

Techniques to engage students: Resources on active learning

What is “active learning?”

Active learning is a broad term used to describe ‘learning by doing’. Active learning uses techniques that promote student engagement with course content beyond passively sitting and listening to a lecture. To be “actively involved, students must engage in such higher order thinking tasks as **analysis, synthesis and evaluation**”

(<http://www.ntlf.com/html/lib/bib/91-9dig.htm>).

How can active learning be incorporated into my course?

Elements of active learning may include talking, listening, reading, writing, discussing and reflecting. Strategies for incorporating active learning and higher order thinking skills range from simple to complex. Regardless of the level, the goal remains the same: Increase understanding and retention by having students reflect upon and interact with the material and with each other.

Techniques and activities that engage students:

- One minute paper: pose either a specific or open-ended question and have students respond in writing for one or two minutes.
- Muddiest (or clearest) point: ask students to write about the “muddiest” point of the day’s lecture or discussion.
- Think/pair/share: give students a question or problem to solve and have them work 2–5 minutes (alone). Have them discuss their ideas for 3-5 minutes with the students next to them (pair). Finally, ask or choose student pairs to share their ideas with the whole class (share).
- Panel discussions and Student debates: give students or teams a topic to consider and research. Have them present arguments in support of their position to the class. Allow other teams to respond.
- Punctuate a lecture or discussion with different questioning techniques, such as *diagnostic* (how do you interpret and explain?), *priority* (what do you consider most important?), *prediction* (what do you think would happen if?), and *summarizing* (what inferences can be made from the case, what generalizations?).
- Foster active listening: pause during important points in a lecture to let the material sink in. Move around the room, making eye contact with students and ask if anyone has questions or needs clarification.
- Have students use flash cards or personal response system (clickers) to indicate their level of comprehension during a discussion or lecture.
- Collaborative learning: have students work together online or in the classroom to solve problems or analyze cases. Discussion boards, wikis and whiteboards are just a few of the tools students can use to share information and exchange ideas. Provide clear guidelines for participants, including how group projects and individual contributions will be graded.
- Integrate multimedia, including audio and video clips, into course lectures; have students interpret and react.

Resources

Active Learning:

- Active Learning: Getting Students to Work and Think in the Classroom:
http://ctl.stanford.edu/Newsletter/active_learning.pdf

- The University of Hull – Platform for Active Learning:
<http://www.hull.ac.uk/pal/section-1/index.html>
- Using Mid-Semester Evaluations to Encourage Active Learning:
http://trc.virginia.edu/Publications/Teaching_Concerns/Spring_2007/Sargent.htm

Team Based Learning:

- Team Based Learning:
<http://www.ou.edu/pij/teamlearning/index.htm>
- Team Based Learning in Large Classes:
<http://connect.educause.edu/library/abstract/TeamBasedLearningAnE/39204>

Collaborative Learning/Group Work:

- Collaborative Learning: Group Work and Study Teams:
<http://teaching.berkeley.edu/bgd/collaborative.html>
- Cooperative Learning: Students Working in Small Groups:
<http://ctl.stanford.edu/Newsletter/cooperative.pdf>

Critical Thinking:

- Teaching Critical Thinking Through Online Discussion:
<http://www.educause.edu/ir/library/pdf/EQM0048.pdf>
- The Critical Thinking Community
<http://www.criticalthinking.org/>

Problem-Based Learning:

- Teaching Strategies: Problem-based Learning:
<http://www.crlt.umich.edu/tstrategies/tspb.html>
- Problem-Based Learning:
http://ctl.stanford.edu/Newsletter/problem_based_learning.pdf

Bloom's Taxonomy:

- Bloom's Taxonomy & Higher Order Questions:
<http://www.stedwards.edu/cte/content/category/13/27/51/>

Leading Discussions:

- Leading Discussions:
<http://isites.harvard.edu/icb/icb.do?keyword=k1985&pageid=icb.page29698>
- Participatory Lectures:
<http://isites.harvard.edu/fs/html/icb.topic58474/TFTlectures.html>
- 10 Strategies for Effective Discussion Leading:
http://isites.harvard.edu/fs/html/icb.topic58474/Dawes_DL.html

Grading & Assessment:

- Grading Class Participation:
http://trc.virginia.edu/Publications/Teaching_Concerns/Spring_1996/TC_Spring_1996_Maznevski.htm
- Writing Multiple Choice Questions That Demand Critical Thinking:
<http://tep.uoregon.edu/resources/assessment/multiplechoicequestions/mc4critthink.html>
- The Critical Thinking Rubric:
<http://wsuctproject.wsu.edu/ctr.htm>