Teaching Strategies to Use in Interactive Lectures

Key points during lecture where you can include interaction/application **1) At the beginning to "hook" your audience –** e.g. Stories/Anecdotes/Cases, Problem or Startling fact, Test Question, Humor, Probing audience knowledge/experience/attitudes. **2) Change stimulus every 10-15 minutes to maintain learner attention** e.g. Video, Demonstration, Role-play, Debates, Case examples, Audience reflection, Brainstorming, Animations plus strategies described in right hand column **3) Promote learning through application to emphasize complex concepts and key points -** e.g. strategies described in right hand column	**Knowledge Probe** • Posing questions at the start of a lecture can stimulate thinking about the content you will cover for the day. Prepare 2-3 short-answer questions or 5 multiple-choice questions from the lecture content. Have the students work in pairs or individually to answer the questions, have them save their answers. The questions can be readdressed at mid-lecture or end-of lecture activity (case that applies the concepts), allowing students see how their knowledge/understanding has increased.
	Think-Pair-Share • Pose a question/problem. Students spend 1-2 minutes thinking about the problem alone then discuss problem in pairs. Pairs are asked to report to the entire class. Works well in large and small classroom settings at any time during the class. Effective way to involve learners, especially those apprehensive about speaking up in class. Provides instructor with feedback on what learners have/ have not grasped. Another variation of this is **Pair/Share/Square –** where students first share in pairs and then share with another pair nearby.
	Pause and Clarify • Ask learners to discuss idea with neighbor. Pause lecture for 2 minutes while learners chat with neighbors about their respective understanding of key or difficult conceptual content. Aim is for each student to clarify their own understanding by comparing their perspective with that of their partner. Works best when teacher asks question requiring application of understanding, rather than simply recall of information.
	Quick Think • Every 15 minutes or so insert a "quick think" exercise to increase attention, interest, and learning. Students can record their responses individually and then explain their answers to a neighbor, can verbally generate an answer with a neighbor, or can be asked to silently think about a response. Provide feedback so that students can hear or share correct or possible answers. Some examples include: Select the best answer, correct the error, complete a sentence starter, compare or contrast, support a statement, re-order the steps, reach a conclusion, paraphrase the idea.
	Cases • Use a realistic, relevant case(s) at beginning or during lecture. Include a brief question that requires the application of key concepts. Students each work on the question then report their answers when called upon.
	Minute Writes • Pose a question about a concept; ask learners to write a response in 1-2 minutes. Collect responses & without revealing names, share sample responses & give feedback. Effective technique for determining learner progress – understanding course material, reaction to course material.

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	Muddiest Point • As with "Minute Writes," students are given a couple of minutes to write the "muddiest point" or most confusing concept to understand. Can provide clarification in real time or through email/online discussion.
	Critical Thinking Activity • Provide a small group breakout session designed around a thought provoking question/case that concerns the material just presented and/or builds upon concepts presented in previous lectures. After breakout, select a student from a group to respond to the question or task. Then ask others to participate by adding to the case. Finish session by providing a summary
	Matrix or Diagram Completion • Give students an incomplete matrix or diagram related to your lecture topic, stop periodically to have them try and fill in the missing parts of it based on information they might already know or information you have given them as part of the lecture. For example, create a differential dx matrix for chest pain and have students fill in the features that would distinguish one diagnosis from another.
	Ranking • Have students rank a list of things from most important to least. Can do this on paper or ask students to stand in a line based on where they ranked a specific item from the list. Discussion can focus on why they would rank an item as having more or less importance in relation to the concept one is teaching, for example, a differential diagnosis related to a case
	Corners • Designate four corners of the room as representing particular topics, subjects or viewpoints. Have students pick a group to participate in based on viewpoint, expertise or what is most challenging for them or assign students to each group. After discussion in groups, have them report back to large group.
	Jigsaw Learning Activity • Jigsaw learning requires that students become experts in a subject area and then teach that topic to peers who have become experts in other topics. Steps: 1) divide class into small groups of 4 to 6 students. 2) Assign each group a subject area to learn. 3) Rearrange groups so that there is 1 expert in each group. Experts reciprocally teach their peers.
	Role Play • Have students practice skills being addressed in lecture, either before or after they are presented, by turning to a neighbor where each have distinct roles, for example, clinician and patient, and try engaging in a focused conversation with each other. Give clear instructions for both roles, including expected goals and reactions. Have pairs give each other feedback and then debrief with large group.

Adapted from materials compiled by Lynne Robins, PhD: lynner@uw.edu, Dept. of Biomedical Informatics & Medical Education, University of Washington The Interactive Lecture, An Instructor's Manual, Office of Medical Student Education, University of Arizona, College of Medicine;
UW-Madison Teaching Academy, Office of the Vice Provost for Teaching & Learning, and DoIT Academic Technology. Bleason, BL, Peeters, MJ, Resman-Targoff, BH et al. An Active-Learning Strategies Primer for Achieving Ability Based Educational Outcomes. American Journal of Pharmaceutical Education 2011; 75 (9)Article 186.