University of Minnesota - Making Active Learning Work

Following are some recommendations for implementing active learning in your classroom.

**To overcome student resistance to active learning**

* Begin using active learning strategies early in the term. Introduce the concept on the first day of class and let students know that they will be expected to participate in such strategies throughout the course.
* Use active learning frequently–at least once a class period initially. After the first several sessions, students will understand that you're serious about active learning and will accept their role as participants readily.
* Give clear instructions. State the goal students should meet, how much time they have for the activity, what procedures they should follow, and with whom they should partner (i.e., "turn to the person next to you" or "form groups of four with the people nearest you.")  Put directions for in-class activities on a PowerPoint slide so that students have something to refer to as they begin the activity.
* Explain to students why you're using active learning and the benefits they can expect from it.
* Be committed to your choice to use active learning and communicate that confidently to students. Students will be put at ease if they understand that you're in charge and have good reasons for what you're doing.
* Break students into groups. This can be an effective way to overcome student reluctance and demonstrate that you're in charge.
* Start small and simple. Use low-impact strategies such as think-pair-share or in-class writing exercises. These strategies are easy to implement, take only a few minutes, and are "low stakes" for students who may be unsure or uncomfortable. As you and your students gain experience, you may decide to graduate to more involved activities. For ideas, see our [Active Learning Strategies list](http://cei.umn.edu/support-services/what-active-learning/basic-active-learning-strategies).

**To counter student complaints about active learning**

* Address student complaints about active learning immediately and with confidence. Keep your comments positive.
* Explain to your classes why you're using active learning. Highlight what students have to gain from such activities. Consider making such an announcement early in the term and reprising it later if necessary.
* See student complaints about active learning as "teachable moments" that offer students opportunities to reflect on how they learn and how to improve those learning skills.

**To maintain control of your classroom during active learning**

* It is not necessary to devote your entire session to active learning. You can still lecture. In fact, a mix of instructional methods–lecturing for ten or fifteen minutes followed by a three or four minute active learning interval–is extremely effective. It's also very easy to implement and doesn't require a great deal of additional preparation.
* Just because students are "active" (i.e., talking to one another or engaging in some other activity) doesn't necessarily mean they will learn anything. Simply putting students in groups doesn't constitute active learning. Any activity you choose must be well planned and executed.
* When planning and presenting active learning strategies to your students, make sure to consider the goal of the activity, the outcomes you expect of students, the procedure they should follow, and the time limit for the activity.
* Use strategies to keep control of the classroom during active learning activities. These might be ringing a bell or flashing the lights to gain students' attention.

**To manage time pressures when using active learning**

* Consider your learning objectives carefully. Based on them, what content is most important for students to master?
* Consider what content you must cover in class and what content students can cover outside of class by themselves. It may be necessary to create assignments, activities, or other support to help students master material on their own.
* Attempt to use one or two brief active learning strategies during your lectures. Space the activities throughout the lecture to break it up and keep students engaged.
* Attempt to use classroom assessment techniques to determine what students are learning and what is confusing them. These can help you decide when (and whether) you need to spend more time working with particular material.
* Avoid racing through material to finish it all by the end of the period. This is almost always counterproductive. Students tend to become overwhelmed and discouraged.
* Remember that just because you say it, doesn't mean they learn it. If student learning is your goal, resolve to spend more time on less material.

**To handle dysfunctional groups**

* Successful cooperative learning doesn't just happen. It takes careful planning, a well-designed activity, and an instructor who is willing to intervene to help groups function properly.
* Design group activities to include positive interdependence, independent accountability, face-to-face interaction, use of group social skills, and group processing.
* Assign group roles for students - discussion leader, time keeper, note taker, etc. Explain these clearly at the outset of the activity.

**To ensure quality peer review of writing**

* Recognize that peer reviews often falter because students fail to understand the process of peer review or they lack buy-in to the concept. Develop strategies to address these concerns in your students.
* Teach students how to conduct a peer review. Focus on the reasons for doing them, the process to follow, and how to give (and receive) constructive feedback.
* Create a rubric or checklist for students to use during peer review.
* Grade students' revision and peer review work. Consider portfolio grading or having students submit a revision essay outlining the comments they offered their peers and how they used peer comments to improve their own writing.
* Intervene as quickly as possible when groups struggle with peer review.
* Make it clear to your students that they should not expect to rely solely on the instructor's comments for their reviews. Peer commentary is important.

[Active Learning Strategies list](http://cei.umn.edu/support-services/what-active-learning/basic-active-learning-strategies)

Basic Active Learning Strategies

Engaging students in individual or small group activities–pairs or trios especially–is a low-risk strategy that ensures the participation of all. The sampling of basic activities below can be adapted to almost any discussion or lecture setting. Using these strategies, or variations on them, ensures that you'll hold your students' attention in class and throughout the semester.

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| [Ice Breakers](http://cei.umn.edu/support-services/what-active-learning/basic-active-learning-strategies#ice) | [Scenarios / Case Studies](http://cei.umn.edu/support-services/what-active-learning/basic-active-learning-strategies#scenarios) | [Shared Brainstorming](http://cei.umn.edu/support-services/what-active-learning/basic-active-learning-strategies#shared) |
| [Think / Pair / Share](http://cei.umn.edu/support-services/what-active-learning/basic-active-learning-strategies#think) | [Reciprocal Questioning](http://cei.umn.edu/support-services/what-active-learning/basic-active-learning-strategies#reciprocal) | [3 - 2 - 1 Format](http://cei.umn.edu/support-services/what-active-learning/basic-active-learning-strategies#321) |
| [Write / Pair/ Share](http://cei.umn.edu/support-services/what-active-learning/basic-active-learning-strategies#write) | [Numbered Heads Together](http://cei.umn.edu/support-services/what-active-learning/basic-active-learning-strategies#numbered) | [Note Check](http://cei.umn.edu/support-services/what-active-learning/basic-active-learning-strategies#note) |
| [Student Summaries](http://cei.umn.edu/support-services/what-active-learning/basic-active-learning-strategies#summaries) | [Roundtable](http://cei.umn.edu/support-services/what-active-learning/basic-active-learning-strategies#roundtable) | [Background Knowledge Probe](http://cei.umn.edu/support-services/what-active-learning/basic-active-learning-strategies#probe) |
| [Question and Answer Pairs](http://cei.umn.edu/support-services/what-active-learning/basic-active-learning-strategies#question) | [Corners](http://cei.umn.edu/support-services/what-active-learning/basic-active-learning-strategies#corners) | [Generating Questions](http://cei.umn.edu/support-services/what-active-learning/basic-active-learning-strategies#generating) |
| [One Minute Paper](http://cei.umn.edu/support-services/what-active-learning/basic-active-learning-strategies#paper) | [Problem-Based Learning](http://cei.umn.edu/support-services/what-active-learning/basic-active-learning-strategies#problem) | [Jigsaw Teamwork](http://cei.umn.edu/support-services/what-active-learning/basic-active-learning-strategies#jigsaw) |
| [Focused Listing](http://cei.umn.edu/support-services/what-active-learning/basic-active-learning-strategies#listing) | [Ten-Two Strategy](http://cei.umn.edu/support-services/what-active-learning/basic-active-learning-strategies#tentwo) | [Rotating Chair Discussions](http://cei.umn.edu/support-services/what-active-learning/basic-active-learning-strategies#rotating) |
| [Two Column Method](http://cei.umn.edu/support-services/what-active-learning/basic-active-learning-strategies#column) | [Peer Survey](http://cei.umn.edu/support-services/what-active-learning/basic-active-learning-strategies#peer) |  |

**Ice Breakers**

These activities get people talking quickly and personally about their goals, fears, and expectations for the session before them. Ask them, for example, to consider what one thing each hopes to gain from the workshop and what one thing each hopes to offer during the workshop, then have the group get up to rove the room for five minutes gathering a sense of what others have come to gain and to offer. At the end of the workshop, this might become a way for individuals to measure what they've accomplished and gained overall. Or, as another example, you might consider having participants fill out a 3x5 card with their names and phrases/words in response to questions you've given all of them; the participants then don these cards as name badges and walk around the room meeting as many people as possible, interviewing others about the ideas/information on the card or large-size name tags; after five minutes you can ask participants to return to their seats and jot down names of folks who might be contacts after the session or jot down an individual goal for the session.

**Think/Pair/Share**

Have students turn to someone near them to summarize what they're learning, to answer a question posed during the discussion, or to consider how and why and when they might apply a concept.  This works well with pre-planned questions and with ideas that emerge during a larger group discussion. The objectives are to engage students with the material on an individual level, in pairs, and finally as a large group. The activity can help to organize prior knowledge; brainstorm questions; or summarize, apply, or integrate new information. Approximate time: six to eight minutes. The procedure is as follows: 1) individuals reflect on (and perhaps jot notes) for one minute in response to a question; 2) they pair up with someone sitting near them and share responses/thoughts verbally for two minutes, or they may choose to work together to create a synthesis of ideas or come to a consensus; 3) the discussion leader/instructor randomly chooses a few pairs to give thirty-second summaries of ideas.

**Write/Pair/Share**

The format for this strategy is identical to the think-pair-share, except that students process the question asked of them by writing about it rather than reflecting. After a brief time to note their thoughts, each student turns to a partner to discuss. The activity closes with the instructor calling on random students to summarize their responses. As with the think-pair-share, the instructor may choose to skip the summary portion of the exercise depending on circumstances.

**Student Summaries**

During a class session, the instructor pauses and asks students to explain to a partner the central concepts just presented. The activity can be altered in several ways. The instructor can request that students write or think individually prior to discussing with a partner, making the activity resemble a think/write-pair-share.

**Question and Answer Pairs**

The objective here is to engage individuals with readings and then to pair them to answer particular questions. This helps to deepen the level of analysis of presentations/readings, and helps engage participants in explaining new concepts, as well as considering how/where to apply the concepts to their own thinking/work setting. Approximate time: five to ten minutes. The procedure: 1) students respond to a presentation (video, panel, readings) and compose one or two questions about it; they may do this in class or you may ask students to bring questions with them; 2) the students pair up; A asks a prepared question and B responds; then B asks a prepared question and A responds; 3) the instructor may ask for a sampling of questions and answers in order to bridge to a full group discussion.

**One Minute Paper/Free Write**

Ask students to write for 2-3 minutes on a topic or in response to a question that you've developed for the session. Again, this is particularly useful in those moments in which instructors are asking students to move from one level of understanding to another, from presentation of new ideas to application of ideas, from considerations about self to situations involving others. These moments of writing provide a transition for students by bringing together prior learning, relevant experience and new insights as a means of moving to a new (aspect of the) topic. The writing offers students a moment to explore ideas before discussion, or to bring closure to a session by recording ideas in their minds at that moment. A minute of writing is also a useful thing when discussion takes a turn you didn't expect – when a particularly good question comes from the group, when discussion keeps circulating around a basic idea rather than inching its way into potential applications or deepening of ideas.  This is useful with other active learning tools.

**Focused Listing**

A focused listening activity is a great follow-up to short presentations (whether via video or in-person speaker) during which students are asked to absorb information that is new and vital to the discussion that will follow. For example, an early American Literature class focused listing might start with asking: "What is literature?" or "Based on your reading of Thomas Jefferson's letter about 'the novel,' what phrases describe the founders' fears about young women and men reading novels?" Then, as a full group, take five to ten minutes to for students to speak and record on a flip chart/white board as many associations as possible for this prompt. This activity works well to introduce a topic, as an exercise joining/synthesizing two sets of information (lecture plus follow up reading or two lectures), and/or as something to return to as a wrap up so that participants can compare before/after thinking.  This will also give you a chance to see if/where students have picked up on topics/ideas as you had anticipated, to gather a sense of interests/insights of the specific group before you, to establish a base from which you can begin to extend concepts of the course.

**Two Column Method**

Before solving a problem or applying concepts, a discussion leader can help participants more fully consider a problem or issue or concept by employing a two-column method of generating and recording responses to a prompt – e.g., "A Positive Classroom Looks and Sounds Like/ Doesn't Look Like This." Head two columns on the board/flip chart with "Looks/Sounds Like" and "Doesn't Look/Sound Like" and ask the participants for ideas, observations, recalling of presentation information that will support one side of the board or the other.  You might ask half the room to be initially responsible for two minutes of listing "Favorable to A" and the other half to provide "Favorable to B" listing; then you could take a minute to have students generally add to this base of information and/or generate a "Creating C from A & B" column. This technique can be quite effective in moving a group discussion from basic ideas toward considerations of how to apply those ideas; the listing can provide a base of ideas from which potential problems as well as benefits/successes/possibilities can be identified so that students can begin a next stage of discussion.

**Scenarios/Case Studies**

Provide students with a "local" example of a concept/theory/issue/topic being covered in the discussion. They discuss and analyze the scenario/case, applying the information covered in a presentation to some situation they may encounter outside of the workshop.  Students can briefly present their findings to other small groups or to the whole group or simply record ideas on an overhead/white board so that instructor can draw questions and synthesis from the material. Students can also develop (individually, in pairs, groups) their own work-based case studies and exchange them with others for discussion and analysis.

**Reciprocal Questioning**

The instructor provides question stems, such as the following:

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| --- | --- |
| Comprehension Question Stems  Describe...in your own words. What does...mean? Why is...important? How could...be used to...? | Connector Question Stems  Explain why...and how... How are...and...similar? How are...and...different? How does...tie in with...that we learned before? |

Students then develop specific questions from the given stems and provide answers.  They can work individually, with a partner, or in a small group.

**Numbered Heads Together**

Here students work in groups (large or small). To begin, a group member asks a question, then others in the group put their heads together and make sure everyone knows the answer. To close, the question asker picks one from the group to answer the question. This can also be done with two or even several teams, where Team One asks Team Two a question. Team Two puts their heads together and makes sure team members know the answer. Then Team One selects a Team Two person to answer the question.

**Roundtable**

A question is posed by a group leader, teacher/facilitator or another participant. Each person writes one answer (or another sort of response, as directed by group leader) on paper (or flipchart or transparency) that's passed around the group. Each group shares/presents their answer to the entire class.

**Corners**

The leader of the day places content (or flipchart with question) in each corner of the room. Groups of 3-6 people move from corner to corner and discuss answer(s) to each posed question. The groups develop a consensus and write their answer directly on each flipchart. When the flipchart has an answer already written by a previous group, the next group revises/expands/ illustrates that response with additional information, if possible. Different colored markers can be used for each group to see what each group wrote for each question.

**Problem-Based Learning**

Present a problem to the class/group. The problem needs to be based on an authentic situation that the participants could actually encounter. Partners or small groups must apply the presented information to address the problem. They may address the problem deductively (determine what is causing the problem) or inductively (analyze the issues and identify the problem).

**Ten-Two Strategy**

The instructor shares information for ten minutes and then stops for two minutes to encourage listeners to pair and share their ideas, fill in any gaps or misunderstandings, and allow each other to clarify information.

**Peer Survey**

Each participant is given a grid that is to be filled in according to the needs of the group. Students/group members can be instructed to fill in the grids on their own or the can collect statements from peers and then share in small/large groups. Groups can then generate and share conclusions. Grid topics or categories can be tailored/designed as needed/preferred; here's a sample grid:

|  |  |  |
| --- | --- | --- |
| Example of Idea: |  |  |
| Useful Information: |  |  |
| Unresolved Question: |  |  |

**Shared Brainstorming**

The instructor disseminates sheets of paper to each small group of 3-5 people. On each sheet is a different question. Team members generate and jot down answers to the given question. The instructor then instructs each group to rotate to another sheet containing a different given question to answer. Depending on the time available, this procedure is repeated, giving each group the opportunity to respond to as many questions as possible. At the end of this activity, each group returns to their original question sheet, reviews the given responses, generates a summarization of ideas, and shares their conclusions etc. with the entire group.

**3 - 2 - 1 Format**

Presenter instructs students to jot down and share with partner or small group:

3 ideas/issues etc. presented  
2 examples or uses of the idea/information covered  
1 unresolved/remaining question/area of possible confusion

**Note Check**

Students pair with a partner/small group to briefly (2-5 minutes) share notes. They can clarify key points covered, generate and/or resolve questions, generate a problem to solve, solve a problem posed by the instructor, or write a paragraph synthesizing key ideas as set out in partner's notes.

**Background Knowledge Probe (BKP)**

Background knowledge probe questionnaires ask for basic, simple responses (short answers, circling/showing of hands in response to multiple choice questions) from students who are about to begin a course, a unit, or study of a new concept. Such probes are meant to help teachers determine effective starting points/appropriate levels of instruction for a given subject and/or class. Used to both open and close course activities, a BKP helps students focus attention on what will be important material.

**Generating Questions**

Have students/participants create five types of questions from a reading assignment, with each question moving to a "higher" level of thinking. Begin with a question asking for an important fact stated directly in a text. Then develop a question that revolves around two relationships, ideas, characters or events addressed in the reading. At the next level ask students to write questions requiring answers built from inference – an analysis drawn from two pieces of information close together in a text or from relationships among many pieces of information spread throughout the assigned reading(s). Students can create higher level questions based on patterns they perceive in seemingly unrelated pieces of information – a symbol, a theme that recurs. The last of this question-developing thread might ask students to create a question based on the reading and everyday life, issues, and contexts. This can be a great activity for those days when students have been assigned short but intense readings that they will be expected to discuss in detail in class. Have students write the five questions (noting page numbers when they refer to textual passages or ideas) on a note card, which can be passed around, used as a guide during discussion, and/or turned in at the end of class.

**Jigsaw Teamwork**

A Jigsaw is an active learning exercise in which (1) a general topic is divided into smaller, interrelated pieces (e.g., the puzzle is divided into pieces); (2) each member of a team is assigned to read and become an expert on a different piece of the puzzle (e.g., one person is given a Team Building Issues puzzle piece/article, another the Team Composition & Roles piece/article, and so on); (3) then, after each person has become an expert on their piece of the puzzle, they teach the other team members about that puzzle piece; and, finally, (4) 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. Functioning as a successful team requires the integration of many different activities. If any piece of the puzzle is missing, the team is generally a group and not a team.

**Rotating Chair Discussions**

The Rotating Chair group discussion method works well in several situations; groups well versed in the ordinary usefulness of this process of building ideas will comfortably engage rotating chair practices for handling difficult discussions. The ground rules for Rotating Chair are four: (1) When you would like to participate, raise your hand; (2) The person speaking will call on the next speaker (aiming to call on a person who has not/has less frequently contributed); (3) The person called on will first briefly restate/summarize what has been said then develop the idea further; (4) As a speaker, if you wish to raise a new question or redirect the discussion, you will briefly summarize the points made in the prior discussion, and where possible create a transition from that thread to the one you're introducing.

Students gain the most from Rotating Chair discussions by not only participating as speakers, but by also being attentive listeners, jotting down notes about ideas so that ideas develop in those spaces between speaking, learning from others' ideas rather than listening for a "right idea" or "right answer" to emerge, and trusting that the opinions and experiences that you offer in speaking will increase the knowledge base and problem-solving capacity in the classroom.