

The Enhanced Lecture*

Stephanie Nickerson
Stern School of Business
New York University

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1. The Pause Procedure

Pause for two minutes after every 12 to 18 minutes of lecturing and ask students to review their notes or to compare their notes with a neighbor. After a unit on a particular topic, for example, “net present value,” an instructor could ask students to review their notes on it and, after two minutes, the instructor could ask if students have questions on the concept.

Research has shown that more information is retained when this strategy is used than in a similar lecture with no pauses.

2. Short Writes

At an appropriate time in the lecture, instructor stops and asks students to take two or three minutes to write briefly on something related to the lecture, e.g., “Write in your own words what the purpose of linear regression is.” Alternately, instructors might ask students to write the key points so far in the lecture—something that encourages students to reflect on the material.

3. Think -- Pair -- Share

Tell students to take a moment to think about a specific question, concept, issue, problem that has just come up in lecture. Then students discuss and compare their responses with one other student for one or two minutes. (You can move around the class for that time, listening to the pairs of students.) Finally, you open the discussion to the entire class.

The main benefit of this strategy is that at least 80 percent of the class has been focused on the question at hand—not just one or two students. In addition, having spoken with another class member, and perhaps gotten social support for their ideas, even students who rarely speak in the class are more likely to do so in the full class discussion.

4. Formative Quizzes

This is a very good tool to raise the level of involvement in large classes in quantitative subjects, in particular. The statement, “This question is very similar to ones that will be on the exam” is a very effective motivator for many students. Actually responding to a test question and getting immediate and ungraded feedback is even more motivating.

*Adapted from Bonwell, Charles C. (1996). “Enhancing the Lecture: Revitalizing a Traditional Format.” In T. Sutherland & C. Bonwell (Eds.). *Using Active Learning in College Classes: A Range of Options for Faculty*. New Directions for Teaching and Learning, 67, San Francisco, CA: Jossey-Bass.

Put a question on an overhead or on a slide; give students the appropriate amount of time to work out the problem. Slightly too little time is better than too much; then ask several people what they came up with. Have someone who got the answer right talk through, or better, demonstrate their process on the whiteboard. Alternately, after you have given students time to solve the problem on their own, tell them they have one minute to convince their neighbor of the correctness of their answer. Then bring the large group together to review the answer and how to get it.

5. Create an Exam Question

At the end of a lecture unit, ask students to take several minutes to create an exam question based on the material they have just learned. Ask students to turn in the question (and the answer), and use some of the good questions on your exam.

6. Voting and Polling

At the appropriate time in a lecture, get everyone to vote on a controversial issue you have raised, or something you are about to discuss. Require everyone to vote by a show of hands. Sometimes an instructor might have a re-vote later in the class.

7. Classroom Assessment Techniques**

Classroom Assessment Techniques are short, quickly administered, quickly analyzed devices (ungraded and usually anonymous) instructors use to obtain feedback on what and how well their students are learning. You might, for example, use a one minute paper after a unit of the class and ask, "What was the key point of the lecture on the time value of money I just gave?" or, e.g., after teaching the concept of regression, a statistics teacher might ask, "In your own words, what does one use multiple regression to find out?" The students would write quickly their responses. The teacher would collect the anonymous writing to get a sense of how well students understood the issue.

8. Mid-lecture Brainstorming

During a lecture, but before the presentation of new material, ask students to quickly tell you everything they know (or think they know) about a new topic. While the students offer ideas, write everything on a white board or an overhead. Then give the lecture, underscoring some of the points students raised before the lecture, and correcting misconceptions students have about the topic.

Students are more involved in a lecture to which they have contributed. Also, you have feedback about what individuals in the group know already.

**For more Classroom Assessment Techniques, see <http://www.crlt.umich.edu/tsca.html>