Active Learning Techniques

Active learning is "anything that involves students in doing things and thinking about the things they are doing" (Bonwell & Eison, 1991, p. 2). Research suggests attention wanes after 15-20 minutes of a lecture. Active learning techniques can be used to re-energize and refocus a class. The following are just a few active learning techniques instructors can easily modify for use in their own classes.

Technique #1 – Think-Pair-Share/ Write-Pair-Share
(10 minutes of class time)
- Present a question to answer or a statement/quote for reflection.
- Give students two to three minutes to think about or write their responses.
- Have students then share their answers or responses with a neighbor.
- After a few minutes, signal for students to stop.
- Debrief by calling on a few pairs to share their thoughts or answers with the class.
- Reflect on students’ answers to gauge student progress and relate their responses to the next part of your class.

Technique #2 – Minute Paper1
(2-10 minutes of class time)
- Think about the class learning outcomes. What should students in your class know or be able to do?
- Design a prompt based on your learning outcomes. (For example: What are the most important points of today’s lecture? What are two ways you could you apply [concept] to a real-world situation?).
- Check the effectiveness of your question and anticipate various responses.
- Give students enough time to respond (2-10 minutes depending on the prompt).
- Collect all responses for review or select a sample for larger class sizes.
- If checking individual student comprehension/writing, ask students to write their names on the papers; if checking general comprehension of the class, make it anonymous.
- Review the responses for themes or commonly made errors.
- Provide feedback in the next class; comment on papers directly, or summarize main themes to the whole class.

Technique #3 – Stump Your Partner
(10 minutes of class time)
- At a natural break in your lecture, pause and ask students to come up with one or two questions based on the lecture content up to that point.
- Tell students that they will try to stump their partner, so they have to come up with a challenging question.
- Have students turn to a partner and pose their questions.
- Collect the questions (they might be used as possible exam questions or to check students’ comprehension).

Technique #4 – Catch-Up
(5-10 minutes of class time)
- Introduce this activity at some logical breaking point in a class or lecture.
- Ask students to turn to a neighbor to share notes and ask any clarifying questions for a few minutes.
- Take two or three questions from a couple of pairs.
- At this point, assess the situation—if there are only a few questions to address, you can quickly do so and move on, if there are many more, it might be worth slowing down or stepping back to review.

Technique #5 – Problem Solving or Case Study
(5-20 minutes or more of class time depending on depth of assignment)
- Present a problem or case study for review on an overhead.
- Students work in pairs or small groups to come up with an answer (or answers—depending on your prompts).
- Give students a set time, or allow students to work until the first group comes up with the solution(s).
- Debrief the answer(s) as a class.
- To motivate and energize, add a bit of healthy competition; the first group who comes up with the right solution(s) gets an extra point on the next test/exam.

Thinking about incorporating active learning?

- Set the tone early; explain to students that they will be engaging with the material in various ways in class.
- Use activities to draw attention to issues and content you feel are most critical.
- Incorporate activities or change things up every 15-20 minutes (once or twice in a 50-minute class or twice or thrice in a 75-minute class).
- Variety is important; having a handful of different activities can keep things less predictable.
- Set aside time before and after each activity to introduce it and define the takeaway.
- Articulate ground rules for participation and discussion.
- If you are implementing a new technique or introducing a new theme, consider surveying students to determine its effectiveness.

Some additional thoughts:

- Active learning techniques may not engage all students; focus on engaging more students in more meaningful ways.
- Explaining the learning benefits of the activity may counter possible resistance (see Felder & Brent, (1996) for more strategies).
- It may take time for both instructors and students to get used to new teaching techniques.

Active Learning and Technology

i>clickers and REEF Polling

- Create questions that students can answer individually and anonymously, or as a pair or small group.
- Project the answers as they roll in using presentation technology.
- Strike a balance between asking questions and other lecture activities—asking too many can be distracting.

Videos/ Multi-media

- Do a pre-viewing activity (have students predict a situation or brainstorm ideas about the topic).
- Show the video; consider providing guiding questions or prompts (find the error, spot the critical moment, etc.).
- Post-video, students work individually, or in pairs/groups to reflect on what they saw or discuss what they noticed.
- Debrief as a class by asking a few students to share.

Smart Mobile Devices or Laptops

- Ask students to check/clarify information by searching online in pairs or small groups.
- Ask students to find a video that illustrates the lecture’s main point.
- Have students create and evaluate questions using back channeling and question generation technologies.*

*For more information on classroom technologies, please contact Academic Technologies at acadtech@cornell.edu or (607) 255-9760.

Student Attention Span in Lectures


Active Learning Resources


Effectiveness of Active Learning

