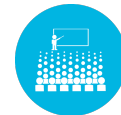


ACTIVATING LECTURES

PLANNING INSTRUCTION & LEARNING ACTIVITIES



WHAT IS IT?



Active learning practices can boost student engagement with course material, enhancing learning and increasing performance on assessments in all fields. Integrating active learning practices into your high enrollment lecture sections also helps to personalize learning and build a learning community among students and instructors.

RESEARCH...



Impact of active learning includes:

- Active learning in high enrollment lectures increased student performance on exams by an average of 6%, and decreased failure rates for these courses from 34% to 22% (Freeman et al., 2014)¹.
- Active learning is particularly beneficial to first-generation college students in STEM courses, boosting both retention and passing rates (Reimer et al., 2016).
- Students who used 'hands-on' active learning outperformed the control group, who passively received a lecture, on a concept test by a mean of 68% (Gray et al., 2010).
- Education technologies (e.g., clickers or podcasts) provide students with opportunities to more actively engage in course material (MacArthur & Jones, 2008), and can help to improve students' academic performance (Mayer et al., 2009).

DATA ...



36% of UCD students report they are satisfied (or very satisfied) with access to small classes

60% of UCD students report they are satisfied (or very satisfied) with the quality of instruction (UCUES, 2018)

¹List of all references in the complete JITT Guide.

TEACHING STRATEGIES...



- **Structure the lecture.** Use a 'book-end' strategy by introducing the topic, alternating between **mini-lectures** (10-12 minutes) and **active-learning exercises** (4-6 minutes), and closing with a 5-minute summary.
- **Use the Minute Paper** – students **write** down their thoughts on a topic or question for one or two minutes and ask for volunteers to **share** their thoughts.
- Assign a **problem set** or **critical thinking** task to **groups** of 3-5 students. Solutions can be turned in or responses shared verbally.
- **Streamline content.** If instructors ensure class **activities are complementary** to lecture topics and aligned with course learning goals, a similar amount of content can be covered as in a lecture-only class.
- **Integrate classroom response systems** (e.g., clickers, Mentimeter, Polleverywhere, Kahoot, Piazza, Socrative) into high enrollment lectures to increase student **engagement and collaboration**.

STUDENTS SAY...



"My instructor used podcasting. This helped me learn material when I was studying at home and needed extra time with certain topics."

"In my largest class, our TAs are important to lecture. At times they begin class with a 5-minute review. Other times they circulate around the class, answering our questions when we work in pairs or small groups."

REFLECTION...



- Once you carefully define class learning outcomes and unit objectives, how do you ensure that all your assessments and activities are aligned?
- How might you practice active learning activities to make them run more efficiently during class?
- Since lectures are effective for conveying information, but not for learning outcomes that require higher-order thinking, how can you break up lectures with active learning activities like pair- or group-work, problem-solving, or low-stakes assessments?



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