Welcome to Active Learning Anywhere

**Before we get started**

- Let us know if you can hear us when we do **Audio checks**
- Download **Presentation Slides** at [uoft.me/ctsi-videos](uoft.me/ctsi-videos)
- Turn on live captions if you would like closed captioning (see screenshot for details)

**During the webinar**

- Your **microphone** will be muted until Q&A at the end of the session
- Type questions and comments into the **Chat**
- This session features a short activity in breakout rooms.

**Following the webinar**

- View **Session Recording** at [uoft.me/ctsi-videos](uoft.me/ctsi-videos) in 2 business days
- Complete **Feedback Survey** (link sent via email)
Active Learning Anywhere

Cristina D’Amico
Justin Fletcher
August 17, 2023

With contributions from Sarah Shujah, former PASS Librarian and Mike Kasprzak, Assistant Director, CTSI
Land Acknowledgment

We would like to acknowledge this sacred land on which the University of Toronto operates. It has been a site of human activity for over 15,000 years. This land is the territory of the Huron-Wendat and Petun First Nations, the Seneca, and the Mississaugas of the Credit. The territory was the subject of the Dish with One Spoon Wampum Belt Covenant, an agreement between the Iroquois Confederacy and Confederacy of the Ojibwe and allied nations to peaceably share and care for the resources around the Great Lakes. Today, the meeting place of Toronto is still the home to many Indigenous people from across Turtle Island.

- Revised by the Elders Circle (Council of Aboriginal Initiatives)
Access check

We understand access to be a shared responsibility between everyone in this space. We will strive to create an accessible space that reduces the need for you to disclose a disability or impairment for the purposes of gaining an accommodation. In doing this together, we strive to welcome disability, and the changes it brings, into our space.

• Is there anything about the virtual space that we should address now?

• Are there any other access needs that might affect your participation in the workshop that we could also address?
Learning outcomes

By the end of this session, you should be able to:

• identify active learning strategies that can be used in different course modalities (in-person, online synchronous, online asynchronous);

• implement active learning strategies using tools in Quercus and the Academic Toolbox and various classroom affordances;

• implement and manage active learning strategies;

• navigate Quercus and active learning support resources.
Teaching modalities at U of T
Modes of delivery

- **In-person**
  - Learning in a physical classroom

- **Hybrid**
  - Learning through intentional mix of in-person and online elements

- **Online synchronous**
  - Online learning that happens in real time (i.e., webinar)

- **Online asynchronous**
  - Online learning that happens at different times
Quick survey/poll: Getting to know you

- Teaching modality
- Course size
- Confidence level

https://forms.office.com/r/99CxfqfF9J
Introduction to active learning
Breakout group activity: Let’s define active learning:

- Groups of approximately 3 people. You will have 8 minutes for discussion.
- Assign someone to be timekeeper and note taker on shareable document.

**Prompt:** As a group, discuss and make notes on three considerations:
- define active learning
- share up to 3 characteristics of effective active learning
- identify key benefits of active learning

If you have extra time, discuss active learning strategies you’ve used in your teaching context.
Poll: How forgettable are lectures?

How much information can students recall eight weeks after a lecture?

1) More than 80%
2) ~70%
3) ~60%
4) Less than 50%
How forgettable are lectures?

The “forgetting curve”, where the average student can recall:

• **62%** of the material just presented
• **42%** of the material three to four days later
• **24%** of the material eight weeks later

(Menges, 1988; Nelson, 2010)

How much information can students recall eight weeks after a lecture?

4) Less than 50%
What is active learning?

Active learning is defined as “any instructional method that engages students in the learning process. In short, active learning requires students to do meaningful learning activities and think about what they are doing” (Prince, 2004).
What are some of the benefits of active learning?

- Information retention (Lujan & DiCarlo, 2006)
- Increased motivation (Machemer & Crawford, 2007)
- Deeper learning & relational thinking (Biggs, 1999)
- Critical thinking skills (Smith et al., 2005)
- Self-directed learning (Justice et al., 2007)
- Improved in-class focus (Roehling et al., 2011)
When should I use active learning in my course?

When the strategy supports students in achieving the course learning outcomes
In which contexts can you use active learning?

- As a pre-class activity
- As a pre-class assessment or prior knowledge check-in
- As the beginning of a class as a bridge or hook to garner student attention and motivate
- As participatory learning to engage students in hands-on learning
- As a summary/closure to check student understanding
- As a post-class assessment or metacognitive reflection
In which modalities can you use active learning?

- In-person
- Online synchronous
- Asynchronous
What are key considerations for designing active learning?

<table>
<thead>
<tr>
<th>space/setting</th>
<th>technical knowledge &amp; support</th>
</tr>
</thead>
<tbody>
<tr>
<td>in-person vs. online classroom furniture</td>
<td>low skill level – high skill level reliability tech support</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>difficulty level of engagement</th>
<th>type of engagement</th>
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</thead>
<tbody>
<tr>
<td>simple - complex</td>
<td>student-student</td>
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<tr>
<td></td>
<td>student-content</td>
</tr>
<tr>
<td></td>
<td>student-instructor</td>
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<td></td>
<td>student-public</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>duration of engagement</th>
<th>organization of collaboration</th>
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</thead>
<tbody>
<tr>
<td>1-2 min.</td>
<td>individually</td>
</tr>
<tr>
<td>45-50 min.</td>
<td>pairs</td>
</tr>
<tr>
<td>the entire course</td>
<td>groups</td>
</tr>
<tr>
<td></td>
<td>class</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>timing of engagement</th>
<th>other considerations?</th>
</tr>
</thead>
<tbody>
<tr>
<td>synchronous / asynchronous</td>
<td></td>
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<tr>
<td>before class/in class/after class</td>
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</table>

<table>
<thead>
<tr>
<th>privacy</th>
<th></th>
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<tr>
<td>private vs. public</td>
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</table>
Considering physical space:
Active learning classrooms (ALCs)
Active learning strategies
Let’s explore some active learning strategies!

<table>
<thead>
<tr>
<th>Process content</th>
<th>Connect and communicate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Active learning strategies help students...</strong></td>
<td></td>
</tr>
<tr>
<td>Receive and act on feedback</td>
<td>Stay motivated</td>
</tr>
</tbody>
</table>
QUERCUS

The University of Toronto’s Academic Toolbox
Before we begin...

Consider your:
• Context
• Learning outcomes
• Course modality (delivery mode)
• Students
• Available time
• Comfort level
Processing content
Integrate activities within the content

- **Week 2: Parts of the Cell**
  - Module Pre-Quiz: What do you already know about the parts of the cell? [✔]
  - Lecture 2 Part A: Cell Walls [✔]
  - Lecture 2 Part B: Cell Membranes [✔]
  - Knowledge Check Quiz: Lecture 2 Parts A and B (Cell Walls and Cell Membranes) [✔]
  - Lecture 2 Part C: Mitochondria [✔]
  - Reflection: What have I learned in this module? [✔]
Structure the learning experience

### Requirements

- Students must complete all of these requirements
- Students must move through requirements in sequential order

<table>
<thead>
<tr>
<th>Requirement</th>
<th>View the item</th>
<th>Score at least</th>
<th>Contribute to the page</th>
<th>View the item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Outline</td>
<td></td>
<td>2.0 / 3</td>
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<tr>
<td>Syllabus Quiz</td>
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<tr>
<td>Introduce Yourself</td>
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<tr>
<td>Meet the Teaching Tea</td>
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</tbody>
</table>

### Prerequisites

- Module 1

- **Requirements**
- **Prerequisites**
Guide students’ reading

Week 2 Readings

This week, you are expected to read the following 2 articles linked below. Questions to guide your reading are provided to help you make the most out of each reading.

<Reading 1 Citation>
Guiding Questions:

- What is the main argument the author is making about <topic> ... ?
- What are the main factors contributing to <phenomenon> ... ?

<Reading 2 Citation>
Guiding Questions:

- What research methodologies ... ?
- Thinking ahead to the next module ("Module Title"), why is this <topic> essential for our understanding of <subject>?
Create “treasure hunt” / “hidden gem”

**Syllabus Quiz**

**Quiz Instructions**
This quiz includes questions about key information you need to know about the course. You can find the answers in the syllabus. It’s worth 1% of your final grade!

<table>
<thead>
<tr>
<th>Question 1</th>
<th>2 pts</th>
</tr>
</thead>
<tbody>
<tr>
<td>The instructor aims to reply to all Inbox messages received through Quercus within...</td>
<td></td>
</tr>
<tr>
<td>☐ 10 minutes</td>
<td></td>
</tr>
<tr>
<td>☐ 72 hours</td>
<td></td>
</tr>
<tr>
<td>☐ 48 hours</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Question 2</th>
<th>1 pts</th>
</tr>
</thead>
<tbody>
<tr>
<td>The first word of each paragraph on <strong>page 3</strong> makes a complete sentence. Type it out...</td>
<td></td>
</tr>
<tr>
<td>12pt Paragraph ▼ B ▼ I ▼ U ▼ A ▼ Δ ▼ Λ ▼ Π ▼ Ψ ▼ Ω ▼ ☐</td>
<td></td>
</tr>
</tbody>
</table>
Break time!
Connect and communicate
Create community agreements

Community agreements can:

1. Set course expectations
2. Pre-empt difficult topics
3. Help you learn about your students
4. Be worked on collectively

Resource on Community Agreements
Activity: Community agreements

Answer in the shared document:
What are some key elements that you would incorporate into your course's community agreement?
Brainstorm and co-construct knowledge: Implementation

<table>
<thead>
<tr>
<th>Modality</th>
<th>Method / Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-person</td>
<td>• Shared OneDrive document (Word, Excel, PPT, notebook)</td>
</tr>
<tr>
<td></td>
<td>• Whiteboard and/or posterboards</td>
</tr>
<tr>
<td>Online synchronous</td>
<td>• Shared OneDrive document (Word, Excel, PPT, notebook)</td>
</tr>
<tr>
<td></td>
<td>• Virtual whiteboard</td>
</tr>
<tr>
<td>Online asynchronous</td>
<td>• Wiki on Quercus</td>
</tr>
<tr>
<td></td>
<td>• Shared OneDrive document (Word, Excel, PPT, notebook)</td>
</tr>
<tr>
<td></td>
<td>• Virtual whiteboard</td>
</tr>
<tr>
<td></td>
<td>• Discussion on Quercus, Piazza, Ed, or Pepper</td>
</tr>
</tbody>
</table>
Create small group discussions

Practices to implement for effective small group discussions:
1. Provide clear and specific instructions
2. Designate each group member a specific task
3. Ask for an end-product (graded or ungraded)
4. Take-up the discussion, synchronously or asynchronously
5. Encourage reflective practice
Create small group discussions: Implementation

<table>
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<th>Modality</th>
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</tr>
</thead>
<tbody>
<tr>
<td>In-person</td>
<td>• Turn and talk or group tables&lt;br&gt;• Think-pair/group-share</td>
</tr>
<tr>
<td>Online synchronous</td>
<td>• Breakout groups in webinar platform</td>
</tr>
<tr>
<td>Online asynchronous</td>
<td>• Group discussions in discussion tool (Quercus, Pepper, Piazza, Ed)</td>
</tr>
</tbody>
</table>
Tips for successful live groupwork

- Do a dress rehearsal, especially if technology is involved
- Assign roles, e.g.:
  - Facilitator
  - Timekeeper
  - Scribe
  - Reporter
- Signpost prompts
- Provide clear instructions/questions
- Allow opportunities to share back and debrief
Tips for successful asynchronous groupwork

Answer in the chat:

What are effective strategies for leveraging asynchronous discussion boards to promote learning?
Use multi-media

Pedagogical benefits:

1. Aligns with universal design for learning

2. Provides alternative forms of engagement

3. Improves students' technical & communication skills
Receive and act on feedback
Facilitate peer review

Answer in the chat:

What are some of the pedagogical benefits of having students participate in peer review?
Facilitate peer review: Scenarios

1. Asynchronous peer review

2. Group presentations with peer review

3. Peer review in small groups
Administer **self-assessment**

- Students review their own work using instructor-provided criteria
- **Self-assessment:**
  - Encourages self-reflection
  - Helps students identify where they may have knowledge gaps
  - Helps students improve their work
- **Implementation options:**
  - peerScholar
  - Survey: Microsoft Forms or Quercus Quizzes (Surveys)
  - Assignment submission via Quercus
Stay motivated
Encourage reflection

Metacognition

Example:
• Exit ticket
• Clearest and muddiest points
## Encourage reflection: Implementation

<table>
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</tr>
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<tbody>
<tr>
<td>In-person</td>
<td>• Exit ticket</td>
</tr>
<tr>
<td></td>
<td>• Audience response system / polling</td>
</tr>
<tr>
<td>Online synchronous</td>
<td>• Audience response system / polling</td>
</tr>
<tr>
<td>Online asynchronous</td>
<td>• Survey tool (Forms or Quercus Quizzes)</td>
</tr>
</tbody>
</table>
Poll students

**Pedagogical use cases:**
1. Get to know your students
2. Check for understanding
3. Spark a discussion
4. Enable reflection
5. Collect immediate feedback
Poll students: Implementation

<table>
<thead>
<tr>
<th>Modality</th>
<th>Method / Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-person</td>
<td>• Student response system (iClicker, Forms)</td>
</tr>
<tr>
<td></td>
<td>• Simple hand raise</td>
</tr>
<tr>
<td>Online synchronous</td>
<td>• Student response system (iClicker, Forms)</td>
</tr>
<tr>
<td></td>
<td>• Polling tool in webinar platform (Zoom, Teams)</td>
</tr>
<tr>
<td>Online asynchronous</td>
<td>• Survey tool (Forms or Quercus Quizzes); share back results in video or announcement</td>
</tr>
</tbody>
</table>
Use case studies for authentic learning

• **Conduct a needs assessment** on the value of using case studies

• **Plan for the use of case study**: How will the case and discussion be introduced? What preparation is expected of students?

• **Organize the conduct of case study**: Do you need to divide students into groups or will they discuss as the whole class?

• **Determine the timing**: How much time is needed for students to explore the case study?

• **Debrief**: How will you debrief the case study? How will you evaluate students?
Stay motivated: Brief closing activity

Answer in the chat or reflect individually:

1. What’s one thing I’ve learned thus far in today’s webinar that I will incorporate into my course?
2. What’s still confusing?
Staying motivated: Share your strategies!

Using the shareable document, please share active learning strategies that you use in your own teaching to keep students motivated:

• Checking the room temperature
• Checking student confidence levels or emotional state
• Showing compassion and kindness
Implementing and managing active learning strategies
GROUP CHAT:
What strategies do you use to overcome student resistance to active learning?
How to overcome resistance to active learning?

• connect activities with course learning outcomes, content, skill development in a meaningful way – be upfront!
• set expectations and start early in the course and use active learning activities often
• start with simple activities and slowly build in complexity
• use a variety of different activities
What are the steps to plan and manage active learning?
Assess the need for active learning:

- **Addressing a challenge:** What concepts or topics do students struggle with the most in your course?
- **Applying knowledge:** Do students need more time applying knowledge in-class where your expertise could guide or coach their development?
- **Feedback culture:** What information will help you understand how students are learning? Which active learning strategies will provide this data, and ultimately help your students meet their learning outcomes?
Step 2: Design active learning

- Are there examples of the active learning strategies that you have seen that would be valuable to your students?
- What instructions/supports will students need to be successful and able to complete the activity?
- What are key considerations for managing the activity?
- How are you going to debrief the activity?

Step 3: Implement active learning!
Step 4: Reflect on active learning

- Consider any roadblocks or challenges that you and your students experienced in carrying out the activity. How might these be overcome?

- Elicit feedback from students on whether the activity assisted in their learning. Did they find the activity helpful/valuable?

- Assess the usefulness of the information the activity provided you. Did the students improve their understanding of the topic or concept?
Navigating support resources
# Tune into Teaching

## Upcoming CTSI workshops (a selection!)

<table>
<thead>
<tr>
<th>Workshop</th>
<th>Recordings and materials:</th>
<th>Other CTSI events:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intro to the Academic Toolbox</td>
<td><a href="https://uoft.me/ctsi-videos">https://uoft.me/ctsi-videos</a></td>
<td></td>
</tr>
<tr>
<td>From Panic to Possibility: Rethinking and Redesigning Assignments in the Wake of Generative AI</td>
<td></td>
<td><a href="https://teaching.utoronto.ca/events">https://teaching.utoronto.ca/events</a></td>
</tr>
<tr>
<td>Quercus Quickstart</td>
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<tr>
<td>Setting the Tone for Success: The first day of class and beyond</td>
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<tr>
<td>Drop-in consultations for Quercus and the Academic Toolbox (15- or 30-minute appointments, online or in-person)</td>
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</table>
CTSI website (https://teaching.utoronto.ca/)

Tune into Teaching Series

CTSI’s Tune into Teaching series is for instructors preparing to teach in the upcoming academic year. These sessions, open to all new and returning faculty and librarians, cover topics such as teaching with technology (e.g., Quickstart Quercus and an introduction to the Academic Toolbox), working with teaching assistant teams, active learning, and so much more.

Visit Tune into Teaching for more information.

Conclusion
Welcome to Centre for Teaching Support & Innovation (CTSI)'s Active Learning Classrooms (ALCs) Hub!

The ALC Hub is a self-paced, asynchronous learning program that is designed to provide pedagogical guidance and support resources for instructors teaching in Active Learning Classrooms (ALCs) at U of T. Instructors and Teaching Assistants can leverage the resources and activities in the Hub to help them navigate teaching in ALCs across all three campuses and maximize the affordances in these classrooms to enhance student learning in line with their pedagogical goals.

https://q.utoronto.ca/enroll/WMXBA8
Quercus support resources
(https://uoft.me/qresources)
Summary of support options

• CTSI website: https://teaching.utoronto.ca
• Active learning at U of T: https://teaching.utoronto.ca/resources/active-learning-at-the-university-of-toronto/
• Upcoming events: https://teaching.utoronto.ca/events
• Quercus Support Resources: https://uoft.me/qresources
• Divisional Support for Quercus: https://uoft.me/qsupportcontacts
• Your Liaison Librarian
• Questions: q.help@utoronto.ca
References and additional resources

- Shank, P. (2017). *Write and organize for deeper learning: 28 evidence-based and easy-to-apply tactics that will make your instruction better for learning*
- *Digital Pedagogy - A Guide for Librarians, Faculty, and Students*
- *A guide to teaching in the active learning classroom: history, research, and practice*
- Active Learning in Higher Education - UK - [2000 - current](https://www.facultyfocus.com/articles/online-education/ensuring-student-success-online-courses/)
Usage

• Icons
  • In-person: https://www.flaticon.com/free-icon/conversation_3050525
  • Asynchronous: https://www.flaticon.com/free-icon/elearning_3221561
  • Online Asynchronous: https://www.flaticon.com/premium-icon/video-call_3101169
What questions do you still have?

Thank you!