

How can we use UDL to create barrier-free learning spaces so all our students participate in class?



Solutions Room

UDL Digicon 2022

October 19, 11:30am EST



Carleton
University 
Ottawa, Canada!

Who we are...



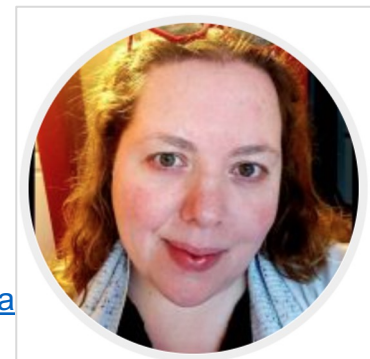
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Accessibility Strategy

We would like to begin by acknowledging that the land on which we gather at Carleton University is the traditional unceded territory of the Algonquin Anishinaabe people

Explore this resource on the history of the Algonquin peoples:

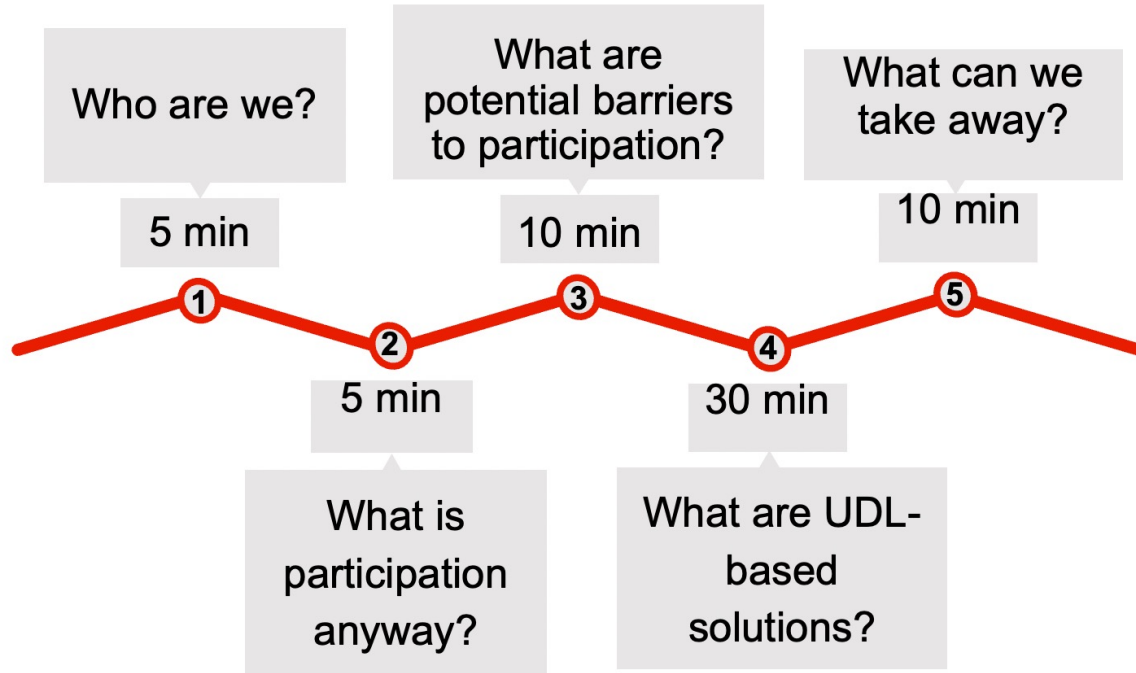
<https://www.anishinabonation.ca/en/history/>

Explore interactive maps of Indigenous territories:

<https://native-land.ca/>

<https://geo.aadnc-aandc.gc.ca/cippn-fnpim/index-eng.html>

Our Session Roadmap



What will I need?

- Connected Device with Zoom
- URL link to course materials
- Links to Google Jamboards (2 Jamboards)
- UDL guidelines “cheat sheet” from CAST

A common scenario

I asked myself...

Why is it always the same students participating in class?

What am I doing wrong? What am I missing?

Does this sound familiar?

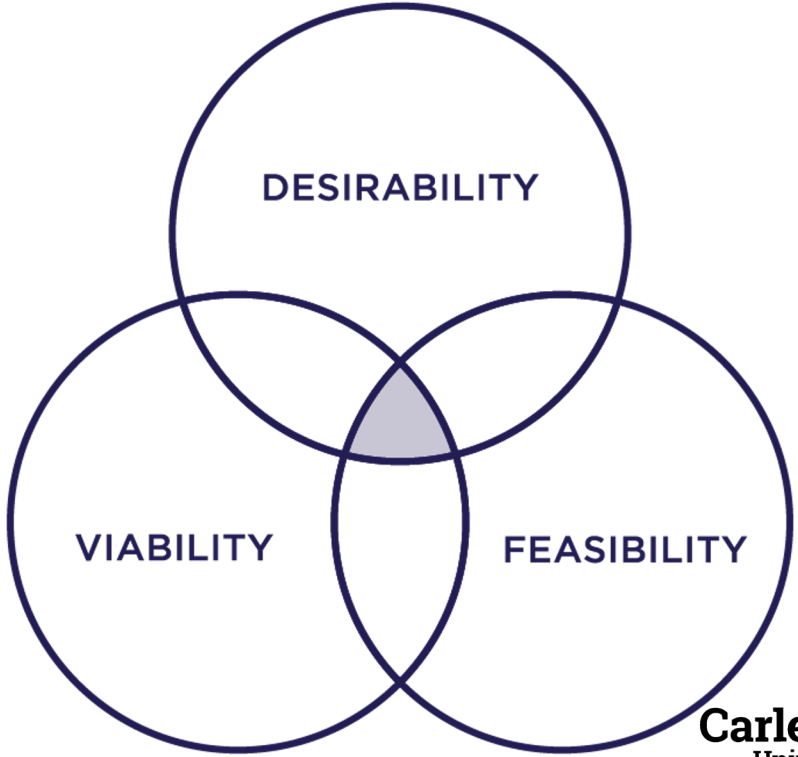
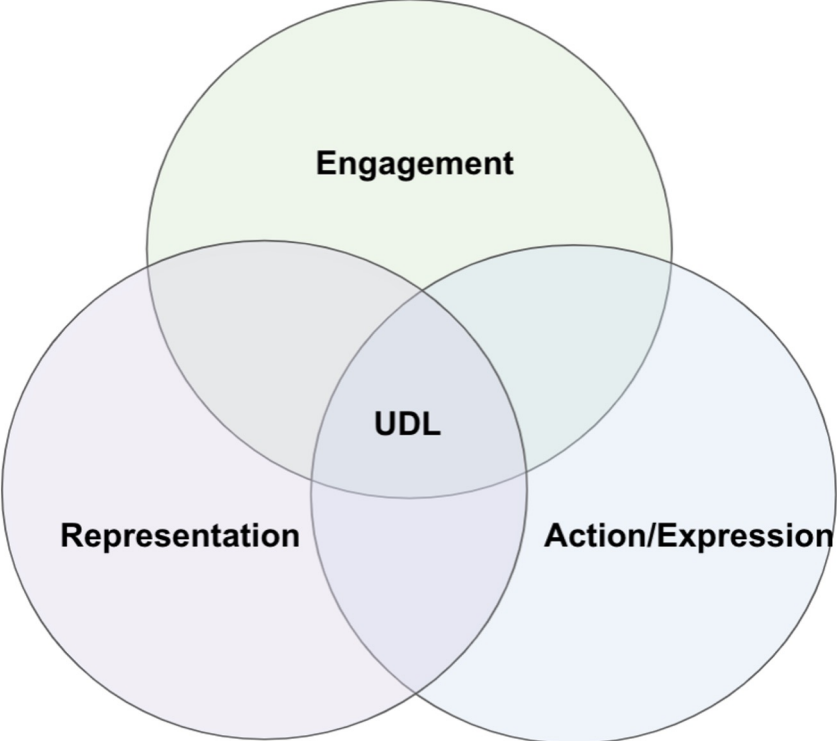


Participation in class - the Why?

- Increases motivation (Junn, 1994)
- Increases connection to the course (Brookfield & Preskill, 2005)
- Develops critical thinking (Brookfield & Preskill, 2005)
- Leads to deeper engagement & understanding (Weaver & Qi, 2005)
- Higher grades (Handelsman *et al*, 2005)

User- (human-) centered Design

Who are our “users”?



<https://www.ideo.com>

What do we mean by “participation” anyways?

Talking?

Attendance?

Asking Questions?

Discussing?

Teachers’ meaning differs from students’
(Fritschner, 2000; Rocca, 2010)

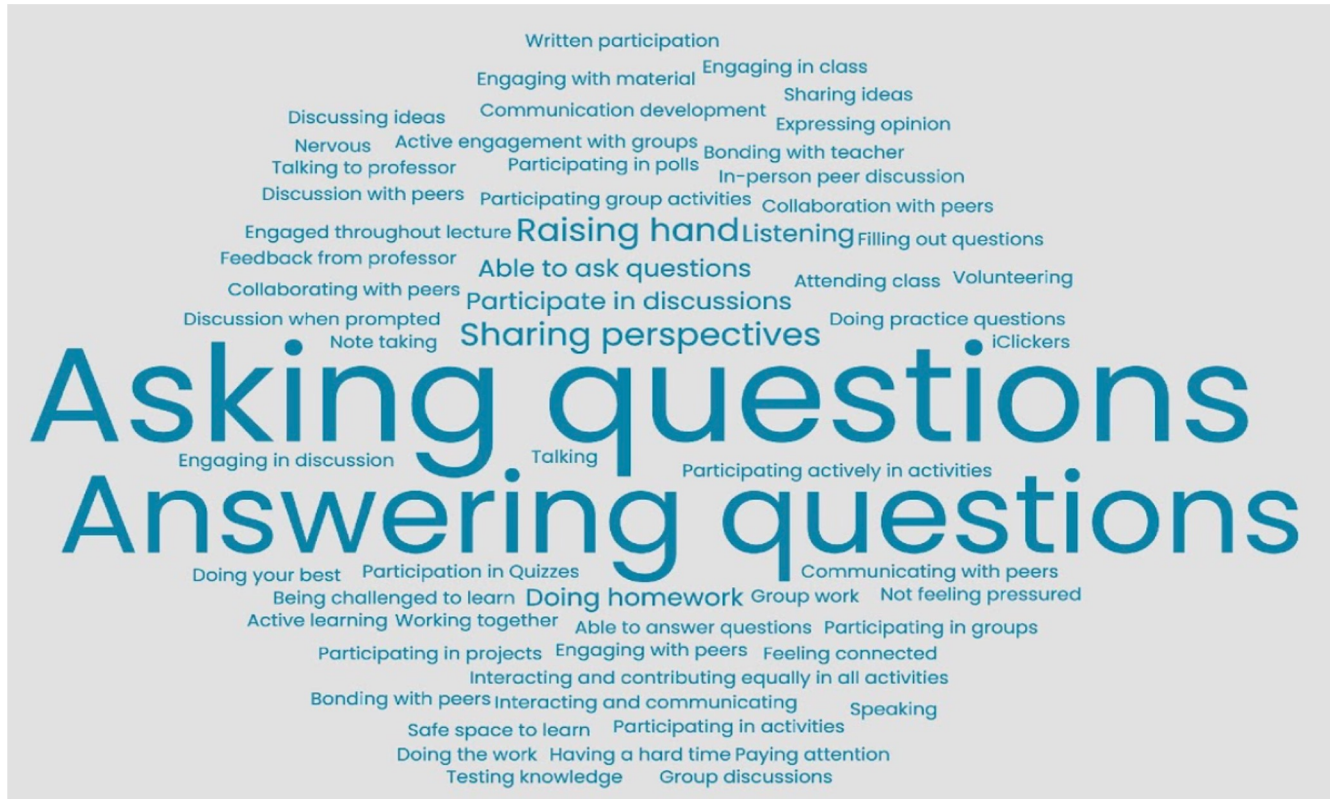
What does participation mean to you?

Add your ideas:

- [Google Jamboard](#)
- In the Zoom chat
- Unmute and outloud

What does participation mean to you?

What our students said:



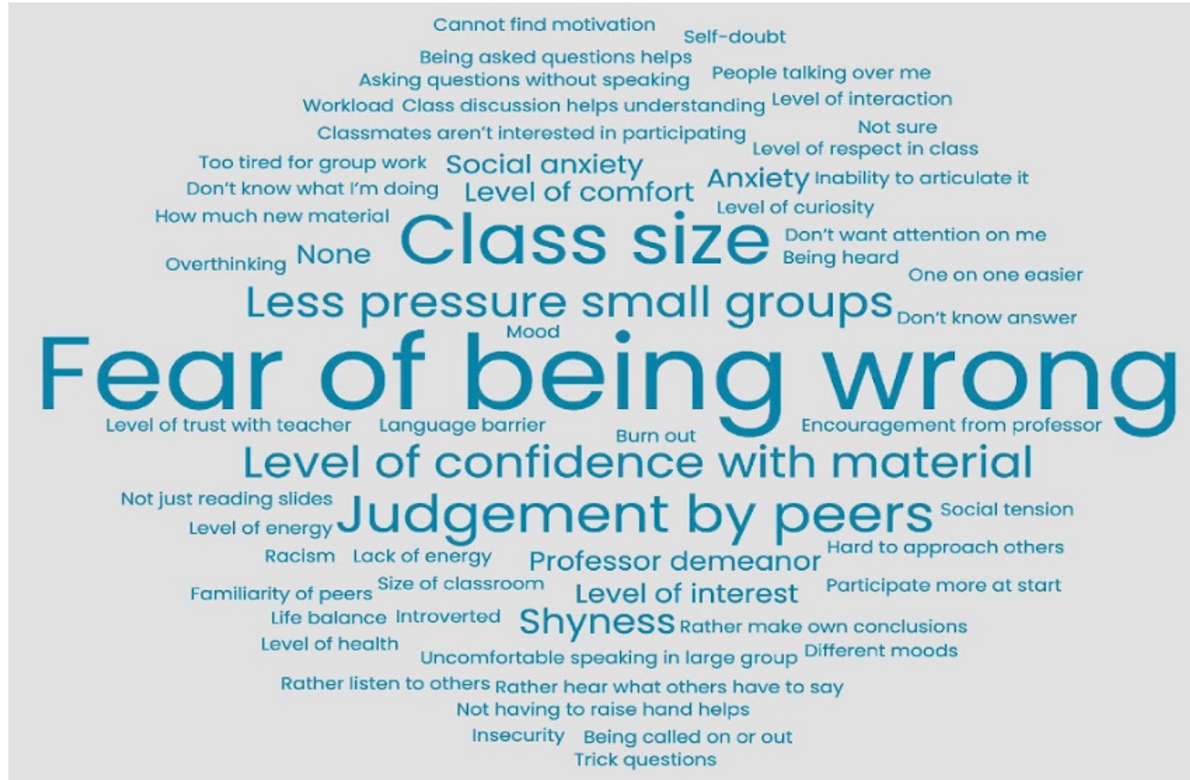
What are possible barriers to student participation?

Add your ideas:

- [Google Jamboard](#)
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What are possible barriers to student participation?

What our students said:



Educational Technology

Barriers

- Socioeconomic
- Cognitive load/design
- Benefit of tools not always clear
- Perception tools are not dynamic
- Tech used as a substitute for engagement

Benefits

- Level playing field for diverse learners
- Multiple means of engagement
- Multiple means of expression
- Multiple means of representation

Provide multiple means of Engagement

Affective Networks
The "WHY" of Learning



Provide multiple means of Representation

Recognition Networks
The "WHAT" of Learning



Provide multiple means of Action & Expression

Strategic Networks
The "HOW" of Learning



Access

Provide options for Recruiting Interest ⁽⁷⁾

- Optimize individual choice and autonomy (7.1)
- Optimize relevance, value, and authenticity (7.2)
- Minimize threats and distractions (7.3)

Provide options for Perception ⁽¹⁾

- Offer ways of customizing the display of information (1.1)
- Offer alternatives for auditory information (1.2)
- Offer alternatives for visual information (1.3)

Provide options for Physical Action ⁽⁴⁾

- Vary the methods for response and navigation (4.1)
- Optimize access to tools and assistive technologies (4.2)

Build

Provide options for Sustaining Effort & Persistence ⁽⁸⁾

- Heighten salience of goals and objectives (8.1)
- Vary demands and resources to optimize challenge (8.2)
- Foster collaboration and community (8.3)
- Increase mastery-oriented feedback (8.4)

Provide options for Language & Symbols ⁽²⁾

- Clarify vocabulary and symbols (2.1)
- Clarify syntax and structure (2.2)
- Support decoding of text, mathematical notation, and symbols (2.3)
- Promote understanding across languages (2.4)
- Illustrate through multiple media (2.5)

Provide options for Expression & Communication ⁽⁵⁾

- Use multiple media for communication (5.1)
- Use multiple tools for construction and composition (5.2)
- Build fluencies with graduated levels of support for practice and performance (5.3)

Internalize

Provide options for Self Regulation ⁽⁹⁾

- Promote expectations and beliefs that optimize motivation (9.1)
- Facilitate personal coping skills and strategies (9.2)
- Develop self-assessment and reflection (9.3)

Provide options for Comprehension ⁽³⁾

- Activate or supply background knowledge (3.1)
- Highlight patterns, critical features, big ideas, and relationships (3.2)
- Guide information processing and visualization (3.3)
- Maximize transfer and generalization (3.4)

Provide options for Executive Functions ⁽⁶⁾

- Guide appropriate goal-setting (6.1)
- Support planning and strategy development (6.2)
- Facilitate managing information and resources (6.3)
- Enhance capacity for monitoring progress (6.4)

Goal

Expert learners who are...

Purposeful & Motivated

Resourceful & Knowledgeable

Strategic & Goal-Directed

Can UDL remove the barriers?

Virtual Carousel Brainstorm

1. Access [NEW Google Jamboard](#)

→ each board addresses a barrier to participation we identified

2. Start with the Jamboard that matches your breakout room #

→ 1 person in each room **share your screen**

→ we will move through the boards in order (eg. 3→ 4→ 5)

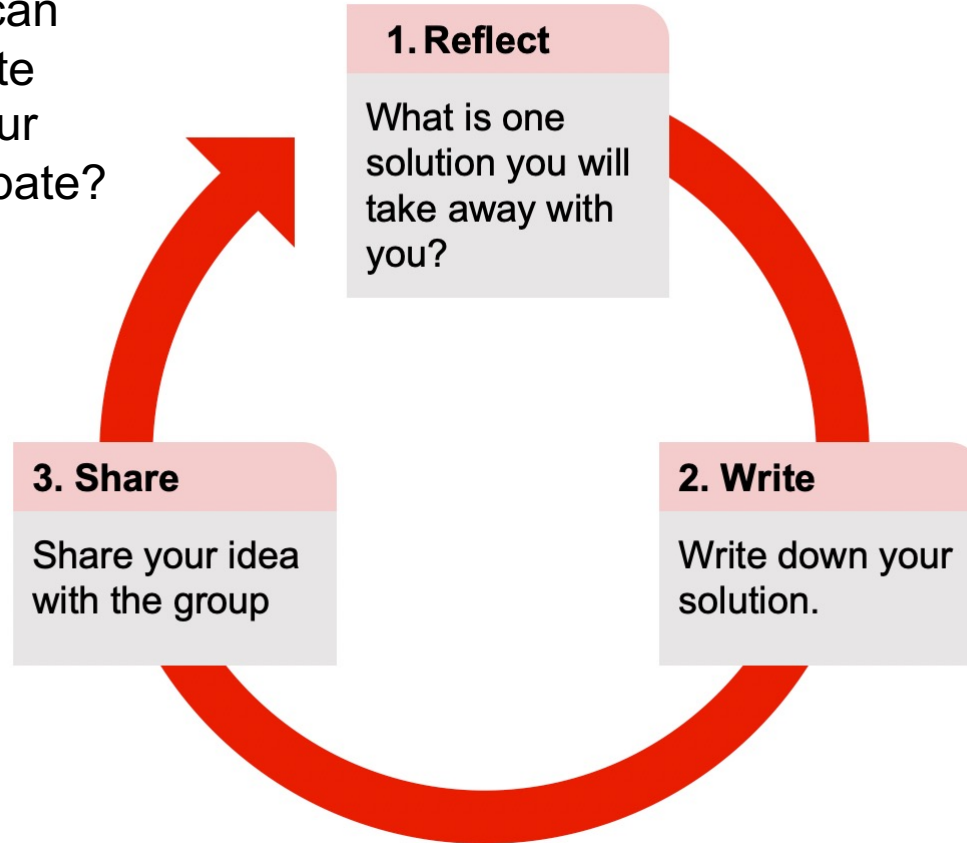
→ 10 minutes for each board - we will indicate when it's time to switch

3. Brainstorm & add UDL-based solutions for the barrier on the board

→ add to existing boards that other groups have started

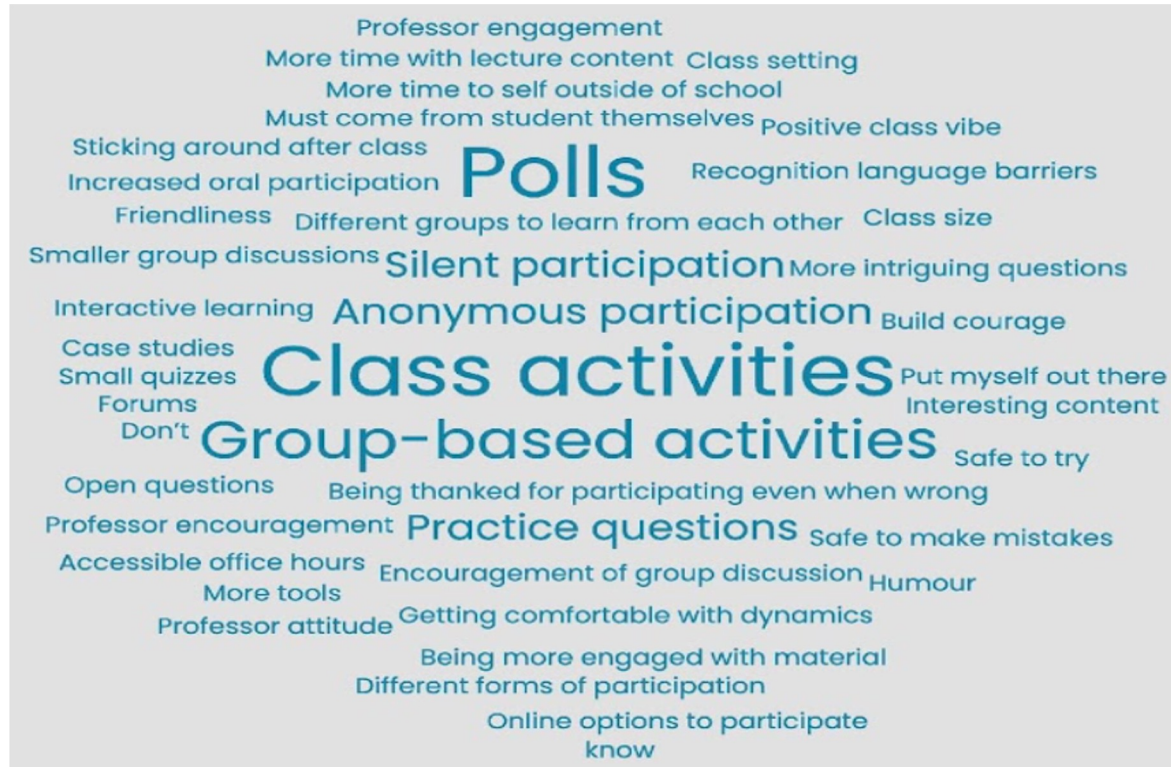
→ use your **CAST UDL** cheat-sheet!

Is there a UDL-based solution that you can take away to create space for all of your learners to participate?



Can UDL remove the barriers?

What our students said:



After our Session

We will send a “goody bag”!

Notes & resources from our session including the solutions we came up with :)



References

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- Fritschner, LM (2000). Inside the undergraduate college classroom: Faculty and students differ on the meaning of student participation. *The Journal of Higher Education*, 71(3), pp. 342-362.
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