of the *Accessibility Toolkit – 2nd Edition*. It includes:

- **Easy navigation**. This text has a linked table of contents and uses headings in each chapter to make navigation easy.
- **Accessible images**. All images in this text that convey information have alternative text. Images that are decorative have empty alternative text.
- **Accessible links**. All links use descriptive link text.

Accessibility Checklist

Element	Requirements	Pass?
Headings	Content is organized under headings and subheadings that are used sequentially.	Yes
Images	Images that convey information include alternative text descriptions. These descriptions are provided in the alt text field, in the surrounding text, or linked to as a long description.	Yes
Images	Images and text do not rely on colour to convey information.	Yes?
Images	Images that are purely decorative or are already described in the surrounding text contain empty alternative text descriptions. (Descriptive text is unnecessary if the image doesn't convey contextual content information.)	N/A
Tables	Tables include row and/or column headers that have the correct scope assigned.	Yes
Tables	Tables include a title or caption.	No
Tables	Tables do not have merged or split cells.	Yes
Tables	Tables have adequate cell padding.	Yes
Links	The link text describes the destination of the link.	Yes
Links	Links do not open new windows or tabs. If they do, a textual reference is included in the link text.	Yes
Links	Links to files include the file type in the link text.	N/A
Audio	All audio content includes a transcript that includes all speech content and relevant descriptions of non-speach audio and speaker names/headings where necessary.	N/A
Video	All videos include high-quality (i.e., not machine generated) captions of all speech content and relevant non-speech content.	N/A
Video	All videos with contextual visuals (graphs, charts, etc.) are described audibly in the video.	N/A
H5P	All H5P activities have been tested for accessibility by the H5P team and have passed their testing.	N/A
H5P	All H5P activities that include images, videos, and/or audio content meet the accessibility requirements for those media types.	N/A
Formulas	Formulas have been created using LaTeX and are rendered with MathJax.	N/A
Formulas	If LaTeX is not an option, formulas are images with alternative text descriptions.	N/A
Font	Font size is 12 point or higher for body text.	Yes
Font	Font size is 9 point for footnotes or endnotes.	Yes
Font	Font size can be zoomed to 200% in the webbook or eBook formats.	Yes

Known Accessibility Issues and Areas for Improvement

- Not all tables have a title or caption

Let Us Know if You are Having Problems Accessing This Book

We are always looking for ways to make our textbooks more accessible. If you have problems accessing this textbook, please contact us to let us know so we can fix the issue.

Please include the following information:

- The name of the textbook
- The location of the problem by providing a web address or page description.
- A description of the problem
- The computer, software, browser, and any assistive technology you are using that can help us diagnose and solve your issue (e.g., Windows 10, Google Chrome (Version 65.0.3325.181), NVDA screen reader)

For corrections or suggestions, you can contact us by filling out a contact form at our website: JIBC Teaching, Learning, and Innovation Centre Contact Form.

This statement was last updated on February 11, 2022.

For Students: How to Access and Use This Book

This textbook is available in the following formats:

- **Online webbook**. You can read this textbook online on a computer or mobile device in one of the following browsers: Chrome, Firefox, Edge, and Safari.
- **PDF**. You can download this book as a PDF to read on a computer (Digital PDF) or print it out (Print PDF).
- **Mobile**. If you want to read this textbook on your phone or tablet, you can use the EPUB (eReader) file.
- **HTML**. An HTML file can be opened in a browser. It has very little style so it doesn't look very nice, but some people might find it useful.

For more information about the accessibility of this textbook, see the Accessibility Statement in the front matter.

You can access the online webbook and download any of the formats for free here: *Universal Design for Learning: A Practical Guide*. To download the book in a different format, look for the "Download this book" drop-down menu and select the file type you want.

How can I use the different formats?

Format	Internet required?	Device	Required apps	Accessibility Features	Screen reader compatible
Online webbook	Yes	Computer, tablet, phone	An Internet browser (Chrome, Firefox, Edge, or Safari)	WCAG 2.0 AA compliant, option to enlarge text, and compatible with browser text-to-speech tools, videos with captions	Yes
PDF	No	Computer, print copy	Adobe Reader (for reading on a computer) or a printer	Ability to highlight and annotate the text. If reading on the computer, you can zoom in.	Unsure
EPUB	No	Computer, tablet, phone	An eReader app	Option to enlarge text, change font style, size, and colour.	Unsure
HTML	No	Computer, tablet, phone	An Internet browser (Chrome, Firefox, Edge, or Safari)	WCAG 2.0 AA compliant and compatible with browser text-to-speech tools.	Yes

Tips for Using This Textbook

- **Search the textbook**.
    - If using the online webbook, you can use the search bar in the top right corner to search the entire book for a key word or phrase. To search a specific chapter, open that chapter and use your browser's search feature by hitting **[Cntr] + [f]** on your keyboard if using a Windows computer or **[Command] + [f]** if using a Mac computer.
    - The **[Cntr] + [f]** and **[Command] + [f]** keys will also allow you to search a PDF, HTML, and EPUB files if you are reading them on a computer.
    - If using an eBook app to read this textbook, the app should have a built-in search tool.
- **Navigate the textbook**.
    - This textbook has a table of contents to help you navigate through the book easier. If using the online webbook, you can find the full table of contents on the book's homepage or by selecting "Contents" from the top menu when you are in a chapter.
- **Annotate the textbook**.
    - If you like to highlight or write on your textbooks, you can do that by getting a print copy, using the Digital PDF in Adobe Reader, or using the highlighting tools in eReader apps.

About BCcampus Open Education

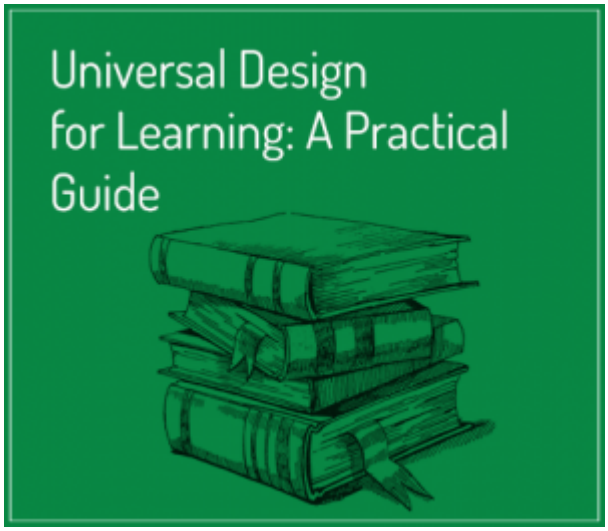
A Comprehensive Guide to Applying Universal Design for Learning by Dr. Seanna Takacs, Junsong Zhang, Helen Lee, Lynn Truong, and David Smulders was partially funded via the BCcampus Open Education Sustainability Grant Program.

BCcampus Open Education began in 2012 as the B.C. Open Textbook Project with the goal of making post-secondary education in British Columbia more accessible by reducing students' costs through the use of open textbooks and other OER. BCcampus supports the post-secondary institutions of British Columbia as they adapt and evolve their teaching and learning practices to enable powerful learning opportunities for the students of B.C. BCcampus Open Education is funded by the British Columbia Ministry of Advanced Education and Skills Training and the Hewlett Foundation.

Open educational resources (OER) are teaching, learning, and research resources that, through permissions granted by the copyright holder, allow others to use, distribute, keep, or make changes to them. Our open textbooks are openly licensed using a Creative Commons licence and are offered in various eBook formats free of charge, or as printed books that are available at cost.

For more information about open education in British Columbia, please visit the BCcampus Open Education website. If you are an instructor who is using this book for a course, please fill out our Adoption of an Open Textbook form.

Universal Design for Learning: A Practical Guide



Authors

Dr. Seanna Takacs

Junsong Zhang

Acknowledgement

This project is supported by BCcampus and JIBC Students Services

Recommended Citation

Takacs, S. & Zhang, J (2020). *Universal Design for Learning: A Practical Guide.* Centre for Teaching, Learning, and Innovation. Justice Institute of British Columbia

Section 1.1: Why UDL Matters

Post-secondary instructors are facing more challenges nowadays because the student population is increasingly diverse. Students with diverse cultural backgrounds, skills, abilities, interests, experiences, and social-economic status require instructors to reflect on their teaching practices and adopt user-centred approaches for course design and delivery. But how do user-centred approaches look like in practice? And how can instructors deliver quality learning outcomes to maximum number of students?

Universal Design for Learning (UDL) is a curriculum design, development, and delivery framework that could help answer these questions. UDL seeks to include the maximum number of learners in instruction by offering multiple paths to get to the same learning outcomes, including

- Multiple means of engagement: the why of learning
- Multiple means of representation: the what of learning
- Multiple means of action and expression: the how of learning

UDL supports the design of inclusive and user-centred learning experiences by:

Creating Expert Learners	UDL aims to create expert learners who are purposeful, motivated, resourceful, strategic and goal-directed
Teaching to the Margins	UDL reminds instructors to think who is experiencing barriers and how to design curriculum for as many students as possible
Planning Proactively	UDL advocates ways of anticipating the variability of learners in your class and gathering feedback for redesign
Enabling Access	UDL looks at access in terms of how learners engage with the class environment, how they interface with the way knowledge is represented, and how they express their learning
Providing Flexibility	UDL emphasizes on programming choice and flexibility to obtain learning outcomes in different ways
Explicitly Addressing Expectations	UDL advocates practices that bring implicit understanding to light so that expectations are clear, concrete, and actionable
Frequent and Varied Assessment	UDL advocates frequent, varied, low-stakes assessment for engagement and regular feedback

You will learn more about UDL and how it could reshape your course design and delivery through this guide.

Section 1.2: UDL: A Quick Start

UDL stands for Universal Design for Learning.

UDL is a framework for designing curriculum. It can also be thought of as a disposition or lens that you can take on creating inclusive learning activities.

UDL seeks to include the maximum number of learners in instruction by offering multiple paths to get to the same learning outcomes.

By designing for choice and flexibility in activities, UDL supports learner engagement with the goal of creating ***expert learners***. Expert learners are well-acquainted with their strengths and weaknesses. They know how they learn best, and they know when to ask for help. Expert learners are able to identify why they have been successful, why they might be struggling, and how to make changes.

Instructors who design activities and curriculum according to UDL principles build in methods not only for conveying content knowledge, but in developing students who have the ability to reflect on their learning preferences and goals.

UDL uses components of design thinking: using empathy to understand learner needs and goals, identifying gaps, working iteratively, and using feedback for steadily improving response. Maintaining a process-orientation and attitude of steady improvement is a key aspect of UDL.

Section 1.3: Opportunities & Challenges

Your best first step into UDL work is a thinking step.

Before getting to any planning, design, organizing, or writing, take some time to consider the next course you're teaching, the activity you're trying to plan, or the project you are trying to support.

You have an opportunity to create and translate knowledge and skills using Universal Design for Learning framework. To move into this framework, start with questions.

- What are your beliefs about learning?
- What would make you feel that you did a good job as an instructor?
- What are you carrying forward from past courses or experiences that will colour your teaching?
- What barriers or difficulties do you anticipate for yourself and for your students?
- How can you work together to achieve learning experiences that you want to carry forward and build upon?

Universal Design for Learning can feel like a 180 degree turn for instructors because it asks us to turn some of our thinking on its head. It asks us to plan for more assessment, to think about engagement as something beyond motivation, to get more student feedback, and to think about finding multiple routes to learning outcomes. UDL asks us to re-evaluate our historical educational conventions and in many cases, asks us to reflect upon our own educational journeys. Did it have to be that way? Does it have to continue to be?

The guide that follows will address questions about learning outcomes, workload, accommodation plans, classroom diversity, and preparedness. This guide will equip you with the UDL framework and multiple ways of entering that framework. While some of the ideas in UDL seem intuitive, they have a depth to them that is best constructed collaboratively. As you feel your assumptions about diversity, teaching, inclusion, and learning challenged, it is helpful to bounce ideas around. While this guide is designed to help you create some concrete guideposts and ways to get started on UDL, working with different people with different voices and experiences will further those exercises and stretch you towards becoming the type of UDL practitioner you seek to be.

Section 1.4: Your Ideal Students

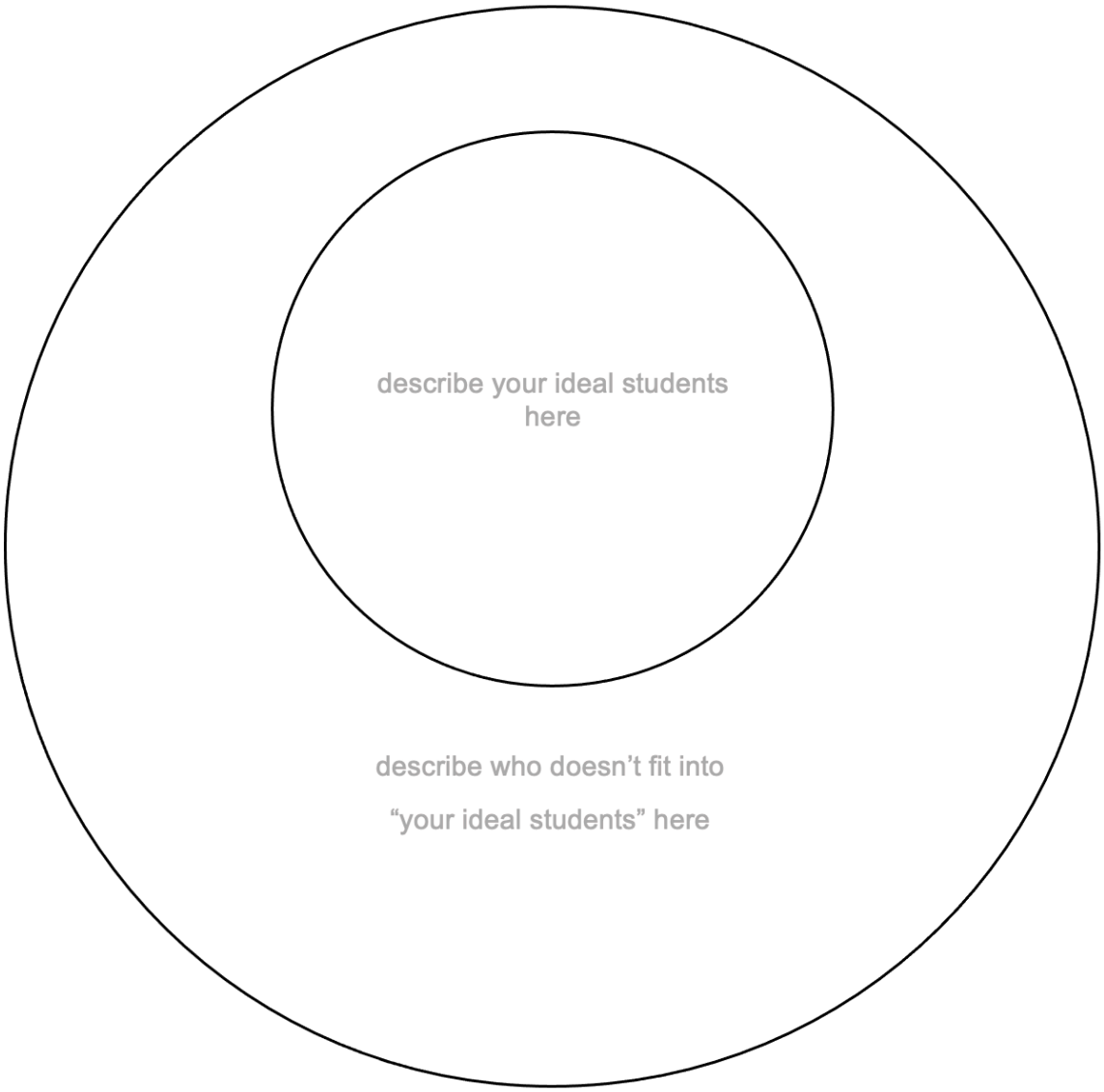
When we are designing curriculum or creating learning activities, a good instructor will imagine their audience or their ideal student. The ideal student is not perfect but instead tends to be a prototype of what we might expect to see in terms of strengths and weaknesses, preferences, motivation, and knowledge base. These assumptions set up a mental model of what the experience with our students will likely look and feel like. So where does the ideal student image come from? It comes largely from our previous teaching experiences, but also from the way we felt as students, and how we were treated by our own parents, teachers, and instructors.

Based on our ideal student image, we imagine how our activities, assessment, and feedback will be designed. Being thoughtful and empathetic, accounting for experience, and connecting with our own and our students' histories is a key aspect of teaching, but sometimes activities don't work as we expect. Perhaps nobody talks during group activities, a small group of students need information repeated multiple times, your inbox is full of questions you thought you addressed, or only half the class seemed to do the readings. These difficulties present an opportunity to think about whether our ideal student mental model is accurate and whether we can design differently.

One of the cornerstones of Universal Design for Learning is to consider the variation in experiences and characteristics in students in your classes. The jaggedness principle (Rose, 2016) holds that learners vary in many ways, along many different dimensions. Your students will vary in:

- Information processing
- Language processing
- Introversion and extroversion
- Financial resources
- Post-secondary readiness
- Self-advocacy
- Spatial ability
- Reading speed
- Mathematical calculations

When we practice taking into account the jaggedness in our classes, we don't change the jaggedness itself, but we change the ways we expect variation and in turn, we get better in planning for that variation. As we get better at anticipating jaggedness, we start feeling less surprised and in turn, we get better at planning proactively. Better proactive planning means less reactivity and less stress for both you AND learners.


describe your ideal students here
describe who doesn't fit into "your ideal students" here

Section 2.1: User-Centred Design

It is extremely important to keep the users in your mind when it comes to accounting for jaggedness and designing proactively in a UDL framework. UDL is user-centred because it is critical to understand the needs, gaps, barriers, and goals that any users may experience, which includes both the instructors and students.

But why is UDL for both of the students AND for you as the instructor? Because classrooms are systems. They are ecologies. Everyone, including you, is using the design that you created so we want to be sure that users on both sides of the design are getting their gaps filled, their goals met, and are leaving with a sense of satisfaction in teaching, learning, and reflection.

Section 2.2: UDL for Instructors and Students

Universal Design for Learning is student-focused and also instructor-focused, because UDL is a curriculum design, development, and delivery framework that focuses on creating expert learners. Learners do not exist alone in a classroom. Classroom ecology is a network of students and instructors who are imbedded in that design. Strong curriculum design should account for student experience and instructor experience, the interactions between student and instructor, and how the design supports a rewarding and engaging learning climate.

One of the most important changes you may experience in working through the UDL framework is the idea of creating expert learners. Often, our goal as instructors is to help students become experts in the content we are teaching. But expert learners are not content experts. They are experts in understanding how they learn, under what conditions they learn, what their preferences are, where they are likely to fail, who they should team up with, and when to ask for help. This can mean that you are teaching expert learners who still fail your class and know exactly why they failed. Likewise, you can have inexpert learners who do well in your class and have no idea why!

Designing for expert learners means that your design should have explicit learning outcomes and expectations so that students have defined goalposts. These goalposts help them gauge how readily they are learning the content and what types of changes they should seek out to improve their performance.

When learning outcomes and expectations are not explicit, you may notice that students

- Are unwilling to ask questions or ask superficial questions
- Are unwilling to take chances
- Do not participate in class discussions
- Argue over grades and deadlines
- Say “I’m not sure what you’re looking for”
- May attribute their success or failure to luck

The UDL framework is student-centred insofar as it helps us investigate these threats to engagement. It encourages us to empathize with the student experience, assess engagement and background knowledge, solicit feedback not only on the content and its accessibility, and offers multiple paths to engagement, learning, and demonstrating knowledge. We can only start developing expert learners if students are aware of what they are meant to learn.

Section 2.3: Using Case Studies

It is important to acknowledge that case studies are important to learn how to mobilize UDL principles by knowing what we are looking for in a situation. They help us understand how the theory we are learning shows up in real life and helps us learn to generalise our knowledge into what we might expect to see in the classroom.

Universal Design for Learning is about taking a stance of curiosity about the situation or problem, analysing the problem into pieces, parsing out the meaning, and translating it into action or intervention. We have to acknowledge and understand our own sense of meaning and our own biases. When we are confronted by an unexpected teaching problem or learning that doesn't proceed along the course we expected, UDL provides us some heuristic or procedure that we can follow to figure out what to do next.

In the exercises on UDL that follow, an important piece of the puzzle will be the learning disposition you take even before you start looking at the problem. In the same way as you thought about your ideal student, accounted for jaggedness, and developed a user-centred approach. When you are reading the case studies, try to:

- Think about how you feel and how you would approach the case studies
- Jot down some of these ideas as you're reading through and connect them to what you're already doing.

This process will help you tune into the beliefs you hold about your skills and abilities as you are about to embark on learning about UDL.

Section 2.4: Design Thinking

While UDL provides a framework for you to identify areas for improvement, Design Thinking offers a human-centred approach for problem-solving. Applying Design Thinking methodology will help you design and implement user-centred solutions in your classroom.

According to Institute of Design at Stanford University (2018), there are five stages of design thinking process: Empathise, Define, Ideate, Prototype, and Test. To begin with, here is a very brief introduction to each stage:

- **Empathise**: The first stage is to gain an understanding of how your users think, behave, and feel. Empathizing with people requires you to gather information and develop knowledge about users' experience, motivation, and needs. Common methods include interview, observation, and/or immerse yourself in the environment.
- **Define**: The second stage is to analyse your findings and synthesise them to define problems. In fact, you may be able to identify multiple problems in the define stage, but it is critical to identify and prioritize THE PROBLEM you want to start with.
- **Ideate**: At this stage you start brainstorming solutions to the problem statement you've identified. It is beneficial to work as a team so your solution takes different perspectives. Also, visualizing your solutions through simple sketch is an effective strategy to communicate your ideas.
- **Prototype**: Prototyping means making your ideas tactile in a way that is inexpensive and rapid. Most people use the term low-fidelity during this stage to emphasize the simple and low-cost nature of the prototype. Prototyping could still be difficult because it usually requires a team effort.
- **Test**: This is the stage where you conduct user testing and gather data for improvement. Design thinking process is iterative and the results generated during the user testing are often used to inform how people think, behave, and feel.

The Design thinking process allows you to gather information from your students such as their background knowledge and learning preferences, identify areas of improvement, design new solutions, and gather feedback through testing iteratively.

In the case studies in this workbook, you will apply the five stages of design thinking to identify areas for improvement based on the UDL framework.

Section 2.5: Wallet (Re)design Activity

Mastering Design Thinking requires extensive practices. In our workshops, we adapted and simplified the Wallet Design Project from Stanford School of Design for you to practice the five stages of Design Thinking.

However, this activity works the best when you collaborate other participants and co-create solutions to improve your design.

If you are reading this guide by yourself, you may find a partner to work with you or contact Centre for Teaching, Learning and Innovation for consultation.

Section 3.1: What is UDL?

Universal Design for Learning is a curriculum design, development, and delivery framework. It was created to support the accessibility of course content and materials and to sustain the development of expert learners. It grew out of the concept of Universal Design (UD) which was applied to physical spaces (Goldsmith, 1963) to make them spacious, accessible, navigable, and flexible in their use. In the same way that fully enclosed bathroom stalls containing a toilet, sink, and shelf can support wheelchair use, room for potty-training toddlers, privacy, quiet spaces for the introverted, and a place anyone can put most stuff so it doesn't fall in the toilet, the L in UDL seeks to apply the same flexibility to the learning environment.

UDL has been developed from research on:

- Reading and Language Acquisition
- Expertise
- Social Learning Theory
- Motivation
- Higher Order Thinking
- Deep Learning
- Metacognition

According to SET-BC, an adopter of UDL in K-12, "UDL provides a framework for addressing the diversity of learners in our classrooms. Rather than individually adapting for each student's needs, teachers create student-focused environments by designing curriculum that is accessible to a wide range of learners. This systematic approach removes learning barriers by clarifying learning intentions and providing flexible instructional environments."

Section 3.2: UDL Priorities

Teaching to the Margins

What are the margins? The margins refer to those teaching and learning places that lie outside an ideal student or what our education system is built to work with. UDL grew out of a movement to include students with learning disabilities who had traditionally been excluded from school. Teaching to the margins means we are mindful of who is experiencing barriers and how to design curriculum for inclusion of as many students as possible.

Creating Expert Learners

According to CAST guidelines, an expert learner is a learner who is purposeful, motivated, resourceful, knowledgeable, strategic and goal-directed. Expert learners know what they do not know and are good at seeking help. They have a sense of their goals and objectives and are able to map out and monitor the course to getting there. If they succeed or fail, they are able to attribute their success or failure to their persistence, strategy use, learning preferences, and sense of engagement.

Planning Proactively

UDL emphasizes being proactive rather than reactive in educational planning. This includes developing ways of anticipating the kinds of learners you are likely to encounter in your classes, planning for flexibility, and gathering feedback from the very beginning. Being proactive means that as an instructor, you become skilled at understanding and addressing diversity in your classroom instead of being surprised and planning as the need arises, with ad hoc solutions.

Enabling Access

UDL also grew out of the Universal Design movement which sought to design the built environment (stairs, bathrooms, hallways, cafeterias) so that they could be used and accessed by people with a diversity of access needs. The L for Learning part was added to bring the same spirit of designing for inclusion to the educational environment. UDL looks at access in terms of how learners engage with the class environment, how they interface with the way knowledge is represented and how they express their learning. Access is the basic starting point in the UDL framework.

Providing Flexibility in Getting to Learning Outcomes

A priority for UDL work is designing for choice and flexibility in working towards learning outcomes.

In a UDL-guided curriculum, learning outcomes are specific, explicit, and have a direct line to learning activities. Unlike a modified curriculum where learning outcomes can be narrowed or changed outright, UDL prioritizes maintaining learning outcomes and programming choice and flexibility to get to the outcome in different ways.

Explicitly Addressing Expectations and Structure

If learners are to find multiple routes to the same learning outcomes, it is crucial to be explicit, transparent, and concrete around the course structure, learning outcomes, assignments, tests, and exams. For example, do you hope that students will find your course transformative? What are some concrete markers of transformation? Do you want students to be able to readily apply theory to practice? What are the steps in that application so that both you and students can know when they have been successful? When we are experts and have taught for a number of years, our understanding becomes increasingly implicit. UDL advocates practices that bring those implicit understandings to light and designing curriculum and activities so that expectations are clear, concrete, and actionable.

Frequent, Varied Assessment

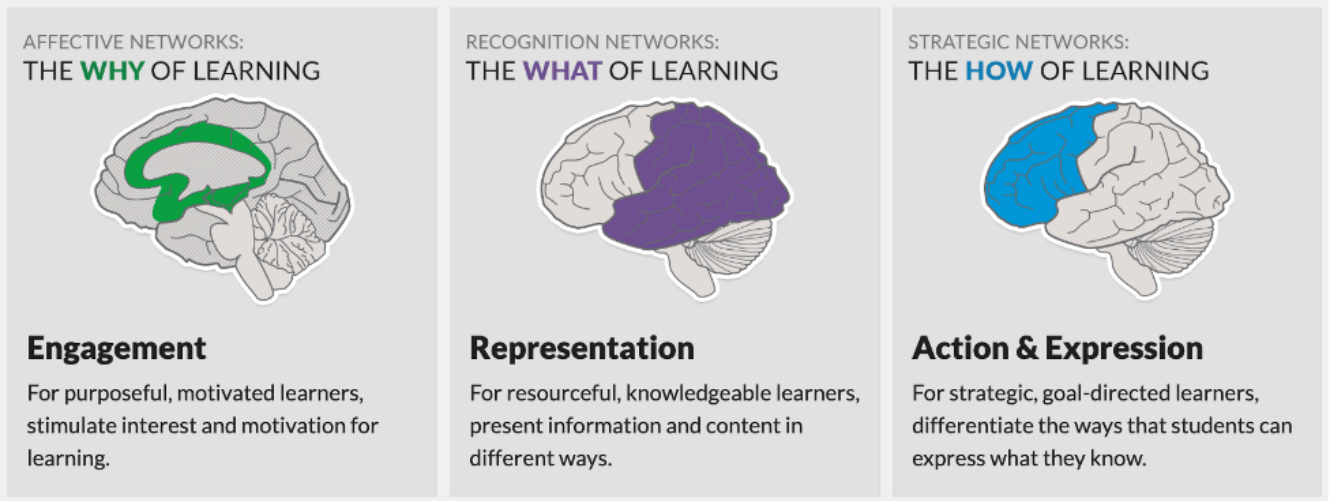
An important part of the UDL framework is frequent, varied, low-stakes assessment. UDL advocates offering formative assessment of engagement and prior knowledge so that students have a sense of where they are starting, a crucial line that will help them understand overall goal structure in the course. Regular, low-stakes assessment gives students regular feedback which will help them understand not only whether they are on track, but how they might be steering the wrong way, and how to get back on track. Frequent, varied assessment helps students not only build a grade, but to map and chart their course from start to finish.

Reflective Question:

How might these priorities change your teaching practices?

Section 3.3: The UDL Framework

The Universal Design for Learning framework is grounded in three cognitive networks: affective, recognition, strategic. Each of these three networks uses a principle which can in turn be used to guide design and practice.



Before you move on, please go through the UDL Guidelines and identify some key pieces to help begin your journey in navigating the UDL framework:

- Brain networks
- Connection to learning
- Goal
- Expert learner
- Access
- Internalize

In the following content, we will explain Engagement, Representation, and Action & Expression separately and provide you with some actionable ideas.

Section 3.4: Engagement

Engagement is part of the Affective Network and is concerned with the WHY of learning. Research into motivation and affect has shown dramatically that there is diversity in the ways different learners are motivated. Learners hold different experiences, different subject-area knowledge, have different goals for learning and for class participation, different interests, passions, and abilities. Some learners crave and enjoy novelty while others prefer routine. Some students enjoy gathering details and stories and building to a concept; others prefer to learn the theory first and understand how it unfolds in real-life second. Some students prefer to think and work alone; others prefer to work in a group; some even prefer a hybrid.

All of these variables taken together mean that if you are planning on a way to "hook" students or hold their interest, you will have to be sure to design for MULTIPLE means of engagement so that everyone gets to jump into the class in ways that not only feel safe, but stimulating and enriching.

Offering choices for engagement is a key aspect of UDL. Assessing and getting feedback on engagement as a beginning, middle, and end step are essential aspects of the design process.

Here are three ideas for supporting multiple means of engagement:

1. At the beginning of the course or class, ask students to write down or share how the learning outcomes or content is supporting their goals for their program or degree;
2. At the end of class do a hotwash. Reserve the last ten minutes of class for students to summarize the main points of the class and suggest one change that could be made for the next class. The instructor is strictly a notetaker at this stage. For the next class, the instructor starts the class by summarizing the feedback from the last class to frame the next class;
3. Have students interview each other on a list of academic strengths and weaknesses (e.g., taking notes, analysis, coming up with big ideas, writing, research) or preferences (e.g., working alone, in groups, in partners; working in quiet or with conversation; novelty vs structure), and have them give three examples of what has worked well in terms of engagement in the past.

Reflective Question:

What ideas can you come up with or adapt here?

Section 3.5: Representation

Representation is the what of learning. Representation is concerned with the ways that we perceive and comprehend information. Representation is about the symbols, words, shapes, and language structures that we use to convey information. Learners vary in the ways we understand and process language and symbols for a number of reasons that are related to culture, language, disability, and educational experience.

To adequately and accurately transfer information from one setting to the next, students should engage in multimodal learning. If students are reading about CPR they should also watch a video and try it out themselves. If students have to learn about implicit bias, they should define the term, observe possible examples, and debate or discuss positive and negative instances of the concept.

To support multiple means of representation, consider offering alternatives for each modality and give students a choice as to which modality they would prefer while encouraging coordinating information across modalities. Explicitly address vocabulary and terminology, providing explicit practice so that terminology can be acquired and used readily and appropriately. UDL principles hold that there should be transparency in the aims of teaching and that holds true when it comes to the ways students learn and communicate.

Here are three ideas for supporting multiple means of Representation:

1. Have students conduct a concept interview. Students work independently or in groups to identify 3 – 4 central concepts in the course/chapter/module and interview each other on the definitions and connected concepts, including a rationale for why those concepts are central.
2. Use shapes, colours, and words to draw relationships between concepts: to demonstrate hierarchies, overlaps, maps, and sequences. Rearrange the shapes and words to tap whether students understand how terms are related.
3. In presenting information, have students choose two modalities for that presentation and explain which modality suited them better and which one did a better job of conveying information. For example, which is better for learning to climb a ladder: written instructions or a video?

Reflective Question:

What ideas can you come up with or adapt here?

Section 3.6: Action & Expression

Action and Expression is the how of learning. It prompts us to understand that students can come to learning very differently and will think about, process, demonstrate, and synthesise learning in different ways.

Learners differ in the ways they navigate learning environments, instructions, and assignments. Learners also vary in their skills in various modes of expression of information and also have specific preferences as to how they express their knowledge. We know that some students love to prepare and write exams and some prefer to write papers.

The UDL framework pushes us to think beyond papers and exams, however and think about demonstrating all or parts of our knowledge using speech, writing, building, demonstrating through slide show, crafting, or assembling. It also supports executive functions: the branch of cognition dedicated to organizing, planning, controlling our attention, and monitoring progress. By giving students a sense of mastery over their navigation and expression of learning, it permits them to develop monitoring, planning, and organizing systems since they have autonomy over the process from start to finish and can develop an internal locus of control over the production and expression of learning.

Three ideas for supporting multiple means of Action & Expression:

1. Implement a multimedia assignment for which students plan the content, layout, and technology. Develop with students around ways of managing the project to support planning and execution.
2. Offer students the choice between writing a paper or illustrating a storyboard and have students analyse content in light of which mode of expression suits both their assignment and their preference.
3. Implement the use of assistive technology in class. Help students learn to use voice recorders, screen readers, or text-to-speech software to enhance their learning and demonstrate that by using many technology alternatives.

Reflective Question:

What ideas can you come up with or adapt here?

Section 3.7: The Overlaps

Since cognition is complex, Engagement, Representation, and Action & Expression are not discrete categories. Instead, they all tend to be interrelated. For example, while the concept interview can serve to support representation of information, it provides a means of expressing knowledge and negotiating meaning verbally. It also supports engagement by giving students choice about how they want to thresh out concepts. Likewise, the Hotwash activity supports engagement but also supports representation by compelling students to condense and articulate key points. It also provides students with a goal or end point for the lecture so that they can plan and coordinate pieces of information with that goal in mind.

Section 3.8: UDL Myths

Since UDL is a new framework that is being slowly implemented across different types of school, learners, and districts, some myths are emerging as educators grapple with what might be considered good UDL practice and what might not.

Myth 1: UDL is just good teaching

To address this myth, we need to have a sense of what good teaching is in the first place. While an academic definition is probably vast and complicated, most of us can agree that good teaching means that the instructor is passionate about their subject area, they take time to model what to learn and how to learn well, they establish good personal relationships with their students, they empathize communicate well, and creating the conditions under which student acquire, retain and generalize their knowledge.

UDL is a design framework which means good teaching is imbedded in a process of design thinking focused on creating expert learners. Good teaching can and does exist on its own to produce positive, memorable educational outcomes. However, the UDL framework suggest new ways of investigating learning experiences, to identify gaps and problems, to provide multiple pathways (engagement, representation, action & expression) to the same learning outcomes, and to test and revise design solutions to learning problems.

UDL complements good teaching with good design thinking.

Myth 2: UDL means that all curriculum has to be overhauled and redesigned

According to most UDL implementation practice, UDL is best implemented in baby steps. UDL CAN mean an overhaul and a total redesign, but it doesn't have to mean that.

Choose a single activity and start by offering two alternatives for expression. Start one class with assessing engagement. Ask for student feedback on your lecture. At the same time, ask them if they have preferences for activities other than lectures. Once you get comfortable with small steps, move onto a bigger step. Experiment with one cell of the framework. Try using visual and auditory materials for learning. Try asking students give a summary of the major points in the class. UDL can be as big or small as you'd like; that is the essence of design thinking. Think about a small change, design it, test it, get feedback, change it and try again. Before you know it, your small steps add up to real change and you will have officially become a Universal Design Thinker.

Myth 3: UDL only benefits the student

Perhaps the most wonderful aspect of UDL is that it DOES benefit students, but instructors time and again say that UDL gave them a way of enjoying teaching again. It takes the pressure off of grading hundreds of repetitive assignments, it gives keys to increasing engagement, and gives students autonomy over their learning. It frames up the classroom as a community, shifts the power dynamics, supports feedback, and by and large, makes expression of learning more creative and interesting.

Section 3.9: UDL and Accommodation Planning

Universal Design for Learning (UDL) and Accommodation Planning share some similarities but are essentially different concepts. Accommodation planning is mandated to ensure that persons with disabilities have the right to access educational institutions. UDL can be a mechanism in that process without focusing specifically on individual students with disabilities, and instead, focusing on what would be maximally instructive for as many students as possible.

You may begin to consider UDL framework in your classes in response to the accommodation processes because

1. There are so many accommodation plans in your classes that it is difficult to provide individualized attention to the students;
2. There are aspects of accommodation plans that are easy to implement without needing to resort to specialized planning. For example, if you use UDL framework to create audio recording for your lectures and provide options for exams, those are accommodations that a student doesn't need to seek for individualized planning.

This pyramid, developed by disability specialists at AHEAD (2017), illustrates the way that we can think about UDL in relation to accommodation planning.

At the bottom level, and as a general approach to teaching and learning in post-secondary institutions, we can apply UDL principles that include the majority of students. As you learn more about UDL, this means that as the instructor, you are considering the design of your syllabus, the types of activities students undertake, whether you convey information in multiple modalities (e.g., seeing, reading, listening, diagramming), and whether students are provided choices and participation in their educational journey.

As we know, accessibility is featured as part of existing technology, UDL dives deep into the way students learn. Where accessibility focuses on access, UDL focuses on becoming an expert learner. While accessibility features serve to mitigate disability-related barriers, UDL starts with variation in learners; the design of the learning environment may not even see a disability label.

Below, accessibility and UDL are contrasted:

Accessibility Features (Reactive)	**Universal Design for Learning (Proactive)**
Wheelchair accessible desks	Explicit learning outcomes
Accessible documents	Student and instructor feedback
Door opening buttons	Building relationships
Ramps	Assessing engagement
Closed captioning	Self and peer assessment
Screen readers	Guiding goal setting
Text to speech software	Providing choice
Braille on signs	Student-designed rubrics
	Represent information in multiple ways

By planning proactively and for as many students as possible, your workload around individualization will be decreased. Students who experience disability-related barriers will not only feel included but will be relieved of the additional work they would normally have to undertake in the accommodation process.

Section 4.1: Case Studies

Case Study #1

You are teaching a class on communication skills in law enforcement.

The course is designed so that student read five chapters from a textbook and two articles. There are ten conflict and arrest simulations that students practice and complete with a partner. Grading is based on seven reading responses and adequate understanding of conflict and arrest simulations.

Students tend to perform well on the reading responses but fare poorly on the simulations. Last semester, two students with self-disclosed anxiety disorders nearly failed the class. You feel that students are not readily prepared for strong communication in the field and you feel discouraged.

Apply Design Thinking and follow the steps below to analyse the case

Start small and concrete	What are the problems? Is the type of reading? The number or type of simulations? The way they are related? Keep your starting points task-based (e.g., examine whether the simulations are related to the readings accurately).
Create clear goals	What is the goal of your design? Clearer simulations? Fewer failures? Better self-assessment? Flexible communicators?
Assess engagement	What do students want to know/build/develop? What are their expectation, strengths, and weaknesses? How can you support them in their opinion? How can they support each other?
Choose a starting point in the UDL Guidelines	How will you start the redesign? Will you start with the way information is presented and accessed? Will you start by designing for access to reading and comprehension? Or create multiple ways of demonstrating understanding of reading and relating that information to improve simulations?
Test and Get Feedback	Implement one aspect of the redesign (e.g., one simulation practiced in two different ways with self- and peer-reflection on a related reading). Test it, get feedback, as implement further changes if necessary. Remember that feedback from both yourself and students is key to knowing when your UDL is doing what you want it to do!

Case Study #2

You are an instructor in the paramedic program. The topic that you dislike teaching the most is how to recognize and respond to signs of cardiac arrest. You find that while students can memorize the steps to recognize cardiac arrest, they aren't able to think critically, and to plan a response in managing the public while attending to a patient. It would seem that students have a sense of "book learning", but you never feel confident that they will perform well in a real-life situation.

Apply Design Thinking and follow the steps below to analyse the case

Start small and concrete	What are the problems?
Create clear goals	What is the goal of your design?
Assess engagement	What do students want to know/build/develop?
Choose a starting point in the UDL Guidelines	How will you start the redesign?
Test and Get Feedback	Implement one aspect of the redesign. Test it, get feedback, as implement further changes if necessary.

Resources

Centre for Applied Special Technology (CAST)

AHEAD Ireland

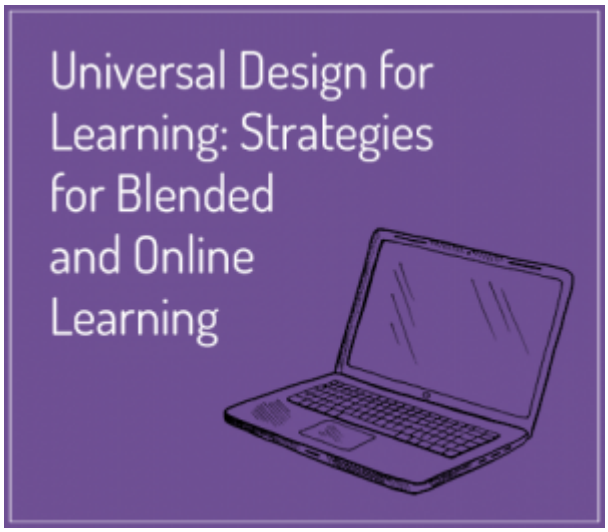
DO-IT University of Washington

Design Thinking Bookleg at Stanford School of Design

References

- *Design Thinking Bookleg (2018).* Hasso Plattener Institute of Design at Stanford
- Goldsmith, S. (2007). *Universal Design*. Routledge.
- Rose, L.T. (2016). The *End of Average: How We Succeed in a World That Values Sameness.* Toronto: Harper Collins.
- *Universal Design for Learning in BC: Legacy of the BC UDL project* (2010). SET-BC. Special Education Technology – British Columbia.
- *UDL & the Continuum of Support* (2017, November 2). AHEAD. Retrieved April 22, 2020 https://www.ahead.ie/udl-pyramid

Universal Design for Learning: Strategies for Blended and Online Learning



Authors

Dr. Seanna Takacs

Junsong Zhang

Helen Lee

Acknowledgement

This project is supported by BCcampus and JIBC Students Services

Recommended Citation

Takacs, S., Zhang, J., Lee, H. (2020). *Universal Design for Learning: Strategies for Blended and Online Learning.* Centre for Teaching, Learning, and Innovation. Justice Institute of British Columbia

Section 1.1: Curricula as Disabled

An important perspective in UDL is understanding that the curriculum we designed is not perfect, and in fact it often fails at meeting the needs of the diverse body of our students. Rather than seeing students as incapable or disabled, we reframe the problem as *curricular disability*. Curricula can be disabled in the following ways, according to the CAST (2011) guidelines:

1. **Curricula are disabled in WHO they can teach**. Curricula are often not conceived, designed, or validated for use with the diverse populations of learners who actually populate our classrooms. Learners "in the margins"—those who are gifted and talented, those with special needs or disabilities, those who are English language learners, etc.— often bear the brunt of curricula devised for the fictional "average", because such curricula do not account for learner variability.
2. **Curricula are disabled in WHAT they can teach**. Curricula are often designed to deliver or assess information, or content, without considering the development of learning strategies – skills learners need to comprehend, evaluate, synthesize, and transform information into usable knowledge. Mainstream curricula remain largely constructed around print-based media, which are good at delivering narrative and expository content. However, they are not ideal for information that requires an understanding of dynamic processes and relationships, computations, or procedures.
3. **Curricula are disabled in HOW they can teach**. Curricula often provide for very limited instructional options. Not only are they typically ill-equipped to differentiate instruction for differing learners, or even for the same learner at different levels of understanding, but they are disabled by their inability to provide many of the key elements of evidence-based pedagogy, such as the ability to highlight critical features or big ideas, the ability to provide relevant background knowledge as needed, the ability to relate current skills to previous skills, the ability to actively model successful skills and strategies, the ability to monitor progress dynamically, the ability to offer graduated scaffolding, among others. Most current curricula are typically much better at presenting information than teaching.

The idea of curricular disability is crucial in a shift between face-to-face environments to blended or online environments because the needs, preferences, and strategies change when educational environments shift. The who, the how, and the what of curricula can change in both positive and negative directions as we move between face-to-face, blended, and online formats.

Section 1.2: Learning as Strategic and Contextual

Human learners are, at our core, strategic beings. When we are confronted with a task we broadly evaluate three things:

- We consider the knowledge we already have and can transfer to the task at hand
- We consider procedures we need to follow or create in the learning environments
- We consider how likely we will be successful and how we know we are successful

Of course, these three things are wrapped up in how interested we are in the task, previous educational experience, whether we have learned or did anything similar before, and what kind of feedback we are likely to get. Our minds work at lightning speed to integrate all this information, **but effective learning (especially in a new environment) often means both slowing down this rapid and automatized process and considering carefully some alternate strategies.**

Our learning strategies are rich, nuanced, and context-driven. Contexts are quite complex by the time students reach post-secondary because they encompass past school experiences, family experiences, successes, failures, learning goals, and career thoughts. For instance, consider a common message instructor hold around students: why can one student get an A effortlessly while another student struggles to get a C? We likely chalk it up to a difference in intellectual ability or being suited to a particular field.

Understanding learning contextually means that, instead of resorting to only an **ABILITY** explanation, we also resort to an **EXPERIENCE** explanation, such as:

- Sometimes I reflect my learning well and activate all the experience I have in appropriate ways; other times I lack background knowledge or relevant information;
- Sometimes I do not see connections between ideas and cannot connect the dots;
- I struggled with the one online class I took before because it was hard to get organized
- I know that I learn well in classes where I can connect with my instructor and peers.

By developing a contextual understanding of learning, both students and instructors have the opportunity to acknowledge how the learning environment can afford the opportunity to learn, and to support the development of expert learners.

Section 1.3: Multiple Paths to Success

Recall that UDL is a design framework that advocates for multiple means of engagement, representation, and expression. It was developed to account for the jaggedness of learners. Research in the last 40 years has shown that, contrary to being a *tabula rasa* (blank slate) that is gradually filled with knowledge as a bathtub fills with water, human learning is a constructivist enterprise in which we use everything we have learned to structure and make sense of everything we continue to learn (Vygotsky, 1978; Packer & Goicoechea, 2000).

Since our experience, learning preferences, aptitudes, and sense-making are different, we are bound to take different paths in the journey of learning. The idea that we learn along multiple paths means that we:

1. **Identify diverse learning approaches**
    - Need to develop one set of skills before we can learn another set of skills
    - Have developed particular ways of achieving accessible experiences
    - Need to develop background knowledge
    - Learn through reading, writing, watching, storytelling, building, or testing
2. **Recognize schooling can be disruptive**
    - Start post-secondary studies later than expected (e.g. gap year)
    - Switch programs of study suddenly
    - Integrate school with work
    - Learning remotely and/or online
3. **Develop and mobilize practical knowledge**
    - Negotiate the best ways to demonstrate learning
    - Work strategically to transfer learning

The idea of multiple paths also implies that those paths change depending on the subject matter, a shift in goals, time constraints, and resources. The strategic aspect of learning shows up in these multiple pathways. For more ideas and examples on multiple paths, please check UDL on Campus published by CAST.

Section 1.4: Thought Experiment

Consider a situation in which you have observed a different path to success, either for a student or for yourself. Ask yourself:

Reflective Question:

- How did success look in that situation?
- What was unexpected or what made the path different?
- Who defined that it was different?
- What actions were taken to support the different path?
- And what was the result?

Section 2.1: Understanding Barriers in a Digital Age

Another important aspect of Universal Design for Learning is to anticipate barriers and design for those barriers in advance, but barriers vary not only according to the learner but also according to the learning environments.

Tony Bates (2018), in his continuum of teaching, suggests that there are primarily three type of delivery mode: face-to-face, blended, and fully online. For this guide, we adapted the continuum into the following categories and definitions:

1. **Face-to-Face Learning**
    - Classroom teaching with no technology at all, which is very rare nowadays.
    - Classroom teaching with some aids, e.g. presentation slides.
2. **Blended Learning**
    - Technology-Enabled: use of learning management system to assist teaching, such as uploading course materials, submitting assignments, or grading.
    - Flipped Classrooms: carefully designed pre-class activities to assist students to learn key concepts in a self-pace manner and engage them in discussions and problem-solving during class that lead to the synthesis and application of the key concepts (University of Adelaide).
    - Hybrid: the majority of learning occurs online and only specific activities is in person. For example, an online course (80%) with consistent live office hours and some in-person simulation exercises (20%) would be a hybrid course.
3. **Fully Online Learning**
    - Also known as distance learning which has no face-to-face components. Depending on the design, instructors and learners may communicate through online conferencing tools.

As you see, learning in a digital age has created new contexts, which requires students to re-strategize their learning process and procedure. Instructors also need to adapt to different delivery modes and design proactively to remove barriers that are posed by digital learning environments.

Remember, effective learning (especially in a new environment) often means slowing down our nearly automatized process and considering carefully some alternate strategies.

In the following sections, we will provide some examples in blended and fully online learning environments.

Section 2.2: Addressing Barriers in Blended and Online Learning

There are some keys points to keep in mind in supporting blended and online learning based on UDL framework.

1. **Look at accessibility as a fundamental starting point.** It is critical to inquire specifically about the accessibility of course content, layout, expectations, and communication in online and blended learning environments. Asking explicit questions and gathering feedback on accessibility from students at the beginning and throughout the course will afford students the opportunity to engage with each other and enable troubleshooting at all points.
2. **Employ clear communication.** Clear communication through multiple channels supports students in a number of ways. Clear commutation includes the establishment of routines, a means of contacting the instructor, and a means of collaborating both formally and informally. It means that students feel welcome to express confusion, to ask questions, and to have a voice in some of the decisions in the course.
3. **Create clear structure and guidelines.** Describe the guidelines, create a summary of the guidelines and quick references. Describe what the expectation of the course are and give both positive and negative examples. Remember that your design has to target clear, elaborate representations of content and expectations. Examples, samples, pictures, and videos are key in reducing barriers.
4. **Offer students (limited) choice.** A key aspect of the UDL framework is offering choices to students about how they engage, how they learn content, and how they demonstrate what they have learned. For example, students may present information through a paper, a blog post, or a storyboard; or help shape a writing project by choosing a meaningful topic. Offering choices does not mean letting students do what they want. Rather, it means you can identify several pedagogically sound options for engaging, learning, and assessment.
5. **Encourage personal and social connections.** Your enthusiasm, openness, and willingness to take risks, get excited, and communicate your love of your field of study are key to getting students on board. Actively encourage connection, excitement, play, and joy. Alongside your content-related questions, create a space where students can be frivolous, where they can share memes, photos, stories, and make connections with content that might feel too risky in discussions.
6. **Create small groupings.** Organizing students into pods or small groups decreases the threat of participating a whole class where student reactions cannot be guaranteed. Humans work the best in small collaborative groups where they can readily develop communication systems, swap ideas, and resolve complaints. Smaller groups tend to be less of a barrier to learning since students can enter a space where they are more likely to feel known and understood.

Section 2.3: An Example of Blended Learning

INDC-1110 Essential Skills for Training & Facilitation is a blended course at JIBC. In this course, participants are asked to do 3 hours of pre-work before attending 3-days of face-to-face in-class instructions. The course is structured in the following ways:

- Prework includes reading articles about adult learning principles, watching videos about the course, and posting online introductions to the cohort in the learning management system (LMS).
- 3-day face-to-face activities include participants taking turns practicing facilitation skills, and opportunities to critique and evaluate each other's facilitation techniques.
- Throughout the course, recordings of facilitated sessions during the day are posted in the LMS for review and additional reflection.

Short Analysis

This blended course has the appeal of working independently online and with peers face-to-face where learners could gain valuable social connections. Learners also have the chance to engage with course content, peers, and the instructor in multiple ways.

But we must not forget that any pedagogical approach has its strengths and weaknesses. Blended learning can remove certain barriers but also create new ones. These barriers can be technological, social-emotional, and cognitive.

Read the example again, and ask yourself:

Reflective Question:

- What may be some of the barriers in this blended learning course?
- If you are the instructor, how might you address the barriers using UDL framework?

Section 2.4: Applying UDL to Blended Learning

Let's think specifically about how UDL principles can create a better experience in blended learning.

From an engagement standpoint, UDL has three priorities:

1. Recruiting interest
2. Sustaining effort and persistence
3. Supporting self-regulation

Here are some ideas for your design:

1. Recruiting interest is concerned with the way we ignite curiosity, find our place in the class, and connect with prior knowledge. This might include asking students why they are taking the course and what knowledge they have that they can apply to make sense of what they are expecting to learn, but it can also incorporate academic and career goals or ideological goals (e.g. I feel I should know more about conflict, or how to be a better person).
2. How will students keep up the good work when it gets tough? Designing for persistence and effort is important. It can be tied to a sense of community where students trust that they can ask questions, be met with positive regard, and receive reliable, timely feedback from their instructor and peers. It can mean having candid discussions about what aspects of the content are difficult, why they are difficult, and developing problem-solving strategies. Designing so that students can take multiple approaches to problems with patience and unassessed attempts can be key.
3. Self-regulation refers to the ability to control learning which can include evaluating learning, planning on next steps, and soliciting information and help (e.g., Winne & Perry, 2000; Zimmerman, 2000). A blended learning course grounded in UDL principles supports students in setting goals. In a blended learning environment, explicit work on setting goals is an important feature since students have more time and autonomy in making sense of the course structure and the content. Help students set weekly goals, reading goals, skill and performance goals and bake them into the course design. Have regular check-ins and help students assess whether they are approaching their goals or avoiding them and develop some options for learning differently to stay on track.

From a representation standpoint, UDL has three priorities

1. Providing options for perceiving and learning new information
2. Provide choice for the language and symbols students use to represent their ideas
3. Support learning through multiple means for comprehension

Here are some ideas for your design:

1. The main way that we convey new information is through reading to "download" content followed by discussions to process or integrate information. Blended learning, for its combination of in-person and online components, has the capacity to offer many more options: reading, discussion, constructing models, interactive H5P slides, collaborating on open educational resources (OER), watching videos, creating videos, synthesizing images across social media platforms… the list is endless.
2. Moving beyond reading and discussing can mean helping students create vocabulary banks, diagrams, heuristics, flow charts, and mind maps. It can mean students use different languages, concepts, and vocabulary to observe connectedness among ideas. Be prepared to have open discussion about what aspects of language, symbols, signs, and pictures are helpful for students in representing the content.
3. Comprehension can be developed in many ways and the UDL framework urges us to move beyond testing. Designing learning activities around perspective-taking, argumentation, negotiating, curating, and collaborating means that students have to learn the content and operate upon the content. A key aspect to engagement is active learning – using and manipulating information to engage in another activity. Ask yourself – are students learning the content or are they learning to do something more?

From an action & expression standpoint, UDL has three priorities:

1. Provide options for physical action
2. Support students in creating alternatives for expression and communication
3. Support students in goal-setting, planning, and managing and monitoring workload

Here are some ideas for your design:

1. Consider how software can expand the way students immerse themselves in learning and offer options for responding to instruction and navigating the informational landscape. Blended learning environments are ideal for helping students learn, use, and grow assistive technology such as text-to-speech functions, adapting page layouts, using animations, storytelling, and mind-mapping tools.
2. In a blended learning environment, we have the opportunity to enable students to exploit both in-person and online options. Students have the option of engaging in both face-to-face environments and internet-based expressions such as blog posts, animated presentations, videos, storyboards, voice-over presentations. Investigating student preferences and being open to different options for developing and expressing learning is key to exploiting the strength of blended learning environments
3. Particularly in post-secondary settings, instructors tend to lay out a syllabus or course outline which implicitly constitutes the goal structure for the course: complete all these readings, activities, tests, and exams and you will have completed the course successfully. In a UDL framework, we go a step further and help students recognize that goal structure while supporting them in goal setting. Students may have additional goals for your course and it is a good idea to tap these goals to enrich learning. Help students develop the capacity to monitor progress, adjust learning strategies, solicit help, and connect with peers.

Section 2.5: An Example of Online Learning

Semester-based, asynchronous online courses offer students much flexibility to take on 3-credit courses that fulfill their elective requirements as part of their degree or certificate programs. A few samples of online courses at JIBC are ENGL-1100 Academic Writing, BUSN-1100 Business Communications, PSYC-1100 Intro to Psychology, and RESM-2100 Research Methods.

- The courses span across a 14-week semester period and roughly require 3 hours of work per week.
- Instructors may/may not offer synchronous sessions.
- The courses all have a consistent look and feel, and templated course syllabus and assignment guidelines are applied.
- Each week there is at least one or more online learning activities (e.g. discussions, quizzes, short written assignments, journals).
- At the end of the course, there is typically a final assignments/projects.

Short Analysis

These online courses offer a high level of flexibility and allow learners to work independently online. Syllabus and assignment guideline documents are always available, which allows learners to plan out their 14-week at the start of the course. Weekly modules follow a consistent design template and create a predictable learning experience for all students.

However, because it is fully online, it may not contain an in-person face-to-face component. The barriers that emerge can be related to feelings of community and connectedness, to self-regulation, and to mapping the course structures.

Read the example again, and ask yourself:

Reflective Question:

- What may be some of the barriers in this blended learning course?
- If you are the instructor, how might you address the barriers using UDL framework?

Section 2.6: Applying UDL to Online Learning

Let's think specifically about how UDL principles can create a better experience in online learning.

From an engagement standpoint, UDL has three priorities:

1. Recruiting interest
2. Sustaining effort and persistence
3. Supporting self-regulation

Here are some ideas for your design:

1. In online environments, the temptation to teach to the screen instead of through the screen can feel even more challenging. Change the frame to see yourself as a culture-creator – creating connections and a safe learning home.
2. Provide a forum for regular feedback, decision-making, synchronous meeting times, and frequent opportunities for students to make choices, steer their learning, and collaborate with others.
3. Give students a clear schedule of your availability and help them feel welcome and included by asking questions, being open to tangential thinking, and providing opportunities to play.
4. Provide choices in assignments – some students like longer, in-depth assignments while others prefer shorter, more frequent assignments. Regardless, take the opportunity to help students connect course content to the real world through linked tasks that deepen understanding and broaden the conceptual frame.

From a representation standpoint, UDL has three priorities

1. Providing options for perceiving and learning new information
2. Provide choice for the language and symbols students use to represent their ideas
3. Support learning through multiple means for comprehension

Here are some ideas for your design:

1. The best first move is asking students what kind of devices students have at home – phone, laptop, desktop, etc. Once you have a sense of what students have access to, you can start planning ways that students can represent information beyond reading and writing tests.
2. Pre-teach vocabulary, show students how to map concepts, and how ideas in the course link to each other and beyond, to other courses, concepts, and current and historical events.
3. Provide access to multi-media presentations, animations, and social media sites that can help students see, hear, feel, reflect, and construct meaning.

4. Provide a visual mapping of course expectations and assignments. Checklists and calendars that are colour-coded are a boon for organizing the course content and deadlines.

From an action & expression standpoint, UDL has three priorities:

1. Provide options for physical action
2. Support students in creating alternatives for expression and communication
3. Support students in goal-setting, planning, and managing and monitoring workload

Here are some ideas for your design:

1. In an online course, there are many choices that you can provide around how students want to demonstrate their learning and it is critical to solicit feedback from students on these preferences.
2. You can ask students how they would prefer to receive feedback as well – audio and video feedback allow students to feel more connected to you and to each other. Hearing voices not only helps students feel connected but directs attention in the way a spotlight can light up the sky (Posey, 2019).
3. You can provide samples and examples that also have a spotlighting effect and give students a sense of how to refine their understanding and how to engage in deep, multi-modal thinking about the course content.

Section 3.1: UDL Strategies for Blended and Online Learning

Here is the list of strategies for blended and online learning adapted from teaching resources at Oakland University.

Engagement

1. Build in opportunities for learners to provide their input on how tasks are designed.	• Create space (e.g. survey or poll) for periodic, informal feedback during synchronous or asynchronous learning. • Let students decide whether certain tasks (e.g. group discussions) will occur online or offline.
2. Integrate learners' experiences, identities, backgrounds and cultures.	• In example scenarios or problems, use a variety of names, settings, or cultural references. • Design assignments or activities in a variety of social, professional or cultural contexts.
3. Build activities that ask learners to engage with the real world.	• Ask students to interview a community leader or attend public events (e.g. court proceedings) in an online course. • Ask students to identify the potential real-world audiences or applications they see in their work.
4. Divide long-term course or assignment goals into smaller short-term objectives.	• Break final projects into a few stages over the semester with diminishing support from the instructor. • Ask students to create a manageable timeline for their projects.
5. Require learners to reframe course objectives and set their goals	• Set up an online journal where students could create their learning goals based on the course description and objectives. • During and at the end of the course, ask students to reflect (in writing, in discussion, or video) on their progress, strategies, and goals.
6. Construct linked tasks with varying degrees of difficulty that require learners to work toward similar learning outcomes.	• Build small (e.g. activities) and large (e.g. papers, exams) tasks that address course outcomes. • Provide different levels of difficulty with the same assignment. • Offer optional challenges and provide relevant incentives (e.g. extra credit).
7. Provide opportunities for frequent and timely feedback	• Provide feedback using rubrics – this may expedite assessment while clearly indicating students' progress. • Stagger assignments' due dates if possible to reduce feedback load. • Pair students to provide formative peer feedback based on a rubric or task guidelines.

8. Give learners resources to help them cope with "subject phobias."	• Share support resources such as writing center, library help, and online resources. • Emphasize a growth mindset, replacing "I'm not good at X" with "I'm still learning about X." • Share concrete, discipline-specific examples of how past students have coped with challenging learning situations or experiences.

Representation

1. Pre-teach key vocabularies or concepts	• Design interactive key words exercise at the beginning of each unit or module. • Offer a searchable glossary of key terms. • Link to online resources where students can find definitions of key terms.
2. Support learners in accessing and using multiple representations of the same information.	• Use a variety of representations to demonstrate a complex concept (e.g. map, video, graphics, stories). • Provide links to resources that address the same ideas for varying levels of learners.
3. Give learners videos or animations with control in sound and speed	• Record welcome videos via Kaltura. • Record live lectures and send students the link for review. • Ask students to find and share helpful online resources.
4. Provide transcripts for video clips.	• Transcribe videos when possible; review automatically-generated transcripts and correct errors. • Upload PDF transcripts for videos when possible.
5. Map the relationships between important components or ideas.	• Use a concept map to highlight relationships between course ideas. • Provide short videos that emphasize or highlight relationships between course concepts, especially when introducing new ideas. • Have students connect key ideas or themes in discussion forums.
6. Chunk information into smaller pieces to help learners process information	• Use dividers to break online course content into shorter pieces. • Release course modules adaptively to prevent information overload.
7. Provide a high-level checklist for content, activities, and assignments	• Design checklist so students can easily map the course structure for the day or the week. • Assign a group each week to create a checklist for the class.

Action & Expression

1. Build opportunities for learners to demonstrate their knowledge in different formats.	• Create tasks that can be done entirely or partly in writing or through presentation (e.g. online or video presentations). • When appropriate, ask students to come up with ideas on how they want to demonstrate their learning.
2. Provide learners with examples of ways to solve problems with real-life and/or academic examples.	• Offer instances of disciplinary knowledge being used to solve real issues. • Pose problems and ask learners to identify ways that others have solved them. • Ask students to write or speak about how they might apply knowledge in the real work.
3. Give feedback in different formats (audio, video, written).	• Provide feedback using free screen capture tools like Jing or Screencast-o-matic. • Record audio feedback via your phone or computer. • Offer synchronous sessions to meet with students to discuss progress.
4. Provide samples that learners can refer to for content organization and assignment	• Design templates for content organization and assignments. • Share student work samples (with permission) to illustrate course outcomes.
6. Pose questions for learners to reflect and self-monitor progress.	• Ask students to reflect on their learning at the end of each class. • At key points, prompt students to consider how they have met course outcomes. • Create a task that asks students to regularly reflect on their learning, such as a reflection journal.
7. Wrap up courses with activities or interactive assessments	• Have students to summarize key take-aways and share with each other. • Create low-stake short quizzes as a way to summarize key concepts and assess learning.

Section 3.2: Case Studies

Case Study #1

Paola is teaching a first-year Communications course. She has taught face-to-face classes for four years and enjoys teaching enormously. She has enjoyed being flexible with students and has established strong relationships with her students who describe feeling like she really cares about them and their success. This semester, Paola was asked to start teaching a blended course with a lot of emphasis on the flipped classroom model. Most of the class is online and students meet in person for a three-hour evening class every two weeks. Paola is excited for and comfortable with a flipped classroom model but she is reluctant to have so little in-person contact with students. She knows that her students likely have good access to technology but she is concerned that teaching Communications with so much online content will be frustrating for both her and students.

Paola decides to use UDL principles and takes five steps to support both her teaching and her students' learning and sense of feeling imbedded in a community:

1. Paola introduces herself in a 5-minute video, giving a brief overview of the class, showing pictures of her cats, talking about a recent kayak trip to Haida Gwaii and describing her favourite part of the course. She invites students to introduce themselves by way of a quick note or video in the LMS.
2. Paola creates a module to describe the flipped classroom model and gives examples of what previous students have liked and disliked about the flipped classroom. She follows it up with a survey to solicit information specifically on accessibility concerns for the course.
3. Paola describes her rationale around activities designed online and the activities and feedback designed for the in-person time which include structured questions, and a problem-solving activity.
4. Paola includes one community-building activity each week of the course and creates a dedicated space on the LMS where the community-building activity can take place. Students can work together and with her to develop other community building activities that intersect with the content of the course or that are frivolous (e.g., do you eat or drink smoothies?)
5. Paola draws out a colour-coded map of the course content week by week, including readings, videos, hands-on experiments for home and class, suggested questions to guide in-class work, and gives students options for both learning content and

expressing their knowledge. She includes a section below the map where she reminds students that her goal is to help them become content experts and experts on their own learning.

Practice: Analyze and Design

You've read and analyzed Paola's Communications course and you have devised some preferences and design approaches with your own courses in mind. How might you add to the design of Paola's course?

- Would you support the flipped classroom model differently?
- Would you take additional steps to support comprehension?
- Would you support engagement or community-building differently?
- How might you support students' interest?
- Can you think of additional ways to help students demonstrate their knowledge in the course?
- What tools, resources, or knowledge would you need to do this work?

Case Study #2

Xinli is an Emergency Management instructor. She has recently moved her class online and her first concern was the fact that students required hands-on practice. Normally she would supervise that hands-on practice and work with students very closely as they navigated scenarios. Xinli took several steps to remove barriers:

1. She sent an email to all students prior to class starting with a survey to get an idea of previous emergency management knowledge as well as the aspect of emergency management they found most compelling.
2. She thought carefully about the best way of learning procedures and how to represent that information in picture and video format, offering multiple opportunities to practice and improve without being assessed.
3. She decided to provide choices for students to practice and consult with one another by pairing them together. They would rank each other and themselves on how confident they would feel in executing the emergency management procedures under a variety of conditions.

4. Finally, Xinli created a final project where students could identify areas that they would like to practice, improve upon, or expand their expertise such as scenarios around riot management or explosives.

UDL principles helped Xinli to key into the knowledge students were bringing into the course, how they could mobilize that knowledge and develop meaningful content understanding in turn. By pairing students she created a method of immediate feedback and rehearsal. Providing multiple means of representation is key in conveying procedural knowledge by offering pictures, videos, and opportunities to reflect, observe, and rehearse what they have learned.

Practice: Analyze and Design

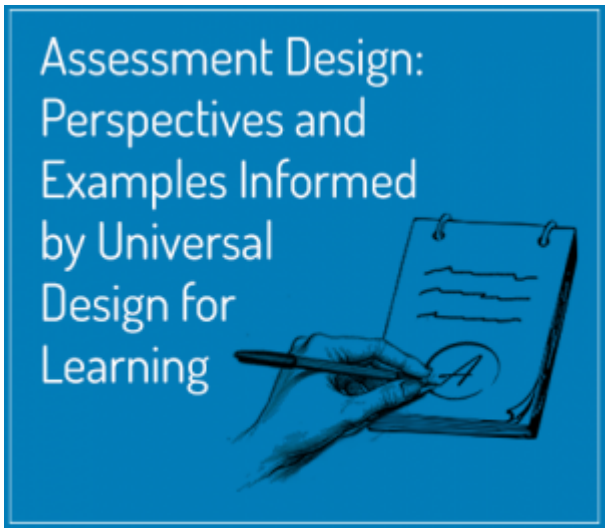
You've read and analyzed Xinli's Emergency Management course. How might you add to the design of the course?

- Would you take additional steps to support the ways students learn emergency management procedures?
- Would you support engagement or community-building differently?
- How else might you support students' interest?
- Can you think of additional ways to help students demonstrate their knowledge in the course?
- What tools, resources, or knowledge would you need to do this work?

References

- Bates, A. T. (2018). *Teaching in a digital age: Guidelines for designing teaching and learning*.
- The University of Adelaide. *The Flipped Classroom Explained (n.d.)*. https://www.adelaide.edu.au/flipped-classroom/about/
- Oakland University, *Teaching Resources (n.d.).* https://www.oakland.edu/cetl/teaching-resources/
- CAST (2011). Universal Design for Learning Guidelines version 2.0. Wakefield, MA.
- Morris, S.M. (2020) *Technology is not pedagogy*. (BLOG POST)
- Packer, M. & Goicoechea, J. (2000). *Sociocultural and constructivist theories of learning: Ontology, not just epistemology*. Educational Psychologist, 35, 227 – 241.
- Posey, A. (2019) *Engage the Brain: How to design for learning that taps into the power of emotion*. Alexandria, VA: ACSD.
- Rose, T. (2016). *The end of average: How we succeed in a world that values sameness*. Toronto: Harper Collins.
- Vygotsky, L. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press
- Winne, P.H. & Perry, N. (2000). Measuring self-regulated learning. In M Boekaerts, P.R. Pintrich & M. Zeidner (Eds.), *Handbook of self-regulation* (pp.531-566). San Diego, CA: Academic Press.
- Zimmerman, B. (2000). Attaining self-regulation: A social cognitive perspective. In M Boekaerts, P.R. Pintrich & M. Zeidner (Eds.), *Handbook of self-regulation* (pp.13-39). San Diego, CA: Academic Press.

Assessment Design: Perspectives and Examples Informed by Universal Design for Learning



Authors

Junsong Zhang

Lynn Truong

Helen Lee

Dr. Seanna Takacs

David Smulders

Acknowledgement

This project is supported by BCcampus and JIBC Students Services

License

Recommended Citation

Zhang, J., Takacs, S., Truong L., Smulders, D., Lee, H. (2021). *Assessment Design: Perspectives and Examples Informed by Universal Design for Learning.* Centre for Teaching, Learning, and Innovation. Justice Institute of British Columbia

Section 1.1: Reassessing Assessments

Most broadly, understanding a student's learning means that we must account for the ways that they have constructed their reality according to their educational context. This workbook is dedicated to assessment – the conventional and the alternative – and it is our hope that before you start to choose the assessment methods for your course, you will start by considering that assessment is not just a measure of what students know; it has the capacity to shape a student's attitude, goal setting, and engagement (Struyven, Dochy, & Janssens, 2005). Typically, we often understand assessment from the standpoint of the instructor: How can we find out if a student is learning what we want them to learn? What are the best ways to assess student's content knowledge and learning transfer? When and how often should assessments take place?

Traditionally, assessments in post-secondary contexts have been primarily exam-based or essay-based. Exams have the specific purpose of gauging the automaticity of recall, or in other words, how quickly and accurately a student can answer questions set by the instructor. Exams offer an efficient means of representing and measuring knowledge conveyed in a course. However, timed exams can simplify learning content into a superficial, rote manner that may not be meaningful or generalizable. That is, students may remember information for the exam, but may not be able to remember it afterwards or apply it in problem-solving. Similarly, essays are used to assess how readily students can compile information, take a perspective, argue for a point of view, and in doing so, synthesize content in a more meaningful fashion. Essays have the advantage of drawing in student voice which thus makes learning more meaningful, but given the technical approach to writing, essays run the risk of superficiality if students feel compelled to overly focus on mechanics and "what the instructor wants" over synthesis and interpretation.

There is no single assessment type, method, or paradigm that works best for all cases. Assessments have strengths and weaknesses, which can live as a set of trade-offs as we see in the examples with essays and exams. Depending on what you settle upon in your courses, your evaluation methods have the potential to support memorization, synthesis, analysis, deep engagement, skill building, or unanswered (and unanswerable) questions. We can look at assessments as evidence that a student's understanding is matching up with the instructors, or better yet, we present to you an alternative: let us look at assessment as a process – as a series of check-ins on the ever-expanding base of knowledge and inquiry as students move through our courses.

Section 1.2: Individual and Institutional Approach

Evaluation of learning and learners is bound up intricately with the teaching philosophy and practices of the instructor and the institute in which we teach.

But what happens when your teaching philosophy runs up against the constraints and expectations of the institute or the professional accreditation body? For instance, what if your school or profession adopts exam-based accreditation yet you do not believe that simply passing the exam means a student has all the competencies required for the job? What does it mean for you and for your students?

In this case, you may feel that you are restricted or unable to design different types of assessments due to accreditation, licensing, and certification requirements of a program. But even when your students are required to write a multiple-choice exam to receive their professional certificate, it doesn't mean that you have to replicate the same test for the student by designing a similar mock exam. Instead, you can reconceptualize assessment design to better align the assessments with student learning outcomes.

UDL is critical in the reconceptualization process because assessments can create barriers that prevent some students from accurately demonstrating what they have learned. As we incorporate UDL approaches in our assessments, we are not constrained by a single assessment method. Instead, we attempt to make our courses more accessible, inclusive, and engaging for all learners. This is a step toward thinking strategically about how we want our students to learn and how we might develop different opportunities for students to engage and display competencies. While you may be limited to the requirements of the accrediting body, you can apply a wide range of assessments to measure student achievement to ensure success in passing their licensing, accreditation, or certification exam. In short, accreditation may be the destination, but you can take students on a route that has a variety of checkpoints that enriches their experiences and also ensure their success.

Here are some questions you can ask and reflect to connect personal and institutional assessment approach:

- What is important to you about the student experience of your course?
- What kinds of experiences and activities do you seek to construct for learners?
- What kind of voice are students interested in having in shaping assessments?
- How do your assessment strategies compare with institutional mandates?
- And how can you reconceptualize existing assessments to ensure student engagement and success?

Section 1.3: UDL-Informed Assessment

A UDL approach to assessment asks that we reconsider the purpose and function of assessment. It asks us to think ahead and proactively plan how the assessment is inclusive of multiple means of engagement, representation, and demonstration of learning. UDL also asks us to consider potential barriers in assessment. Barriers can take a number of forms, oriented around ability, skill set, timing, pacing, and medium. According to UDL on Campus, assessments in courses are meant to determine how well students are meeting goal. Measurable outcomes from assessment should align with course goals. When they don't, we run the risk of creating barriers. Greater transparency to the learning process means that it is easier to align assessments with activities and content. In UDL framework, assessment can be tied to goal setting and engagement as much as it is tied to checking whether the student's understanding "matches" the instructor's. With UDL framework, we can ask some new questions:

- Can we assess prior knowledge as students come into the course?
- Can we assess how meaningful the course is likely to be to students?
- Can we support students in assessing their own or their peers' engagement?
- Can we offer assessments in different formats and at different challenge levels?
- Can students choose an assessment format that may translate to better learning and reflection over time?
- How can assessment focus on both process and outcome?
- Are there grading alternatives, e.g., ungraded assessments or holistic rubrics?

Recall the concept of *jaggedness* (Rose, 2016) – the variation in knowledge, learning, skills, interests, and abilities in all learners – and how important it is to develop a lens that accounts for that jaggedness in order to plan and design proactively. It asks us to take into account the differing ways that students come to the learning setting, the ways they construct understanding, and the way that they can most accurately and meaningfully demonstrate the ways that they have learned the content. It's important to be mindful that Universal Design for Learning is a framework that focuses on developing ***expert learners*** – learners who are able to reflect on their learning, set goals, persist in the face of difficulty, acknowledge the role of flexibility in using learning strategies, and to understand the aspects of their jaggedness and how it is best met in a learning environment. In supporting expert learners, assessments can be designed so that there is a clear rationale, a sense of how the assessment is tied to the learning goals, and how meaningful it is in terms of the course, the program learning outcomes, even skill and career goals.

You may also review the UDL guidelines for a quick refresher. Now that we are familiar with how UDL framework may inform assessment design, the next question we can ask is, where do we start? In the next section, we will introduce five key factors for consideration when designing assessment and provide some UDL-informed examples.

Section 2.1: Key Factors for Assessment Design

Assessment design can be daunting. Sometimes we hear from students that they doubt the relevance and usefulness of their work, or they simply have a hard time completing all the assignments required for the course. In these cases, learners may experience barriers that they don't even recognize as barriers, internalizing them or blaming the course, the instructor, or themselves. Learners can find that they are not relying upon their strengths or are not given the chance to show their best work. At other times, we, as instructors, underestimate the power of meaningful feedback or overlook the time and effort we need to craft that feedback. These problems can create a vicious circle where you and your students are both feel stuck and frustrated.

If you have experienced any of these challenges, it may mean that you have opportunities to reexamine your assessment design through a UDL lens. You can approach these challenges by investigating and empathizing with the student experience, soliciting feedback from students, creating safe conversational spaces to identify the problems, and adopting appropriate strategies to engage your students and support expert learning. Don't forget that supporting yourself is also important as you empathize and investigate assessment challenges. When in doubt, find a supportive colleague or group who likewise are interested in trying new things so you can move your assessment decision-making forward!

Before you start (re)designing your assignments and assessments, here are the five key factors for your consideration:

- Learning outcomes and objectives
- High-stake and low-stake assessments
- Workload for you and your students
- Feedback and rubrics
- Delivery mode

Learning Outcomes and Objectives

The best place to start creating an overall assessment strategy is to carefully examine your learning outcomes and objectives. From a UDL perspective, students need to know why they are being assessed and what might be the skills or abilities they are working on through the assessments so they can prioritize their goals and adjust learning strategies accordingly. As an instructor, explaining how your assessments are tied to learning outcomes and objectives can be critical to engage your students and support goal setting.

While sometimes learning outcomes and learning objectives are used interchangeably, it is important to understand that they are different.

- A learning outcome describes the overall purpose or goal from participation in an educational activity. Learning outcome is a reflection of the desired state.
- Learning objectives are used to organize specific topics or individual learning activities to achieve the overall learning outcome.

Here are some examples from UCLA Health Course Planning Tip (2016):

Learning Outcomes	**Learning Objectives**
Demonstrate knowledge of evidence-based treatment for hypertensive patients by passing post-test with score of ≥ 80%.	List 5 side effects of anti-hypertensive agents.
Correctly identify required actions to manage patients in hypertensive crisis by analyzing a case study.	Discuss risks associated with untreated hypertension.
Utilize an evidence-based protocol.	State normal range for blood pressure.

In practice, you may use course-level learning outcomes to guide the design of the overall assessment plan and use learning objectives to create the specific assessments for each module or topic. Ultimately, your assessment plan should be aligned with the learning outcomes and objectives, and reflect the specific knowledge, skills, or abilities identified in the course outcomes. Even before you offer choices or consider engagement, examine whether you have a sound rationale whereby course activities, content, and assessments are in line.

Keep in mind that simply listing the type of assessments in your syllabus is not sufficient to engage students. It is crucial to communicate with students the relevance of these assessments and how they might benefit from doing them. To take it a step further, consider offering choice of assessments, with that choice being grounded in the meaningfulness of assessments. What would enrich the learning experience? What would help students feel they have consolidated knowledge or feel a solid sense of their skill set?

Low-Stake and High-Stake Assessments

Low-stake assessments are also referred as formative assessments, which usually have low or no point value in a learner's grade. These assessments may include journal posts, discussions, and knowledge checks. Research shows that formative assessments motivate students to learn and make them aware of the areas they need to work on, thus contributing to the process and outcome of learning (Weurlander et al, 2012).

High-stake assessments are also referred as summative assessments, which means that they are often used to decide the final score or grade on a learner's academic record. They are used to evaluate student learning by comparing with certain standards or benchmark. These assessments could include a mid-term or final exam, modular quizzes, standardized tests, a final project, or a final paper.

A good assessment plan should balance low-stake and high-stake assessments. While high-stake

assessment is necessary in many educational contexts, we encourage frequent and varied formative assessments in which choice of modality, topic, or pacing can help cultivate expert learners from a UDL perspective.

Workload for You and Your Students

Through course evaluation, we sometimes hear from students that there is too much reading, too many assignments, or too many tests or exams in a course. As an instructor, sometimes we are also concerned that the workload can suddenly become overwhelming during mid-term or toward the end of the term. Worse, we sometimes hear that assessments make so sense or don't seem to be connected with the course content in any meaningful way. When this happens, it can be important to acknowledge that these feelings around workload can have a lot to do with how we design our assessment plans.

The first step to address this issue is to start thinking how long it will take for a student to complete each activity in your course, and what are the maximum hours we expect them to spend on the course. Be sure to check in with students frequently on workload and meaningfulness of assessments. How long is the work typically taking? What pieces of the content are meaningful, challenging, or easy? Do students want more challenges and what kind of challenge are they seeking? A straightforward way to assessing workload is to create a table that lists the time needed for all activities such as reading articles, composing a discussion post, and prepping for exams. Work on this table together with students to map out workload, expectation, and to leave space for collaboration and designing multiple routes to assessment. We highly recommend introducing students to the Workload Estimator designed by Wake Forest University and creating a workload plan together.

While you are working with students on workload calculations and checking in on the meaningfulness of assessments, be sure to consider your own workload. Often, instructors balk at the idea of UDL because it seems like even more work when instructors often feel overloaded already.

Feedback and Rubrics

A key to successful assessment is giving students a clear understanding of what the expectations are for their work and providing meaningful feedback that facilitate the learning process. Other than verbal and written feedback, rubrics can serve as a baseline of what is expected in learning and can be an efficient tool to provide timely, detailed, and consistent feedback.

Rubrics can generally be divided into holistic rubrics and analytical rubrics.

- Holistic rubrics usually list one general criterion and is used to assess students' overall achievement.
- Analytic rubrics include multiple criteria and allows you to assess students' achievements based on the criteria predefined in the table.

You may refer to the two examples from Queens University.

Rubrics can be useful for all kinds of assignments such as written assignments, oral presentations,

teamwork, peer review, and self-assessment. If you are new to rubrics, you may start by creating one or two rubrics per term, or ask your colleagues if they have rubrics that you can use or modify.

You may also consider creating rubrics WITH your students. If students are offered choices around assessment, it makes sense to offer choices around rubric style. What are the key points? What will constitute a good presentation, or effective group work? When students co-create the rubric, they are, in essence, setting up a meaningful goal for themselves. Student input into rubrics means that instead of guessing what the instructor wants, or hoping for an A, students will have developed the goal that they can work towards and can turn their attention to effective learning instead of guessing, fearing, or hoping that they are on the right track.

Delivery Mode

As we know, delivery mode is generally divided into three main categories: face-to-face, blended, and fully online. These delivery modes tend to create an impression of preferred assessment methods or boundaries when we think about assessment design. For example, students tend to be required to complete more online assessments and discussion forums in an online course than in a face-to-face course.

While it is important to consider how delivery mode informs assessment strategies, we also need to be mindful about how it limits our perspectives on assessment design. For example, some instructors may feel that, in an online course, they can only resort to online quizzes, discussion forums, and essays.

But the truth is that online courses can also adopt a variety of assessment methods such as authentic assessments. With some scaffolding, students could still engage in activities or assignments that are authentic and experiential. For instance, in an online leadership course, students can be asked to interview someone they admire and make connections with people in the real world. Alternatively, students can also be given opportunities to volunteer in local organizations or communities and reflect on their experiences through online discussions. Similarly, face-to-face courses can also benefit from using a variety of assessment methods that offer students more choices or allow them to be more creative.

We will discuss different assessment methods in the next section so you can determine what may be the best for your course.

Section 2.2: Assessment Methods and Examples – Exams and Assignments

Quizzes and Exams

Quizzes and exams can be formative or summative depending on the design and are considered necessary in many educational contexts. Common question types include multiple choice, true or false, matching, and short answers. Quizzes help learners practice existing knowledge and can be effective in recalling what they have learned. Other than mid or final exams, instructors can also design pre-tests or knowledge checks where learners can assess what they already know and don't know. Applying UDL approach in quizzes and exams can provide a supportive environment for all learners.

Here is a UDL-informed example:

Tracy designed some quizzes and exams as a part of the assessment plan for her Organizational Behavior course. Considering that her course is fully online and students are joining from different time zones, here are the things she does to engage students while ensuring access:

- She distributes some low-stake quizzes with automatic feedback during the term to check students' understanding of some basic concepts.
- She designs and releases a mini sample exam before the final exam so students can familiarize themselves with the question types, flow, and format of the test.
- Her exam and quizzes are typically open for three days so students from different time zones have sufficient time to coordinate their schedules.
- She has removed time limit for each attempt and therefore allows her students to complete their quizzes without worrying about internet disconnection or computer issues.
- She allows multiple attempts and even encourage students to redo the exam if they need to, as she intends to use quizzes and exams to reinforce students' learning.
- In some cases, Tracy allows her students to opt out the final exam if they come up with an initiative or an assignment that is significant and meaningful for themselves.

Written Assignments

Written assignments are commonly used to assess learners' ability to understand a topic in a text-based format. To be effective in this area, instructors need to be clear on what they are assessing and if written assessment is the most suitable format. From a UDL perspective, if you are assessing the students' ability to understand the topic, you could allow the learner to demonstrate their learning in other formats such as in a video, podcast, or PowerPoint presentation. If you are assessing the students' quality of writing, you may allow students to choose their topic of interest. As an instructor, you can add flexibility in the assessment choices once you identify the purpose of the assessment. As learners

work towards the same learning goal, it is important that educators offer opportunities and methods for learning to be demonstrated in a variety of ways.

Here is a UDL informed example:

Trang is teaching Academic Writing this term. Students are required to write preparatory papers and learn to summarize and analyze resources applicable for an undergraduate academic environment.

- Trang assesses the learners by their ability to write and the quality of their writing. She offers learners the flexibility to pick their topic of interest, but she wants to emphasize the importance of citation in their writing.
- In the previous offering of this course, she recognized that the learners were often confused about the requirements of their written assignment, so she decides to include a detailed rubric that focuses on academic writing, grammar, and citation.
- She also includes three examples of successful written assignments and makes time to discuss why they were successful.
- Trang also allows several options for her students to choose how they would like to demonstrate their writing, limited in formats such as blogs, e-portfolios, or in a traditional essay format.
- She also uses scaffolding exercises to help lower-level students improve on their essay structure and offer one-on-one editing during her office hours.
- Finally, Trang requires the learners to submit two written assignments. The first assignment is for the learners to understand their errors and revise them. The second assignment is used as the final paper. Her goal is for her students to read her initial comments in the first assignment, understand their errors, make use of them, make changes, and improve their quality of their work.

Section 2.3: Assessment Methods and Examples – Presentations and Simulations

Presentations

Presentations are common in many classes. They have the capacity to assess the way a learner's thoughts are organized, to examine how readily a learner can synthesize feedback, connect with audience questions, and demonstrate presentation abilities in a real-time sense. A key in designing presentations is that they are designed – you should be sure that you have a clear rationale on why a presentation is a suitable assessment. What purpose will it serve? What ends will it meet? Is presentation the best method of demonstrating knowledge of particular concepts? Can you work with students to develop different types of presentations that are meaningful in the context of the course? Importantly, are the skills the learner is relying upon for a presentation the same ones that are explicit and supported through instruction?

Here is a UDL-informed example:

Wangari teaches Interpersonal Communication and designs the course so that students can complete a presentation at the end of the course.

- Wangari offers three choices for the presentation: present in person, by video, or lead the class through a simulation.
- She designs the presentation assignment so that students can offer an alternative that is meaningful for them.
- In the presentation, the students bring in their own voice to discuss how this presentation meets their goals for the course and beyond.
- Students have the choice to work in small groups or alone.They are given guidance on how the presentation should be different in either case.
- Wangari offers regular drop-ins for trial runs leading up to the final presentation so that students can feel that they are on the right track instead of a high-stake final assessment.
- Wangari works with students to develop certain aspects of the marking rubric; she is explicit about her rationale for grading on some aspects of the presentation.
- Throughout the course, Wangari has created a system of peer feedback. Presenters have the option of addressing peer feedback for bonus grades.

Simulations (Role Play)

Simulation as an assessment is recognized an immersive, experiential learning opportunity (Caniglia, 2019). In a comprehensive simulation, learners may find themselves in an environment taking on a multitude of roles in situations that are designed to challenge learners to apply their knowledge in

practical and authentic ways in order to solve problems, respond to incoming information, and work with others toward common goals, among other defined learning outcomes. But simulations do not need to be complex. They can be as simple as a role play conversation between two people.

A well-designed simulation from a UDL perspective takes advantage of a complex environment to highlight the flexibility available to learners in the roles they occupy. Following UDL guidelines, a simulation design welcomes multiple means of expression, action, and engagement. The more comprehensive a simulation, the more opportunity educators have to make space for those means (Hall, Meyer, Rose, p. 11).

Here is a UDL-informed example:

Dave and Wei are instructors in the Emergency Management training program, and a substantial portion of time is dedicated to the simulation of an Emergency Operations Centre (EOC). This simulation involves a coordinated community response to a given emergency such as an earthquake, flood, or fire.

- In preparation for the simulation, Dave and Wei ask students to select the roles they would like to play in the EOC based on interests and suitability in conjunction with the needs of the team.
- In conjunction with the operations of an EOC, Dave and Wei make space for multiple formats for communication, including writing reports, creating information displays, chairing meetings, giving press releases, and debriefing colleagues.
- Assessment is mostly formative, with Dave and Wei circulating the EOC to offer challenges, suggest recommendations, offer mini ‘what if’ scenarios and pose questions for further consideration, all the while moving the simulation forward through a series of “injects”.
- Dave and Wei offer feedback to individuals based on their actions and in larger group settings when they see something worthy of everyone’s attention. Throughout the simulation, Dave and Wei encourage learners to seek out feedback on their actions.
- Dave and Wei ask learners to consider their experiences both individually through a short reflective writing exercise and collectively in teams and then together with a final group debriefing session.

Section 2.4: Assessment Methods and Examples – Authentic Assessment

Authentic Assessment

Authentic assessments are designed to resemble a task, project, or activity that learners may perform in the real world. Authentic assessments ask students to demonstrate their understanding in a more meaningful application, which fosters students' higher order thinking and skills such as communication, problem-solving, and critical thinking.

Authentic assessments are learner-centered as they focus on student's interests by encouraging them to play a more active role in their learning as it is more meaningful and relevant to their lives. From a UDL perspective, authentic assessments provide learners the opportunity to demonstrate skills or competencies that they can apply in their future jobs in different ways. For example, instead of describing different career options, an instructor may ask learners to investigate career options for themselves. As part of their assignment, students are encouraged to reach out to professionals in their field and get expert advice on career development. This assignment will help foster legitimate peripheral participation as they encourage the learner to engage with experts in an authentic and meaningful way.

Here is a UDL-informed example:

Pierre teaches Multiculturalism and Social Justice. He has created a community engagement assignment in which students are required to engage in social activities and reflect on community decision-making process.

- Prior to this community engagement assignment, Pierre asks students to rewrite the outcomes of this activity and set up achievable goals, including how to measure their own success in community engagement.
- He then provided rubrics for this assignment and shared with students.
- Pierre gives students the choice to identify the organization they want to engage with based on their interests and future career development.
- Pierre offers an online workshop on how to contact different organizations and provides general information to some organizations.
- Since students are required to reflect on their experience, Pierre offers some sample work from previous cohort and suggested that video presentation and/or written work are both acceptable.
- For students who want to take on challenges, Pierre offers bonus credit if a student decides to engage with multiple organizations and compare the similarities and differences of the decision-making process.

Section 2.5: Assessment Methods and Examples – Multimedia and E-Portfolio

Multimedia Assessment

With the wide access of smart devices, making videos, audio, and graphics have become much easier for students. Multimedia assignments have become more common in recent years as it provides options and sparks creativity in students' work. Multimedia assessment could include recording the process of completing a task, recording a video or audio on a given topic, designing a poster or infographics, or even creating an animated video for storytelling.

Adopting multimedia assessment help develop students' computer and digital literacy. Students could also have the opportunity to practice as many times as they need before submitting their final work. Because they are in a digital format, these assignments are easier to showcase as a part of a student's portfolio.

Here is a UDL-informed example:

Fei teaches an online course on Governance and Accountability. She has designed a public hearing simulation in which students need to write legal arguments on an issue assigned to them from police misconduct scenarios, but the ultimate goal is to have students debate as if they are in court. Since students are taking this course from different time zones and some are working professionals, Fei has implemented the following design changes to ensure students are supported and engaged:

- She decides not to force the entire class to attend synchronous online sessions for this assignment. Instead, she asks students to form groups and each group is required to submit a video recording to present their debate.
- She includes a quick polling on students' access to smart devices in order to determine whether students can complete this assignment via multimedia.
- She provides some tips and resources for video recording, and asks students to support each other and address potential technical issues collaboratively.
- With permission, she provided some video examples for public hearing.
- She explains to her students that they can be creative in the way they record and edit but she expects the video to be around 10 mins per group.
- She provides rubrics for evaluation, so students can assess their debate based on the criteria before submitting their final videos.

E-Portfolio Assessment

Similar to Multimedia Assessment, e-portfolio provides students the freedom to curate and create

multiple elements they find meaningful during their learning journey. They have the freedom to choose what elements to highlight and what to submit for assessment.

E-portfolios can become especially valuable if the ultimate goal is to complement student growth in career prep or professional development beyond the duration of their studies. A well-developed e-portfolio conveys the student's skill sets and professional aspiration. It can also help develop a student's digital identity which is often required by employers nowadays.

Here is a UDL-informed example

Franco is teaching a 3-day course on Conflict Resolution. He has taught the course a number of times. While the course seems to function effectively, he would like to see students engage in a way that helps them understand communication and conflict resolution as a practice, in which students are constantly improving their skills by observing, sharing, and collaborating. He decides that e-portfolios could help.

- Franco introduces the e-portfolio platform before the class begins so students have time to access the tool and become familiar with the basics. He also shares a few professional e-portfolios from industry experts to illustrate the usefulness and relevance.
- To get started, he asks students to post a photo that represents a recent conflict and write down the conflict story before the first class. As the course progresses, he sends students reflective questions and asks them to reflect on those questions based on their stories.
- Franco communicates that he expects the e-portfolio to expand, not just to compile answers for reflective questions, but as a way to research, synthesize, converse, and reflect upon the concepts that are important to them.
- He explains that students must include a few elements from the course to meet the minimal requirements, and then they can be creative on adding content such as video, audio, case studies, and useful resources. Students can also be creative on the design of their e-portfolios.
- He includes a rubric that explains how students' e-portfolios will be evaluated.
- He leaves half an hour a day for students to ask questions and receive formative feedback on their e-portfolios.

Section 2.6: Assessment Methods and Examples – Collaborative and Peer

Collaborative Assessment

Collaborative assessment is an approach to assessment where there are features of reciprocal feedback and reflection between instructor and student and among the students themselves. That reciprocity can take the form of verbal feedback, co-constructing rubrics, retaking tests/exams, practice evaluations, or group grading. Note that collaborative assessment does not necessarily imply a grading component (although it can). In fact, many instructors engage in feedback with and between students, but the difference with collaborative assessment is that it is an aspect of the design of the course so that reciprocal feedback and its structure is proactive and planned with a clear rationale. Collaborative assessment can be planned:

- At the beginning of the course to decide on how to evaluate learning
- In planning self, peer, and instructor feedback schedules
- In deciding on deadline flexibility and how grades will be assigned
- When integrating feedback in subsequent iterations of the evaluation process

Here is a UDL-informed example

Shauna has created a new lab for paramedics to learn safety protocols around cardiac arrest.

- She introduces the lab with explicit mapping of the learning outcomes. She explains to students that the goal of the lab is to reach a level of proficiency where students feel comfortable, confident, and flexible in their knowledge.
- She solicits feedback from the students on those learning outcomes and whether they are familiar with any similar labs.
- Students elaborate on the learning outcomes, and with Shauna's assistance, revise the wording to take account of student knowledge and experience.
- Together, Shauna and her students review the lab description and assign responsibilities for providing feedback. Some aspects of the lab can be reviewed via peer assessment; other areas of feedback will be delivered by the instructor.
- Students work in groups to describe what feedback should look like. With Shauna's guidance, they construct a rubric for reviewing the lab activity. This rubric runs in parallel with the checklist of tasks that comprise the lab.
- Students determine the levels of criticality for the lab procedure. That is, some aspects of the protocol have little to no room for error and need to be identified as such; other areas may be more flexible in how the students approach the task.
- They agree on five scaffolds or stages in reaching the final assessment. They can try each stage as many times as they would like and pace themselves as they would like.

Peer Assessment

Peer assessment involves the review of a learner's work by a fellow learner or group of learners. Peer assessment can be difficult to implement and even counter-intuitive because it restructures some of the power balance in a classroom and recognizes the authority of knowledge and expertise exists among students in addition to the instructor (Fenwick and Parsons, p. 254). However, reviewing the work of others demands critical thinking, observation skills, application of effective communication and is itself a significant structured learning activity. Using peer assessment adds a critical piece to a larger evaluation strategy and helps learners become less detached from the design of the course and more involved in its pedagogy (Wride, M., 2017).

In addition, it offers a number of advantages that fit into a UDL framework:

- Recognizing that learner variability contributes to a wider perspective on learning and draws on a richer collective background.
- Learners are given more responsibility to monitor and reflect their own learning as well as that of their peers.

Here is a UDL-informed example

Ron is teaching Research Method this term, and students are assessed at different stages along the writing process, from the proposal stage to the final report. One of the assignments in this course is for students to review each other's work and provide feedback.

- Ron explains to the students that the goal of the peer review process is to help them to become better at academic writing. Instead of being told that their writings may not meet the given style (e.g. APA, MLA), students must learn the standards by assessing the accuracy of their peer's work.
- Giving good feedback is a skill itself, so Ron provides an example that demonstrates how to provide feedback to ensure a useful result.
- Ron reassures students that they do not need to assign a grade to their peer's work but simply to provide feedback, primarily in the form of suggestions for improvement. The emphasis is on feedback and formative assessment rather than a grade.
- Ron provides a rubric that students can use to provide feedback and invites students to revise the rubric based on their understanding of the assignment.
- Ron also offers choice on how to conduct their review. Students can provide written feedback, or record a video in which they go through their peer's work, or schedule a synchronous meeting to provide feedback directly. Therefore, peers can agree with each other what format works best.

Section 2.7: Reflection on Assessment Methods

Reflection on Assessment Methods

Reflect on one of the assessment methods you currently use or used in the past, what might be some of the barriers for you and your students? How might you better support your students from a UDL perspective? You may use the table below to jot down your thoughts or you can discuss with your colleagues.

Assessment Method	Pick an assessment method you want to work on
Context	Describe the context of the assessment: • Who are the learners? • What skills, abilities, or competencies the assessment addresses? • What are your goals?
Barriers	List some barriers or issues you or your students had: • What are some of the explicit and implicit barriers? • What made it difficult during the process? • What didn't work well?
Solutions	Write down a few things you can change or improve: • What can be kept? • What can be fixed using UDL principles? • What needs to be removed?

Section 3.1: Adopting a UDL-Informed Assessment Plan

Adopting a UDL-informed assessment plan doesn't mean that you have to redesign everything you have already planned. In fact, with minor adjustments, many of our existing assessment methods would align well with the UDL framework. In this section, we will provide a sample assessment plan and the description for each assignment adapted from the course syllabus on Multiculturalism, Conflict and Social Justice by Essya Nabbali.

A Sample Assessment Plan

Activity	**Weight**	**Deadline**
Self-Introduction	3%	Week 1
Learning Outcomes Summary	3%	Week 2
Opening Quiz	4%	Week 3
Community-Engaged Learning	10%	Week 12
Self-Evaluation (10%)		
Self-Evaluation 1: Goal Setting	2%	Week 2
Self-Evaluation 2: Mid-term	3%	Week 8
Self-Evaluation 3: Final	5%	Week 14
Critical Analysis and Presentation (20%)		
Critical Analysis	10%	Week 8
Peer-Reviewed Presentation	10%	Week 13
Reflective Writing (25%)		
Reflective Writing 1	5%	Week 1
Reflective Writing 2	5%	Week 4
Reflective Writing 3	5%	Week 6
Reflective Writing 4	5%	Week 10
Reflective Writing 5	5%	Week 11
Discussion Facilitation & Participation (25%)		
Group Discussion Facilitation	15%	Weeks 3 to 13
Group Discussion Participation	10%	Weeks 3 to 14

Section 3.2: Sample Assessment Plan Components Part 1

Self-Introduction (3%)

To help mobilize a community, you are invited to introduce yourself within the first week of the class. You may choose to introduce yourself via audio, video, or written format. Guidelines for the introduction are specified in **Week 1**.

Learning Outcomes Summary (3%)

In your own language, summarize and rewrite the course learning outcomes listed in the syllabus in **Week 2**. You may relate course learning outcomes to the skills, knowledge, and abilities needed for your future jobs or dreams. You can be creative on how you present your summary!

Opening Quiz (4%)

Take a short online quiz in **Week 3** to demonstrate your understanding of the course expectations, including APA formatting, as well as key concepts presented in a short instructional video and the assigned readings of Week 2. You may take this quiz as many times as you need and the goal for you is to develop a solid understanding of the basics.

Self-Evaluation (10%)

There will be opportunities for you to set your learning goals and reflect on them iteratively throughout the semester. Specifically, you will set goals in **Week 2**, reflect and adjust your goals in **Week 8**, and then do a final self-evaluation in **Week 14**. Sample templates, rubrics, and guidelines for each self-evaluation are provided in the course.

Community-Engaged Learning (10%)

Through this course, you will familiarize yourself with community decision-making processes. This may be realized in a great number of ways, but for the purposes of this course, you are required to **engage with a local city council meeting**. You can decide where and when but a written reflection is required to complete this assessment. Here are some of the steps:

1. *Plan ahead.* City Councils meet at particular junctions of the year; they hold regular meetings, public hearings, special meetings, and other in-camera (closed) meetings. Some City Councils meet bi-weekly, others meet monthly. Planning ahead will ensure that you can coordinate your schedule accordingly.
2. *Notify the instructor of your plan.* Once arrangements are made to attend a City Council meeting, you are required to notify the instructor by email of your plan, including the City

Council and expected date of engagement. Please be advised that your assessment will not be graded if notification of plan was not received prior to beginning your work.

3. *Reflect on your experience.* You will write a reflection with approximately 400-500 words in length, excluding references if any. The reflection should include
    1. a summary of your involvement,
    2. the impact or impressions of the involvement, and
    3. connections you made between the involvement and course content.

Note: those who are not able to attend City Council meetings may have an alternative upon consultation with the instructor. Templates and rubrics for this assignment are provided in the course. This assignment is due **Week 12**.

Section 3.3: Sample Assessment Plan Components Part 2

Critical Analysis and Presentation (20%)

In this assignment, you will consider an issue or topic given by the instructor. You will analyze the issue critically by providing key facts to stakeholders who may not have the time to do research on the matter. More importantly, you will identify critical considerations (i.e., potential limitations, outcomes) along with recommendations to help shape/direct "steps forward" (i.e., possible actions, solutions) on the issue or topic.

1. *Critical Analysis (10%).* A workshop will be held in Week 8 to familiarize you with critical analysis. Following the workshop, you are expected to analyze and answer a series of questions based on the given topic. Guidelines and rubrics are provided in **Week 8**.
2. *Peer-Reviewed Presentation (10%).* Well-prepared presentation help convince your stakeholders. In **Week 13**, you are required to do a 5-minute presentation based on your analysis. PPT is required. In addition, your peers will be given a few criteria to provide non-grading feedback for your presentation. Guidelines and rubrics are provided in the course.

Reflective Writing (25%)

Throughout the course, you will prepare a total of 5 reflective writings to accompany course readings. Reflective writings should not be summaries of the reading. Rather, your writings should be considering the significance of the reading and the module's theme. Some guiding questions are provided for each reflective writing. Additional guiltiness and details are specified in **Weeks 1, 4, 6, 10**, and **11**. Reflective writings are expected to be 500-750 words in length, excluding title page and references cited. Rubrics for reflective writing is provided in the course.

Discussion Facilitation and Participation (25%)

During Week 1, you are asked to identify 2-3 articles that you are interested in facilitating through a sign-up sheet. During the semester, you will be assigned to lead one of the weekly discussions and actively participate in the weekly discussions.

1. *Group Discussion Facilitation (15%).* You will be assigned an article and will prepare a maximum 2-page summary handout, which is expected to be posted to the discussion board at the beginning of the week, along with 2 questions for discussion. The goal of the handout is to provide an overview of the article, not necessarily to engage with every detail. You will also moderate the discussion board for that week and are expected to reply/comment on a minimum of 5 responses from your peers. Rubrics and guidelines are available.
2. *Group Discussion Participation (10%).* Beginning Week 3, you are expected to post, at least, 3 responses to the discussion questions. You may reflect on any of the discussion questions or

reply to another post. Rubrics and guidelines are available in respective weekly activities.

Section 3.4: Reviewing the Sample Assessment Plan with UDL Principles

Reviewing the Sample Assessment Plan with UDL Principles

Generally speaking, the assessment plan and description above allows frequent and varied formative assessment, with some assessment at slightly higher stake. The assessment plan is well-distributed throughout the semester so both students and the instructor have the time to allocate their time properly.

The description helps engage the students by explaining "why": the relevance and potential skills students will acquire through the assignments. In addition, many of the assignments have rubrics and guidelines which support student self-assessment and reflection. In some of the assignments, students have the option to choose their preferred means of representation. The instructor also provides multiple means to represent content such as journal articles, videos, and online workshops to ensure students' success.

What is also valuable in this assessment plan is that students are able to construct their knowledge and express their learning in different formats and at various occasions. The assessment plan also guides higher order thinking such as goal setting, planning, and progress monitoring, which is an essential part of cultivating expert learner.

However, an assessment plan like this still have room for improvement. Take look at the sample assessment plan again and compare it with the UDL guidelines.

Reflective Question:

What areas can be further improved in your opinion?

The Plus One Assessment Approach

If you are considering making changes to your assessment plan yet time and resources are limited, we would recommend the plus one approach by Jennifer Pusateri, meaning adding one thing at a time. The table below illustrates the plus one approach per semester:

	Last Semester	This Semester	Next Semester
Assessment Plan	1. Test	1. Test 2. Project	1. Test 2. Project 3. Presentation

Alternatively, you can always reach out to the Centre for Teaching, Learning and Innovation for support and design.

Your Next Steps

Now that you have learned different types of UDL-informed assessment and reviewed a sample assessment plan, consider the following exercise.

Reflective Question:

What changes are you considering in your own course or program and how will you implement them?

References

- Caniglia. J. (2019). Simulations as a Teaching Strategy. Kent State University Center for Teaching and Learning. Retrieved [April 20, 2021] from https://www.kent.edu/ctl/simulation-teaching-strategy
- Course Planning Tip Sheet (2016), UCLA Health, Retrieved from https://www.uclahealth.org/nursing/workfiles/Education%20Courses/ContinuingEducation/ce-LearningOutcome-v-LearningObjective-052016.pdf
- Fenwick, T. J., & Parsons, J. (2009). *The art of evaluation: A resource for educators and trainers* (2nd ed.). Thompson Educational Pub.
- Hall, T. E., Meyer, A., Rose, D. H., & Ebooks Corporation. (2012). *Universal design for learning in the classroom: Practical applications*. Guilford Press.
- Rao, K. (2019). "Instructional Design with UDL: Addressing learner variability in college courses." In Bracken S., Novak K.(Eds.), *Transforming higher education through universal design for learning: An international perspective* (1st ed.). Routledge, Taylor & Francis Group. https://doi.org/10.4324/9781351132077
- Rose, T. (2016). The end of average: How we succeed in a world that values sameness. Toronto: Harper Collins.
- Streuvens,K., Dochy, F., & Janssens, S. (2005). Students' perception about evaluation and assessment in higher education: A review. Assessment and Evaluation in Higher Education, 30(4): 331-347.
- Wride, M. (2017). Guide to peer-assessment. Academic Practice, University of Dublin Trinity College.
- Weurlander, M., Söderberg, M., Scheja, M., Hult, H., & Wernerson, A. (2012). Exploring formative assessment as a tool for learning: students' experiences of different methods of formative assessment. *Assessment & Evaluation in Higher Education, 37*(6), 747-760.

This page provides a record of edits and changes made to this book since its initial publication. Whenever edits or updates are made in the text, we provide a record and description of those changes here. If the change is minor, the version number increases by 0.01. If the edits involve substantial updates, the version number increases to the next full number.

The files posted by this book always reflect the most recent version. If you find an error in this book, please contact us at ctli@jibc.ca. Please remember to include the reference of the location of the error and the URL. Thank you.

Version	Date	Change	Details
1.00	February 10, 2022	Book published.	