



TEACHING AND LEARNING ACTIVITIES

FOUNDATIONS OF COURSE DESIGN

AUTHORED BY:

Lorelei Anselmo, MEd., Lin Yu, MEd., Patrick Kelly, MSc.

Teaching and Learning Activities

Teaching and learning activities (TLA) provide the bridge between the course learning outcomes and student assessments. The activities throughout a course influence the student learning experience and student engagement.

Key concepts:

Alignment: Select and design activities that support students' achievement of the course learning outcomes and provide opportunities for practice and feedback prior to assessments.

Active learning: Focuses on what students need to do to meet the course learning outcomes and involving students in their learning (Børte et al., 2020). Although collaborative activities are a common form of active learning, not all active learning needs to be collaborative.

Metacognition: The awareness of one's thinking, metacognition can take many forms in higher education from critical reflection, study habits, personal beliefs of learning, learning strategies, approaches to problem solving, to effective collaboration and overall effectiveness of learning plans. (Stanton et al., 2021) Metacognition can be fostered through intentional activities and feedback.

Authentic learning: Situates learning in real-world contexts to what the students are learning and doing. Authentic learning has been shown to increase student engagement, collaboration and depth of learning (Chang et al., 2024).

Teaching and Learning Activities in Action:

Choose teaching and learning activities that align with your course learning outcomes and assessments. These activities provide opportunities for practice and feedback, helping students develop skills and competencies. Selecting the appropriate activities can be challenging, especially when facing practical constraints like class size. Start small by incorporating simple strategies, such as think-pair-share, into your lectures to engage students at their current level. Additionally, consider how different types of activities contribute to student learning through practice, feedback, collaboration, and reflection and gradually implement a variety of activities to challenge students to think, learn and grow. This thoughtful approach can enhance the learning experience and support students in achieving course outcomes.



This guide is distributed under the terms of the Creative Commons – Attribution Non-Commercial License 4.0 international (<https://creativecommons.org/licenses/by-nc-sa/4.0/>), which permits sharing and adapting of the material, provided the original work is properly attributed (see recommended citation), any changes are clearly indicated, and the material is not used for commercial purposes.

Examples of teaching activities:	Examples of individual learning activities:	Examples of interactive learning activities
<ul style="list-style-type: none"> • Lecturing • Videos • Modeling • Thinking aloud while problem solving • Demonstrations • Guest speakers 	<ul style="list-style-type: none"> • Note taking • Reading, watching • Problem solving • Reflection/journal writing • Portfolios • Minute paper 	<ul style="list-style-type: none"> • Think-pair-share • Small group work • Discussions • Brainstorming • Fishbowl • Debates • Role playing

Active Learning Strategies

Think-pair-share

Each learner considers the topic/question and writes down some ideas/answers. Then pair up with one other for discussion. After that, share with a wider audience such as another group or the whole class.

Round

- Every person takes a turn to make a statement. Useful topics:
- One thing I need to know about...
- Something that I learned today is that ...
- One important point (about the topic) is that ...

Case studies

A story or scenario is presented to the group. Group discuss the scenario or work together on questions/problems to seek answers/solutions.

Fishbowl

- One group discusses a topic. The second group observes the discussion and each learner records:
- A partner's contributions (and gives individual feedback afterwards), or
- The important parts of the discussion (may be identification of issues, applications, generalisations, etc., depending on the task instructions)



This guide is distributed under the terms of the Creative Commons – Attribution Non-Commercial License 4.0 international (<https://creativecommons.org/licenses/by-nc-sa/4.0/>), which permits sharing and adapting of the material, provided the original work is properly attributed (see recommended citation), any changes are clearly indicated, and the material is not used for commercial purposes.

Question and answer session

This is a useful activity to check students' understanding. A time is set aside for a discussion/answer session. Questions may be submitted in writing at the previous session (inclusive practice to encourage shy students to submit), or they may be oral.

Brainstorming

Brainstorming encourages free thinking, open collaboration, and the sharing of diverse perspectives without judgment or criticism. Everyone thinks of as many different ideas as possible. All ideas are accepted and recorded without comment. The goal is to explore as many possibilities as possible, often leading to innovative or unexpected solutions.

Concept mapping

Concept Mapping is a visual tool used to organize and represent knowledge or ideas. It helps illustrate relationships between concepts, making complex information easier to understand and analyze. Provide a topic for students to work with and ask students to write on the whiteboard or flipchart. The class/group generates and organizes concepts, ideas, and information, presenting them visually, often in clusters. This activity is better carried out in groups with a display of the results at the end.

'Ignorance'

Before the class begins, students consider what they would like to know by the end of the session. They write down some questions – five is a good number to aim for. Some students may like to share their questions, which can be recorded on the board. The students write more questions at the end of the session. These questions are likely to be different from the earlier ones; they should involve a higher level of thinking; there may well be more of them; and they can be a useful basis for further private study.

See <https://www.usf.edu/atle/documents/handout-interactive-techniques.pdf>

for many more interactive strategies.



This guide is distributed under the terms of the Creative Commons – Attribution Non-Commercial License 4.0 international (<https://creativecommons.org/licenses/by-nc-sa/4.0/>), which permits sharing and adapting of the material, provided the original work is properly attributed (see recommended citation), any changes are clearly indicated, and the material is not used for commercial purposes.

Try this: The teaching and learning environments are where the TLA take place. Multiple environments highlight the fact that learning can take place both inside and outside of the classroom, online or offline. TLA can be divided into two components: **Teaching activities** and **Learning activities**. Teaching activities are what the instructor does to facilitate student learning. For example, during class an instructor might assign readings, do a presentation, lead a discussion, and assign homework. Learning activities are what students do throughout the process. This might include readings, studying, listening to lectures, participating in discussions and group activities, working through examples, completing homework, and preparing for exams. Use the following TLA form to decide which TLA are most appropriate for student learning.

Course Outcome	Teaching and Learning Activities	Student Assessment
	Instructor does: Students do:	
	Instructor does: Students do:	
	Instructor does: Students do:	



This guide is distributed under the terms of the Creative Commons – Attribution Non-Commercial License 4.0 international (<https://creativecommons.org/licenses/by-nc-sa/4.0/>), which permits sharing and adapting of the material, provided the original work is properly attributed (see recommended citation), any changes are clearly indicated, and the material is not used for commercial purposes.

Authentic assessment: Incorporate authentic learning into the course to foster relevant and meaningful learning experiences. First identify the ‘real-world’ problem that is aligned with the course learning outcomes. Then plan activities that simulate this problem and provide support for students to engage with the problem and each other. Authentic learning experiences can also be tied to critical reflection and assessments.

Further reading

Critical reflection: <https://taylorinstitute.ucalgary.ca/resources/module/critical-reflection>

Experiential learning: <https://taylorinstitute.ucalgary.ca/resources/learning-modules>

Team projects: <https://taylorinstitute.ucalgary.ca/resources/module/managing-team-projects>

Yee, K. 280+ Interactive Techniques. <https://www.usf.edu/atle/documents/handout-interactive-techniques.pdf>

References:

Barkley, E. F. (2010). *Student engagement techniques: A handbook for college faculty*. Wiley.

Børte, K., Nesje, K., & Lillejord, S. (2020). Barriers to student active learning in higher education. *Teaching in Higher Education*, 28(3), 597–615.
<https://doi.org/10.1080/13562517.2020.1839746>

Chang Y, Choi J, Şen-Akbulut M. Undergraduate Students’ Engagement in Project-Based Learning with an Authentic Context. *Education Sciences*. 2024; 14(2):168.
<https://doi.org/10.3390/educsci14020168>

McAlpine, L. (2004). Designing learning as well as teaching: A research-based model for instruction that emphasizes learner practice. *Active Learning in Higher Education*, 5(2), 119–134. <https://doi.org/10.1177/1469787404043809>

Stanton, J.D., Sebesta, A.J., & Dunlosky, J. (2021). Fostering metacognition to support student learning and performance. *CBE – Life Sciences Education*, 20(3). 1 – 7.
<https://doi.org/10.1187/cbe.20-12-0289>

Wray, E. (2020). *Rise model for meaningful feedback*. <https://www.risemodel.com/>



This guide is distributed under the terms of the Creative Commons – Attribution Non-Commercial License 4.0 international (<https://creativecommons.org/licenses/by-nc-sa/4.0/>), which permits sharing and adapting of the material, provided the original work is properly attributed (see recommended citation), any changes are clearly indicated, and the material is not used for commercial purposes.