CQSD
CENTRE FOR QUALITY SUPPORT & DEVELOPMENT

University of Reading

FOCUS ON: TEACHING AND LEARNING

LEARNING ACTIVELY IN THE CLASSROOM

WHAT DO WE MEAN BY ACTIVE LEARNING?

Active learning is about creating opportunities for students to interact with their learning and builds engagement in the classroom. This helps students to be attentive to their learning and to gauge their understanding of the topic, whilst prompting reflection and application of theory.

Put simply, students learn better through actively engaging with their learning (Freeman et al., 2014).

PREPARING FOR ACTIVE LEARNING

The development of an engaging and active learning experience requires thinking about how you can design the teaching and learning activities across your module and wider programme. You should think about the teaching on your module as programme teams, to identify where activity can scaffold students to adjacent or future learning in the programme. When your module begins, you will want to include activities that prompt students to actively engage, that help them build their knowledge, whilst enabling them to build confidence to express and share their understanding.

Module Convenors should consider the following questions when getting started:

- **What are the Learning Outcomes** that your students are expected to meet?
- How will the Learning Outcomes **be assessed**?
- How will you **prepare your students**, through their learning activity, to **demonstrate through their assessment** that they have built the subject knowledge and application required to meet the Learning Outcomes?

Sequencing the students' learning, through classroom and independent learning, enables you to plan where you are scaffolding students through activity, formative tasks, and feedback towards their summative assessment.

At the module level, for example, you may want to adopt a pedagogic approach such as:

- **Flipped Learning** – this involves giving your students access to learning materials and activity outside of the classroom that constructs student knowledge, in the form of self-scheduled activity. This frees up classroom time for active learning, involving discussion and application of knowledge to authentic or real-world scenarios.
- **Team-based Learning (TBL)** – you may decide that your module will teach and/or assess students in a collaborative capacity, integrating the skills that students develop as part of a group. In this case you want to provide resources and collaborative tools for students to enable them to participate in group activities.
- **Enquiry-based Learning (EBL)** – this involves providing students – either in groups or independently – a scenario or open-ended problem that they can research, discuss and propose a solution for. This embeds collaboration, reflection and communication skills, whilst also letting students tackle authentic, real-world problems in their discipline area.

Teaching & Learning definitions

Scheduled teaching or synchronous activity – these are the **timetabled teaching hours** that you spend with your students, taking the form of lectures, seminars, workshops, or lab work, etc.

Self-scheduled study and asynchronous activity – these are activities that students are expected to do **outside of scheduled teaching hours**, and may take the form of reading, videos, independent activities and working on assessment. See guidance: Self-scheduled Study.

Digitally enabled teaching and learning – activities that are facilitated through technology, either through interactive applications in the classroom or on their virtual learning environment. See guidance: Digitally Enabled Learning.

Inclusive learning – designed to include a **variety of activities**, to provide opportunities for students to engage comfortably in different ways. This also includes **ensuring all learning materials are accessible**, and that they explore a variety of cultural perspectives. See guidance: Inclusive Learning.

BENEFITS OF ACTIVE LEARNING

The research evidence indicates that learning is most effective when it is active, collaborative, authentic and digitally enabled. It has a significant positive impact on learning for all students because it:

- Requires students to use higher order thinking processes, for example: application and reflection.
- Fosters student engagement and encourages attendance.
- Increases access to and the flexibility of learning.
- Reduces and, in some cases, eliminates differential outcome gaps (the awarding gap) in progression and attainment.

A recent large-scale study (the Active Collaborative Learning Project) that involved three UK universities showed that adopting an approach equivalent to the principles of active and collaborative learning, resulted in a reduction in the awarding gap from 15.7% to 1.7% for ethnicity, with similar reductions for widening participation, disabled, mature, and overseas students (McNeil et al., 2019). Evidence from across other education sectors provided by the Education Endowment Foundation (EFF) also backs up these findings.

IN THE CLASSROOM

Creating interaction between yourself and students enables opportunities to apply learning that takes place during scheduled teaching and self-scheduled learning. You can bring in topics of discussion that have taken place online, or reference elements of reading or guided screencasting to bridge these spaces.

To take apart an active classroom, we can classify it into a few key components, and finding the right balance of these components in your teaching helps your students to participate, apply their learning and feel included by giving a variety of methods to interact.

These components do more easily apply to lectures and seminars, but provide a baseline to start from when thinking about your own discipline area and teaching methods:

Component	Purpose and description
Introduction	This is time spent **presenting and establishing key learning**, transferring knowledge, or setting up activities.
Interaction	Participating in tasks with your students, getting **students to reflect, apply or question** components of their learning. It also allows you to **gauge their understanding** and inform choices you make in the session or future classes.
Collaboration	Typically this means **handing over time in the session to students**, giving them time to **work on group work tasks**, or participating in smaller peer activities, with you supervising, encouraging, and answering questions.
Feedback	As a larger activity ends, or coming towards the end of the class, this is where you can talk with the students to **reflect on the outcomes of specific activities**, getting students to share what they've learned, either as a class or having groups present to one another.
Summary	Wrapping up the class by **reiterating the key learning and outcomes**. This is also where you can **signpost students to further support and resources** that may improve their understanding. You can use this time as well to **remind students of key videos, texts or activities** that should take place outside the classroom before you meet again for the next live session.

EXAMPLES OF CLASSROOM INTERACTION

Interacting in the classroom requires thought and planning to ensure that there is enough time in the session for the activity to take place. Be clear with students about the task you are asking them to do and what they should be producing. Explain to students why they are doing the activity, how it is helping them develop and try to avoid using activities just because the technique is novel.

Teacher to student interaction

ACTIVITY	FACILITATES	ENABLED BY
Presentation	• Knowledge transfer • Establishing interactions in the classroom	• PowerPoint (or similar)
Polling & quizzing	• Gauging student understanding • Providing opportunities to express opinions in a 'safe' way • Breaking up a lecture through active engagement	• Polling applications like MS Forms or Mentimeter • Raising hands
Idea boards	• Collecting a wide range of ideas and perspectives • Prompting students to reflect on their learning and apply it to an activity	• Padlet • Whiteboards • Post-it notes
Discussion	• Having students communicate their understanding through active dialogue • Prompting debate over different perspectives either organically or by splitting students into opposing sides of an argument	• Open-ended question responses in applications like MS Forms, Mentimeter, Padlet or Teams chat / Blackboard discussion board • Breakout groups

Student to teacher interaction

ACTIVITY	FACILITATES	ENABLED BY
Question & answer	• Students to clarify or fill in gaps in their understanding • Building consensus on a topic or problem • Constructing direction for further reading, viewing, or understanding of assessment criteria	• Raising hands in the classroom • Using Q&A functions in applications like MS Forms, Mentimeter, and Padlet • Providing questions in Blackboard discussion boards or Class Teams
Presentations	• Peer learning – students can research independently / collaboratively and share what they've learned by relaying information to one another	• Co-authored documents like PowerPoint / Word • Producing short videos with YuJa, watched with feedback as a class
Feedback	• Giving students a voice and decision making in their learning • Building shared consensus • Sharing perspectives and resources • Summarising the key learning points of classroom teaching	• Class discussion • Polls and surveys in MS Forms

Collaborative interaction

ACTIVITY	FACILITATES	ENABLED BY
Breakout groups	• Discussion and collaboration in larger classes • Researching topics or solving problems	• Worksheets • Think-pair-share

		• Co-authored documents like Word or OneNote
Co-authored documents	• Group work • Active and collaborative notetaking • Student presentations & reports • Capturing student participation and contribution	• Office 365 • OneNote
Problem-solving	• Critical thinking • Interdisciplinary application • Analysis and research	• Student presentations • Discussion
Case studies	• Research and reflection • Application of theory to real world contexts • Peer learning	• Co-authored documents • Breakout groups

SUMMARY AND NEXT STEPS

Active learning is a pedagogical approach that promotes student engagement and interaction with the learning process. By encouraging students to participate in their education, whether through group work, problem-based learning, or flipped classroom strategies, educators can enhance the overall learning experience. When planning teaching and learning activities, it is crucial to align them with the intended learning outcomes and assessments, creating a scaffolded sequence that guides students from foundational knowledge to its application. Through various activities such as polling, discussions, presentations, and collaborative projects, students and teachers can interact dynamically, fostering a vibrant and inclusive learning environment that prepares students for the complexities of their future education and employment.

To discuss learning activities in the classroom, please contact CQSD.

To contact us and explore other guides in our Focus On: series, please visit https://www.reading.ac.uk/cqsd/teachingresources

References and Further Reading

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