What is Active Learning?

A. A teaching strategy where less emphasis is placed on transmitting information and more on activities such as discussing, writing, reading and reflecting.

B. Students being involved in higher-order thinking tasks, such as analysis, synthesis and evaluation.

C. Engaging students in activities in addition to listening to a lecture and taking notes in order to help them learn and apply course material.

D. All of the above!

Active learning has been shown to lead to improvements in:

- student-faculty interaction
- student-student interaction
- academic achievement (grades)
- communication skills
- higher-level thinking skills
- teamwork
- favorable attitude towards the subject
- motivation to learn

Active learning teaching methods require students to form their own meaning or interpretation of the material being studied, in other words, form mental constructs.

This method also allows the learner and teacher to detect misconceptions, errors and omissions in learning so that they can correct them.

For research on active learning, download "Active Learning Works" by educator Geoff Petty on his website.
MORE ACTIVE LEARNING IDEAS

- Gallery walks
- Service learning at Missouri S&T
- Research at Missouri S&T
- Case studies
- Mind maps
- Concept mapping
- Examples of How to Use Active Learning
- In the Higher Education Classroom

1. An instructor can start incorporating active learning with small steps by making MODIFICATIONS TO A TRADITIONAL LECTURE (Penner, 1984)

   I. Pause at least three times during the lecture, a couple of minutes each, to allow students to consolidate their notes.
   II. Insert brief demonstrations.
   III. Divide the lecture into two sections and use the time in between for a small-group study session (provide a study guide).
   IV. Lecture for 20 or 30 minutes and then allow students to write for five minutes about what they remember. Then allow small groups to discuss and elaborate on their notes for the rest of the class period.

2. Incorporate GROUP LEARNING whenever possible

   Think-pair-share, question and answer pairs, note checking pairs, planner/coach, simultaneous explanation pairs. Go here for more information.

   Use online discussion boards using Blackboard or a blog.

   Group quizzes -- allow students to take the quiz individually and turn it in, then have them take the same quiz in small groups, allowing for discussion; designate a grade that is some combination of the two scores.

3. INTERACTIVE lectures with personal response systems (clickers)

   Intersperse clicker questions every 10 to 12 minutes of lecture; use questions that challenge misconceptions and encourage critical thinking.
4. USE PEERS for assessment, student-led review sessions

Give students a rubric to grade their peers on group projects or other assignments that are presented. Allow students to anonymously provide feedback to the group online or through written comments in class.

5. JUST IN TIME teaching*

Students complete an assignment before class through an online format which allows the instructor to adjust class material accordingly. Go here to see the JiTT website.

6. CLASSROOM ASSESSMENT TECHNIQUES -- 50 of them can be found in Angelo & Cross' Classroom Assessment Techniques, A Handbook for College Teachers*

Some of the easier to use CATs are the Muddiest Point and the Minute Paper.

At the end of class, instructors using the Minute Paper exercise ask students to write, "What was the most important thing you learned during this class?" and "What important question remains unanswered?"

The Muddiest Point exercise asks students to jot down a response to "What was the muddiest point in ______________," which could include the lecture, discussion, homework, etc.

Selected References:


*These books available on loan from the CERTI library.