

# Building an Inclusive Community: Embracing UDL and Accessibility

**STUDIO23**

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# Land Acknowledgment



## **University of British Columbia (UBC) Point Grey Campus (Vancouver, Canada)**

located on the traditional, ancestral, and unceded  
territory of the xwməθkwəy̓əm  
(Musqueam) People.



# Territorial Acknowledgment



**Studio23** respectfully acknowledges the unceded traditional territories including, the Skwxwú7mesh Úxwumixw (Squamish), səlilwətaʔt (Tsleil-Waututh) and xʷməθkʷəy̓əm (Musqueam) Nations, on which SFU Vancouver is located.



# Today's Session

- Exploring Universal Design for Learning (UDL) Principles
- Emphasizing the Significance of Accessibility
- Strategies for Integrating UDL and Ensuring Accessibility
- Wrapping Up and Addressing Questions



# Our Diverse Students

"Every student can learn, just not on the same day or in the same way."

George Evans



# Inclusive Community

Inclusive community is one that embraces diversity and ensures equal access and participation for all.

UNESCO



# What is Universal Design for Learning?

“Is a set of principles for curriculum development that give all individuals equal opportunities to learn.”



# What is Universal Design?

The design of products and environments to be usable by all people to the greatest extent possible, without the need for adaption or specialized design (Mace, 1985).

[Centre for Excellence in Universal Design](#)



# Universal Design for Learning Analogy



## Universal Design (UD)

### Physical Environment

Physical barriers may exist in our architectural environment

Proactive design of physical space

Physical retrofitting can be costly and time consuming

## Universal Design for Learning (UDL)

### Instructional Environment

Learning barriers may exist in our curricular environment

Proactive design of curriculum and instruction

Instructional accommodations can be time consuming and difficult to implement

# UDL Foundations: Brain-Based Learning Networks



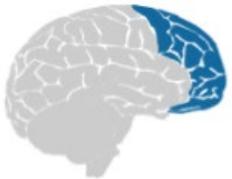
**Affective Networks:** The “**why**” of learning

How learners get engaged and stay motivated. How they are challenged, excited or interested. These are affective dimensions.



**Recognition Networks:** The “**What**” of Learning

How we gather facts and categorize what we see, hear, and read. Identifying letters, words, or an author’s style are recognition tasks.



**Strategic Networks:** The “**how**” of learning

Planning and performing tasks. How we organize and express our ideas. Writing an essay or solving a math problem are strategic tasks.

# UDL Principles



Affective Networks

## Provide multiple means of **Engagement**

For purposeful, motivated learners, stimulate interest and motivation for learning.



Recognition Networks

## Provide multiple means of **Representation**

For resourceful, knowledgeable learners, present information and content in different ways.



Strategic Networks

## Provide multiple means of **Action and Expression**

For strategic, goal-directed learners, differentiate the ways that students can express what they know.

## Why UDL?

- [Beyond COVID](#): the future of teaching and learning
- UBC Strategic Plan, Indigenous Strategic Plan and Inclusion Action Plan
- [BC Digital Learning Strategy Report](#)
- The goal: meeting the needs of all learners and removing systemic barriers



# Systemic Barriers

Systemic barriers are policies, procedures, or practices that can prevent individuals from having equal access to a service and fully participating in a situation.

## Discussion Question

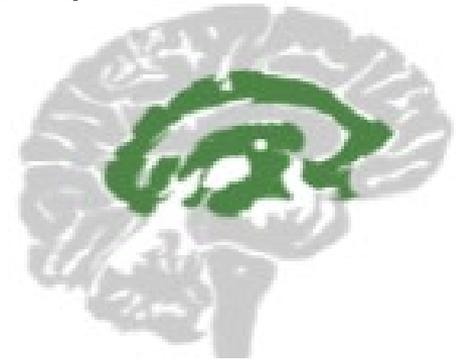
What systemic barriers might exist in your course/faculty/  
discipline/practice?

# Systemic Barriers Examples

- Unclear learning outcomes
- One way assessment (i.e. summative assessment only)
- Providing information in only one way (e.g. no alternative text or media)
- Classroom/events without wheelchair-accessible tables
- Expensive textbooks and field trips
- Lack of transparency and flexibility

# Principle I: Provide Multiple Means of Engagement

This principle focuses on engaging students and maintaining their interest in learning. It encourages educators to create a supportive and motivating learning environment by providing options for how students can engage with the material.



# Examples of Barriers to Engagement

1. Environmental Barriers: loud noise, cold classroom
2. Emotional Barriers: having a bad day, feeling anxious about what your peers think of you, global crisis
3. Cultural Barriers: being in a lecture, pace/tone/volume/gestures
4. Language Barriers: if it's not a language you are fluent in
5. Neurological or psychological barriers: dyslexia, autism, or ADD/ADHD.
6. Physical barriers: auditory, visual, etc.

# Removing Barriers to Academic Engagement

1. Focus on what resources you have and what is within your capacity to change. Small steps but big impact.
2. Consider your options:
  - Navigate your classroom climate
  - Include students
  - Redesign
  - Accommodate

# Strategies for Provide Multiple Means of Engagement

We can motivate learners and sustain their interests by:

- Offering choices in assignments and providing directed or tailored feedback
- Incorporating real-world relevance to the curriculum (i.e. authentic assessment)
- Using technology to provide interactive learning experiences
- Using collaborative activities

## Principle II: Multiple Means of Representation

This principle emphasizes providing information in various ways to cater to the diverse needs of learners.



# Describe your Visuals and Transcribe your Media

## Caption

Figure 3.3: This image displayed the results of a field test conducted in 1942 to show the ability of phosphate to encourage plant growth. A phosphate deficiency reduces plant production.

Source: the Tennessee Valley Authority



## ALT Text

Figure 3.3: This image displayed the results of a field test conducted in 1942 to show the ability of phosphate to encourage plant growth. Two signs designate the experimental treatments.

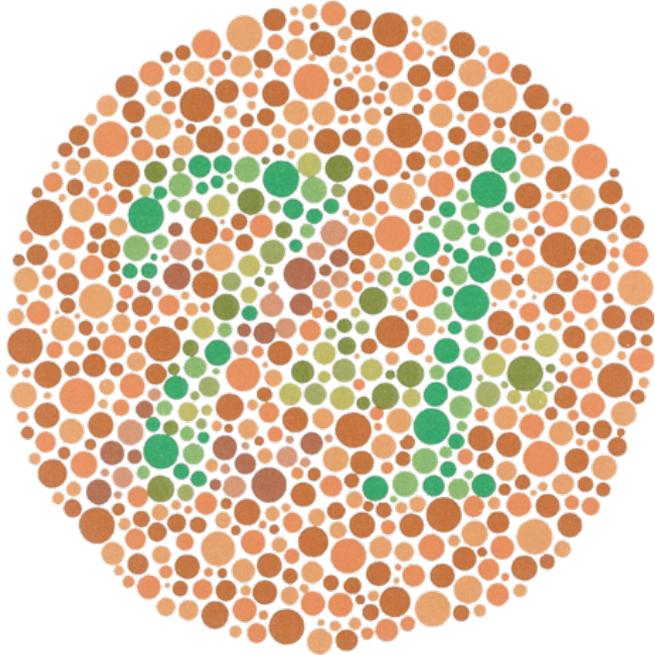
The sign on the left reads "Starved by lack of plant food". Crops here are stunted or dead. The sign on the right reads "Nourished on phosphate and lime". Crops are healthy and show vigorous growth.

## Describe your Hyperlinks and Use Headings

"Click [here](#) for more information"  
has a less clear hyperlink than

"More Information about Teaching and Learning Fund at UBC [is available online.](#)"

# Make your Text Readable



## Languages of India

Red = IE - Green = Dravidian

- **Sanskrit**
- **Malayalam**
- **Tamil**
- **Hindi**
- **Sinhala**
- **Kannada**
- ...

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# Persona Activity - Guide

## Activity Guide:

As a group, you will be presented with “Personas”

1. **Read** some information about a “Learner Persona”, to become familiar with their preferences and challenges.
2. **Read** about an “Instructor Persona” and their course scenario
3. **Reflect** on how you would feel as each of the personas in a course scenario together: What possible barriers could exist for you as a learner in the Instructor Persona’s Course? As the instructor in the course scenario, what could you do to reduce or remove some barriers for the Learner Persona?

## Learner Persona: Yeongkyung



[Image Source: Unsplash](#)

Yeongkyung is a second year Pharmaceutical Science student who hopes to become a pharmacist. She lives near campus in a shared apartment with two other students. She uses text to speech software, and finds that reading text while listening to audio at the same time helps her learn. She appreciates videos with transcripts so she can follow along. She finds it more difficult to follow videos with no captions or transcript. Longer videos (more than 5 minutes) can be particularly frustrating, when no transcript or captioning is available.

## Instructor Persona: Paula



[Image Source: Unsplash](#)

Paula is teaching a survey course in Pharmaceutical Science. She'd like to supplement the course readings with short videos to show students what course concepts look like in practice, so she has started include short videos of current practices and “real” cases. She sources her videos from national news sites and YouTube. She selects videos that support the theory, practices and concepts that students are currently studying.

Paula's class meets twice a week. She would like to “kick-start” each class with a video, followed by a discussion. Paula also holds two online synchronous sessions per week for student presentations and discussion.

## Learner Persona: Cedar

Cedar is a first year Arts student with wide-ranging interests; he isn't yet sure what field of study he will eventually choose, but is drawn to the idea of a career that lets him help people thrive. He has a long commute to campus (1.5 hours each way).

Cedar has some usable vision, and uses a variety of assistive technologies, including screen reading software. Cedar can read enlarged print and can see some high-contrast images, but complex images can be difficult to interpret, even when they are enlarged. At times, Cedar needs to rely solely on his screen reader.

Cedar had a good working relationship with his K-12 teachers, but is now navigating University-level coursework for the first time, without much family support.

## Instructor Persona: Preet

Preet is teaching an introductory psychology course. Preet's class meets three times each week. Because it is a popular intro course, enrollment is quite large, and Preet has three TAs. He tries to upload his lecture notes ahead of time, but he also likes to keep his lecture topics fresh and incorporate current events, so sometimes he finds himself updating the slide content shortly before lecture begins, or even pulling up an article or video during class time.

Preet feels the textbook content can be text-heavy and dry, and knows there's a lot of "boring" fundamental concepts to learn, so he tries hard to keep students engaged and make things fun. He loves to incorporate lots of visual content to add interest and prompt engagement, including "memes," short videos, in-class polls, and more. To encourage regular attendance, Preet likes to include graded "pop quizzes" and "bonus" assessments during class.

## Discussion Questions

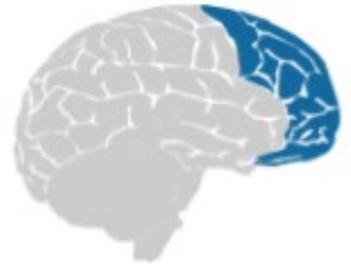
- I. What barriers could exist for our learners? (And for *other* learners?)
- II. What could our instructors do to reduce potential barriers?
- III. How can we help our learners advocate for their needs?
- IV. What supports and resources can help support our instructors?

Google Doc link: <https://tinyurl.com/UDLStudio23>

# Persona Activity - Debrief

## Principle III: Multiple Means of Action and Expressions

This principle acknowledges that students have varying strengths and challenges when it comes to demonstrating what they've learned. Educators should allow students to express their understanding and knowledge through various means, such as written assignments, oral presentations, digital projects, or artistic creations.



# Examples of Barriers in Assessment

Assessments we usually use/see	Possible Barriers
<ul style="list-style-type: none"><li>• Single response mode assessment (e.g, research paper)</li><li>• One format for all exams (e.g, only multiple choice or exams with fixed structure and time)</li></ul>	<ul style="list-style-type: none"><li>• Attention Deficit Disorder (ADD): lengthy research papers challenging to plan, compose and complete</li></ul>
	<ul style="list-style-type: none"><li>• Non-native English speakers: more demands and fewer benefits</li><li>• Attention Deficit Disorder (ADD): working memory</li></ul>

# Strategies for Multiple Means of Action and Expressions

- Provide options  
a video, powerpoint presentation, blog, podcast, performance, interview, infographic, or audio recording/digital storytelling
- Provide choices: select one of the topics/ suggest your own topic, in written **or** verbal form, in a group **or** alone, answer Question A **or** Question B
- Allow flexibility: self-paced modules, exams with adaptable timing and structure, choice in readings and learning materials

# Accessibility and UDL

The numbers of students supported by UBC's Centre for Accessibility grow each year – many of you may find the same is true at your institutions too!

To access support through CfA, students must register and provide documentation. This process can be a barrier for students, and can take time, effort, and money. We are working to reduce these barriers, but recognise that not all students who could benefit from support will receive that support from the start of their coursework.

Accessibility is fundamental to UDL principles, and designing for accessibility helps ensure students can thrive throughout their academic careers.



# Accessibility versus Accommodations

- **Accommodations** often address accessibility concerns, but accommodations are student-specific, while **accessibility** is a broader design and content philosophy
- Users who can benefit from accessible design don't necessarily have accommodations (or identify as “needing” accommodations)
- Accommodations can be difficult for students to access; designing for accessibility helps us get around those limits of access, time, and cost

Resources and levels of support can vary between institutions. Following the principles of UDL helps ensure that more folks can access and use your materials from the very start – and can help reduce delays and costs.



# Accessibility is for Everyone

- Students who already use adaptive technologies and strategies
- Students who don't necessarily identify as "disabled"
- Instructors and TAs
- Accessible content is easier to update for systemic changes: LMS and content platform changes, new technologies, updates to departmental, institutional, provincial and federal requirements

By encouraging our colleagues to be open, think deeply, get curious about students' needs, and embrace accessible design, we help them support their current students, find broader audiences for their work, serve the global learning community, and "future-proof" their course content. We also help our Fellows bring these benefits to their colleagues and home departments.



# Tips for Implementing Accessibility: Know Your Learners

- Recognize diverse needs: audio, visual, cognitive, emotional, financial
- Gather data on individual learners
- Personalize learning experiences



# Tips for Implementing Accessibility: Create Accessible Content

- Choose accessible formats and offer choices when possible
- Alt text, image description, text-based versions, captions, transcripts
- Ensure navigation is logical and functional
- Keep layouts simple and clean



# Tips for Implementing Accessibility: Use Technology Wisely

- Ensure compatibility with assistive technologies
- Test things out – ideally with user input
- Regularly update your resources



# Tips for Implementing Accessibility: Foster a Supportive Learning Environment

- Promote collaboration and communication
- Encourage self-advocacy
- Provide clear instructions and timelines



# Questions



# Thank You!

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