



McGill | ELATE

Enhancing Learning and Teaching in Engineering Amélioration de l'apprentissage et de l'enseignement en génie

2022 ELATE Annual Teaching & Learning Conference

Strategy Exchange

Cooperative Formative Assessments

How can we enhance student learning through cooperative formative assessments? Low stakes quizzes and assessments are often used to help students with retrieving content and knowledge, as well as practicing basic problem-solving skills. Although the stakes are low (e.g., low weight in terms of determining course grade), many students can still feel anxious and often focus on simply completing the assessment as opposed to learning. This exchange will describe a cooperative (or collaborative) environment for students to complete low stakes quizzes and assessments which allows them to focus on their learning.

Facilitator: Amin Emad (ECE)



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EDI & Teamwork

How can you form and support student teams to bolster student success with team-based learning and in-class group work? Team-based learning and group work can enhance the learning experience of students significantly, through discussing course content to gaining new knowledge to solving complex problems and projects. However, a number of challenges can arise if teams are not formed properly nor offered sufficient scaffolding to support ongoing learning and growth. This exchange will describe best practices for effective teamwork training in course-based contexts.

Facilitators: Faye Siluk & Renee Pellissier (E-IDEA Teamwork Initiative); Sidney Omelon (MIME)



Flipped Tutorials

How can you enhance student learning during tutorials? Flipped learning is an instructional approach that makes extensive use of active learning to engage students in discussion, reflection, and problem solving. This exchange will describe the use of a flipped approach to tutorials, i.e., the flipped tutorial. Topics of discussion include: motivation and objectives; pre-tutorial preparation; in-class deployment; "to grade or not to grade"; and student feedback.

Facilitator: James Forbes (MECH)

Lab Videos

How can you enhance student learning through the use of instructional videos in lab courses? Short instructional videos are often used to provide content to students prior to a class (e.g., in support of flipped learning) or to review a confusing topic following a class. Instructional videos can also be used in lab courses either to explain relevant background and content, or to highlight specific instruments and tools, as well as measurement techniques, experimental methods, and laboratory processes. This exchange will describe the how to plan, create, and use instructional videos in a lab course.

Facilitator: Stephanie Loeb (CIVE)



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Lifelong Learning Assessment Strategies

How can we promote and assess lifelong learning? The graduate attribute of lifelong learning consists of skills related to self-regulation, adaptability, and metacognition. It is critical for the success of engineering students but may be challenging to teach and assess explicitly. In this exchange, we will discuss different ways that lifelong learning can be promoted in engineering classes and present a lifelong learning 'assessment menu' with pre-designed templates that can be easily integrated into various course plans.

Facilitators: Amanda Saxe and Rehab Mahmoud (ELATE)



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Online Assessments

How can you enhance student learning through the use of online assessments? This exchange will describe the use of the Ans platform for creating, managing, and grading online assessments. A variety of questions can be created, from multiple choice to more complex numerical calculations; students can also receive 'individualized' assessments. Some of the capabilities for creating a diverse range of online assessments with Ans will be discussed.

Facilitator: Damiano Pasini (MECH)