

Active Learning

Active learning has been identified as one of the seven principles of good practice in undergraduate education (Chickering & Gamson, 1987). For learning to be active, students must do more than listen, they must “read, write, discuss, or be engaged in solving problems. Most important, to be actively involved, students must engage in such higher order thinking tasks as analysis, synthesis, and evaluation.” Students must be doing things, and then thinking about why they are doing them. These kinds of activities can include case study, “cooperative learning, debates, drama, role playing and simulation, and peer teaching (Bonwell & Eison, 1991).

According to Felder and Brent, as little as five minutes of active learning activities per fifty-minute class session can boost learning significantly. The benefits can be as simple as waking students up after a dry or heavily technical lecture. More importantly:

“Academically weak students get the benefit of being tutored by stronger classmates, and stronger students get the deep understanding that comes from teaching something to someone else. Students who successfully complete the task own the knowledge in a way they never would from just watching a lecturer do it. Students who are not successful are put on notice that they don’t know something they may need to know, so when the answer is provided shortly afterwards they are likely to pay attention in a way they never do in traditional lectures” (Felder & Brent, 2003).

There are assorted activities that can be used to encourage active learning in both large and small classes.

Cooperative Learning Exercises

Think-Pair-Share

Think-pair-share is a quick and easy method of engaging students in a collaborative activity (College Level One). In think-pair-share, the instructor proposes a difficult or open-ended question to the class. The students are asked to think about the question for a minute and then form into pairs to discuss their views. The instructor can ask the pairs to try to reach a consensus or to discuss their thoughts. At the end of a set period of time, the instructor asks the pairs to share what they’ve discussed with the class.

One possible modification for Think-Pair-Share is Think-Pair-Square-Share. This technique adds an extra step by requiring each pair of students to turn to another pair and discuss what they’ve shared within the first pair before debriefing with the whole class (Schreyer Institute).

After reconvening, instructors can keep the discussion unstructured or they can have students take a vote. Instructors can also have students take a minute to fill out a note card with their thoughts and collect them (College Level One). Instructors can use “student responses as a basis for discussion, to motivate a lecture segment, and to obtain feedback about what students know or are thinking” (Schreyer).

Benefits of think-pair-share include:

- Requires only five to ten minutes of class time

- Can be used in classes of any size and seating arrangement
- Low risk for both students and instructor
- Accustoms students to collaborative activities
- Fosters classroom community
- Gives students a chance to work through tough material before the class moves on to the next topic
- Increases student confidence in their answers

Role-Play

Along with small group discussions and lecture demonstrations, role-playing is a form of active learning that can both engage students and clarify complex concepts. Role-play is effective because it “provides opportunities for learning in both the affective domain, where emotions and values are involved, as well as in the cognitive domain where experiences are analyzed” (Nickerson).

Role-playing exercises can take multiple forms. In one form, each student takes on the role of a person affected by an issue, allowing the class to study the impact of that issue. In another form, students can take on the role of an abstract concept or phenomena (Teed), playing the parts of “cells, molecules, economic forces, and abstract philosophies, in addition to historical figures, characters in a novel, etc.” (Berkeley).

Role-play can be used to:

- *“To solve a problem* e.g., in a public policy class students play the parts of several stakeholders with distinct goals in a community board meeting.”
- *“To apply skills* e.g., interviewing clients in social work, medicine, sociology, human resources; improvising an interaction in a retail store to practice language learning; taking a patient’s medical history.”
- *“To explore or change values;* to develop empathy; to become aware of one’s assumptions e.g., students enacting a scenario in which new immigrants have to engage with a city bureaucracy; students taking the part of a person or character for whom they have no sympathy; or a situation between people of different cultures or classes” (Nickerson).

Benefits of role-playing in the classroom:

- “The creative aspect of the exercise will make it seem more like play than like work.”
- “The pressure to solve a problem or to resolve a conflict for their character can motivate a student... and is far more typical of the pressure that will be on them in real life.”
- “Particularly useful in courses for non-majors to emphasize the intersection between” the topic and real life.
- Show “the world as a complex place with complicated problems that can only rarely be solved by a simple answer that the student has previously memorized”
- Allow students to combine skills they learned separately, such as quantitative and communications skills (Teed).

Jigsaw

In a jigsaw project, the class is divided into groups. Each member of a group is asked to complete some discrete part of an assignment. When every member has completed their assigned task, the pieces can be joined together to form a finished project. “For example, students in a geography course might be grouped and each assigned a country; individual students in the group could then be assigned to research the economy, political structure, ethnic makeup, terrain and climate, or folklore of the assigned country. When each student has completed their research, the group then reforms to complete a comprehensive report” (Cal State).

Fishbowl

In a fishbowl discussion, a small group of students sit in the middle of the room, forming the “fishbowl” group. The rest of the class sits on the “outside.” The group in the fishbowl is given an open-ended question to discuss. The outside group observes, takes notes, and will later be asked to pose questions and analyze interactions. The class will then be asked as a whole to discuss what they observed and experienced during the discussion. The fishbowl technique helps students practice group discussion skills as well as active listening and note taking. It can also be used to provide more structure to discussions of controversial topics (UBC).

Panel Discussions

If you want students to give presentations, but your class is too large to accommodate individual presentations, consider using a panel discussion. Divide students into groups and assign them a topic to research—you can even combine this method with the jigsaw method to help structure their work. “Each panelist is then expected to make a very short presentation before the floor is opened to questions from the audience. The key to success is to choose topics carefully and to give students sufficient direction to ensure that they are well prepared for their presentations.” To engage the students in the audience, you can combine this method with role-play—for each panel, you could assign students in the audience different roles. For example, “if students are presenting the results of their research into several forms of energy, you might have some of the other students role-play as concerned environmentalists, transportation officials, commuters, and so forth” (Cal State).

Buzz Groups

Break the class into groups of three to six students. Each group is given a few minutes to discuss a question or topic and to generate arguments, answers, or ideas. “Once time is up, have each small group share one idea, answer, or argument with the class.” Record the ideas from each group on the board (Queens).

Quescussion

A ‘quescussion’ is a discussion using only questions. To begin, the instructor asks a question related to a discussion topic and writes it on the board. Students may only respond or add to the discussion in the form of more questions, each of which is written down on the board. Following the quescussion, the class can then focus on discussing “one or two of the key questions raised in greater depth.”

This method works well for controversial topics because “in getting students to ask questions, you’re inviting them to generate a variety of thoughts about the topic without them directly stating their own views.” This method also works well with dense or difficult readings, “where students ask genuine questions about what the text might mean or be implying (this works particularly well for literature or

more abstract poems).” Quescussion can also be combined with a “**dotmocracy**,” where students used dots (stickers that you distribute evenly) to vote for which questions they would most like to discuss (Queens).

Pro and Con Grid

Break the students into groups of two to six and have them fill out a pro and con grid listing the pros and cons, or advantages and disadvantages of a given issue. Let students know how many pros and cons you expect and whether they should use point form or full sentences. “Once students have had time to complete the activity, bring the class back together to share and discuss points on each side” (Queens). The pro and con grid is effective because it “forces students to go beyond their initial reactions, search for at least two sides to the issue, and weigh the value of competing claims” (Waterloo).

Debates

There are many ways of implementing debate in the classroom. For example, in the method suggested by the University of Waterloo, the class is divided into large groups representing broad positions. The class could be divided by where they happen to sit, or by asking the class in advance to seat themselves in the section representing a particular side of the debate. If students refuse or are unable to choose one side or the other, create a middle ground and invite their reasons for choosing it. In this method, the debate would be more along the lines of a large class discussion (Waterloo).

Northern Illinois University explains a procedure in which the students are divided into smaller groups or pairs. They break the activity down into two or three rounds, depending on the objectives for the activity and the available time:

- **Round One:**
 - Team One: Presentation of “Pro/positive” or “Arguments for” (10 minutes)
 - Team Two: Presentation of “Con/negative” or “Arguments against (10 minutes)
 - Team Discussion Period allowing teams to prepare their responses (5 minutes)
- **Round Two**
 - Team One: Response or rebuttal of “Pro/positive” or “Arguments for” (5 minutes)
 - Team Two: Response or rebuttal of “Con/negative” or “Arguments against (5 minutes)
- **Round Three:** Teams have further opportunities to respond
- **Whole Class Discussion:** Determine which team provided the most convincing arguments. This could be done through a simple vote or a more detailed evaluation form.

To implement this method in your classroom, Northern Illinois University has provided the following steps:

- Prepare guidelines and a set of rules to assist students in preparing for the debate
 - Include a time frame and instructions on how to present the material
 - Allow non-debate students to adjudicate, helping them learn to be objective in rating their peers’ performance
- Provide students with resources on debate techniques and structure. Consider holding a practice debate.

- Have students prepare brief “position papers” which also include their reaction to the debate process and how they were able to reach consensus with their team.
- Select the format you plan to use, i.e. teams, individual, class
- Research controversial, news breaking, and stimulating topics to encourage dynamic and energized classroom discussion. If students see the relevancy of the topic or can relate to it in some way, they are more likely to dedicate time, effort, and passion to the process.
- Review the guidelines and procedures in class to address any questions or requests for clarification
- Provide adjudicators with rating rubrics to guide their evaluation
- Begin the debate, giving students as much autonomy as possible
- Facilitate discussion and debrief the process at the end of the debate period
- Distribute both student and instructor evaluations to the teams
- Have a plan in place if the debate gets “hot” and students begin to argue. Have guidelines in place to minimize inappropriate behavior (Northern Illinois University).

Written Activities

One-Minute Paper

The one-minute paper is a short writing assignment that you can ask students to complete between segments or at the end of class. You can use these assignments to assess student learning by asking questions like “What was the most important thing you learned during this class?” “What questions remained unanswered?” or “Summarize the main point of today’s lecture in one sentence” (Waterloo).

One simple way to do this is to distribute index cards for students to anonymously write one or two questions about the material. You can then pick a couple of cards to discuss either immediately or at the beginning of the next class (VCU).

Activity Records

A form of one-minute paper, activity records “document students’ observations, reflections, and thoughts in response to questions or problems posed during class.” This allows students to record their ideas even if they choose not to participate in class discussion. Cameron suggests asking three to five questions per class and collecting responses periodically. Reviewing the responses will give you “a flow of feedback on how well students understand class material and how well they can use course content to generate ideas of their own and solve problems.” By allocating “a few marks for responses to *all* class-posed questions and problems,” you can “encourage and reward students for engaging their minds and responding” to your questions (Cameron, 1999).

Muddiest (or Clearest) Point

This is a variation on the one-minute paper, though you may wish to give students a slightly longer time period to answer the question. Here you can ask questions like “What was the muddiest point in today’s lecture?” and “What was the clearest point?” or “What (if anything) do you find unclear about the concept of ... ?” (Cal State)

Peer Review

In this activity, students provide peer feedback to each other on their written assignments. Divide the students in groups of two to four and have them swap assignments, taking the time to read and then

provide written and verbal feedback. The key to success with this activity is providing the students with guidance on how to provide effective feedback. Review with them the characteristics of constructive, supportive comments, and “be sure to give them guiding questions, key elements to look for... based on the assignment rubric, or a form to fill in about the other student’s paper.” This activity can be used in larger classes where it may not be possible as the instructor to provide sufficient feedback to every student. This activity can also “become part of the grade or assignment. When submitting the final version of their paper. Have each student, in addition to their final draft, also submit the feedback they gave/received as well as reflections on the revisions they made in light of their peer’s comments” (Queens).

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