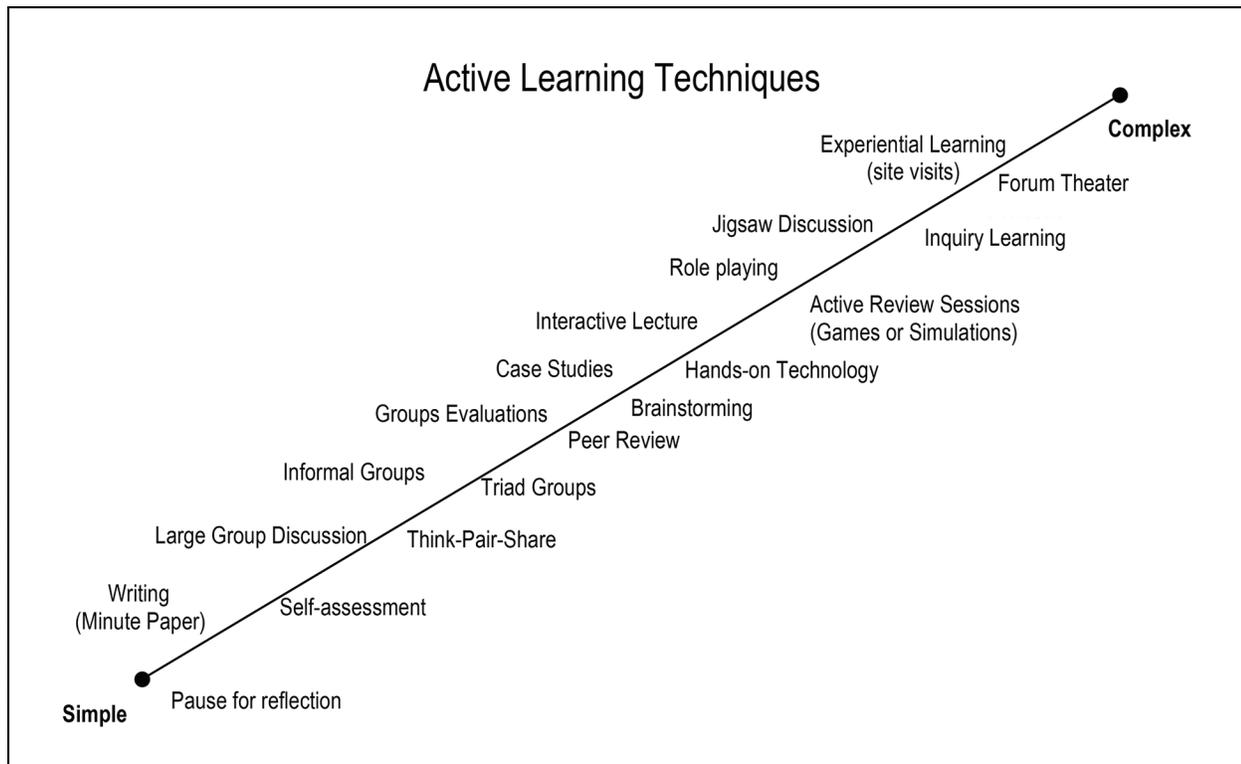


How Can You Incorporate Active Learning Into Your Classroom?



This is a spectrum of some active learning activities arranged by complexity and classroom time commitment.

Prepared by Chris O'Neal and Tershia Pinder-Grover, Center for Research on Learning and Teaching, University of Michigan

The following lists summarize some of the many approaches.

- **Clarification Pauses.** This is a simple technique aimed at fostering “active listening”. Throughout a lecture, particularly after stating an important point or defining a key concept, stop presenting and allow students time to think about the information. After waiting, ask if anyone needs to have anything clarified. Ask students to review their notes and ask questions on what they’ve written so far.
- **Writing Activities such as the “Minute Paper.”** At an appropriate point in the lecture, ask the students to take out a blank sheet of paper. Then, state the topic or question you want students to address. For example, “*Today, we discussed emancipation and equal rights. List as many key events as you can remember.*” Or “*We discussed conductive heat transfer. List as many of the principal features of this process as you can remember. You have two minutes – go!*”
- **Self-Assessment:** Students receive a quiz (typically ungraded) or a checklist of ideas to determine their understanding of the subject. Concept inventories or similar tools may be used at the beginning of the semester or the chapter to help students identify their misconceptions.
- **Large Group Discussion:** Students discuss a topic in class based on a reading, video, or a problem. The instructor may prepare a list of questions to facilitate the discussion.
- **Think-Pair-Share.** Have students work individually on a problem or reflect on a passage. Students then compare their responses with a partner and synthesize a joint solution to share with the entire class.
- **Cooperative Groups in Class (Informal Groups, Triad Groups, etc.)** - Pose a question for each cooperative group while you circulate around the room answering questions, asking further questions, and keeping the groups on task. After allowing time for group discussion, ask students to share their discussion points with the rest of the class.
- **Peer Review:** Students are asked to complete an individual homework assignment or short paper. On the day the assignment is due, students submit one copy to the instructor to be graded and one copy to their partner. Each student then takes their partner’s work and, depending on the nature of the assignment, gives

- critical feedback, and corrects mistakes in content or grammar.
- **Group Evaluations:** Similar to peer review, students may evaluate group presentations or documents to assess the quality of the content and delivery of information.
 - **Brainstorming.** Introduce a topic or problem and then ask for student input. Give students a minute to write down their ideas, and then record them on the board. An example for an introductory political science class would be, “*As a member of the minority in Congress, what options are available to you to block a piece of legislation?*” Or, in an engineering design class a topic would be “*What are possible safety issues (environmental, quality control, etc.) problems we might encounter with the process unit we just designed?*”
 - **Case Studies.** Use real-life stories that describe what happened to a community, family, school, industry or individual to prompt students to integrate their classroom knowledge with their knowledge of real-world situations, actions, and consequences.
 - **Hands-on Technology:** Students use technology such as simulation programs to get a deeper understanding of course concepts. For instance students could use simulation software to design a simple device or use a statistical package for regression analysis.
 - **Interactive Lecture:** Instructor breaks up the lecture at least once per class for an activity that lets all students work directly with the material. Students might observe and interpret features of images, interpret graphs, make calculations and estimates, etc.
 - **Active Review Sessions (Games or Simulations):** The instructor poses questions and the students work on them in groups or individually. Students are asked to show their responses to the class and discuss any differences.
 - **Role Playing:** Here students are asked to “act out” a part or position to get a better idea of the concepts and theories being discussed. Role-playing exercises can range from the simple to the complex.
 - **Jigsaw Discussion.** In this technique, a general topic is divided into smaller, interrelated pieces (e.g., a puzzle is divided into pieces). Each member of a team is assigned to read and become an expert on a different topic. After each person has become an expert on their piece of the puzzle, they teach the other team members about that puzzle piece. Finally, after each person has finished teaching, the puzzle has been reassembled and everyone in the team knows something important about every piece of the puzzle.
 - **Inquiry Learning:** Students use an investigative process to discover concepts for themselves. After the instructor identifies an idea or concept for mastery. A question is posed that asks students to make observations, pose hypotheses, and speculate on conclusions. Then students share their thoughts and tie the activity back to the main idea/concept.
 - **Forum Theater:** Use theater to depict a situation and then have students enter into the sketch to act out possible solutions. Students watching a sketch on dysfunctional teams might brainstorm possible suggestions for how to improve the team environment. Ask for volunteers to try to act out the updated scene.
 - **Experiential Learning:** Plan site visits that allow students to see and experience applications of theories and concepts discussed in the class

Sources

- Active learning.* (n.d.). Retrieved from University of California at Davis, Teaching Resources Center Web site: <http://trc.ucdavis.edu/trc/tatips/activelearning.pdf>
- Bonwell, C.C. (1996). Enhancing the lecture: Revitalizing a traditional format. In T.E. Sutherland, C.C. & Bonwell (Eds.), *Using active learning in college classes: A range of options for faculty.* (pp. 31-44). San Francisco: Jossey-Bass Publishers.
- Felder, R.M., & Brent, R. (1994). Cooperative learning in technical courses: Procedures, pitfalls, and payoffs. *ERIC Document Reproduction Service, ED 377038.*
- McKeachie, W.J. (2005). How to make lectures more effective. In *Teaching tips: Strategies, research, and theory for college and university teachers* (11th ed.) (pp. 52-68). New York: Houghton Mifflin Co.
- Paulson, D.R., & Faust, J.L. (n.d.). *Active learning for the college classroom.* Retrieved from California State University, L.A. Web site: <http://www.calstatela.edu/dept/chem/chem2/Active>