

Interactive Teaching Techniques: Options for Student-Active Breaks during Lecture

While lecturing is not the preferred mode of teaching in the age of student-centered learning, we all know there are occasions where a well-structured presentation becomes the most efficient way of communicating important information to students. However, even then it is important to remember that attention span is limited to 10-15 minutes among all but the most motivated and well-prepared students. Therefore, it is good advice for an instructor to pause about every quarter of an hour and get students involved in some active processing of the lecture material. "Resetting attention span" can take as little as two minutes and will get most students ready for another 10-15 minute lecture vignette. Of course, this too has limits and should not be tried with class periods lasting multiple hours. Most of the following ten teaching techniques are summarized in Linda Nilson's book *Teaching at its Best* (2003). Many more techniques are available. The CTL is happy to find others for you if you are looking for more alternatives.

These teaching techniques have in common that they are used after short segments of the lecture. The instructor stops after a fifteen minute vignette and gives students a carefully controlled time limit to perform a task individually, in pairs, or small groups.

SHORT ACTIVE BREAKS (2-6 minutes)

Comparing Lecture Notes

Pair and Compare: Students pair off with their neighbor and compare lecture notes, filling in what they may have missed. This activity makes students review and mentally process your lecture content. It may also help students improve their note-taking skills when they compare their own notes to what someone else in the class considered relevant.

Pair, Compare, and Ask: Same as above but with the addition that students jot down questions on your lecture content. You then field questions that students cannot answer between themselves. This is also a good opportunity for formative assessment revealing difficulty patterns in students' understanding.

Free Recall of Lecture

Periodic Free-recall, with Pair and Compare Option: Students put away their lecture notes and write down the most important one, two, or three points of your lecture this far, as well as any questions they have. This activity makes students review and mentally process your lecture content. Students may work individually, but if they work in pairs or triads, they can answer some of each other's questions. This is another technique for helping students improve their note-taking skills because it teaches them to focus on the most relevant parts of the lecture rather than writing down notes indiscriminately.

Listen, recall, and Ask; Then Pair, Compare, and Answer: Students only listen to your mini-lecture—no note-writing allowed—then open their notebooks and write down all the major points

they can recall, as well as any questions they have. Instruct students to leave generous space between the major points they write down. Finally, they pair off with their neighbor and compare lecture notes, filling in what they may have missed and answering one another's questions. The technique also sharpens students' concentration efforts.

Solve a Problem: Students solve an equational or word problem based on your lecture content. They can work individually or in *ad hoc* pairs or triads. Put the problem on the board, a slide, or an overhead and, to make class debriefing easier, give four multiple-choice options. Ask for a show of hands for each option. You can also ask student pairs to rate their confidence level in their answer. This activity makes students apply your lecture content while it's fresh in their minds, and it immediately informs you how well they have understood your lecture material (i.e. formative assessment!). You can then clarify misconceptions before proceeding to new material.

BIGGER ACTIVE BREAKS (8-25 minutes)

Prewrites: Before discussing a topic or lecturing on it, ask students to write a brief account of what they already know about the subject or what opinions they hold. Then field some of their responses and have a brief discussion. (Source: Tollefson, 1988)

Quick Case Study: Students debrief a short case study (one to four paragraphs) that has them apply your lecture content to a realistic, problematic situation. Display a very brief case on an overhead or slide; put longer ones in a handout. You may add specific questions for students to answer, or teach your class the standard debriefing formula: What is the problem(s)? What is the remedy(ies)? What is the prevention(s)? Instruct students to jot down their answers. Consider taking case scenarios from current media reports to increase students' interest and awareness of the practical relevance of your course material.

Pair/Group and Discuss: Students pair off with their neighbor or get into small groups to discuss an open-ended question that asks them to apply, analyze, or evaluate material in your lecture or to synthesize it with other course material. The question should have multiple possible correct answers. Have students outline their answers in writing. This activity makes students examine, extend, and process your lecture content and serves as a perfect prelude to a general class discussion. It also models for students what a critical thinking question looks like.

Pair/Group and Review: Same as above but with an essay question designed for pre-exam review. Student pairs/groups present their answers to the class, while you mock-grade them and explain your assessment criteria. You can also have the rest of the class mock-grade pair/group answers to help students learn how to assess their work. This is also a prime opportunity for helping students understand the criteria of a scoring rubric, should you use one for this task.

Write from a Pro or Con Position: When an argument has been presented in class, stop for a few minutes and ask students to write down all the reasons and evidence they can think of that support one side or the other. Use these statements as the basis for a brief discussion. Students always benefit from looking at an issue from more than one perspective. (Source: Walvoord, 1986)

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