

Classroom Assessment Techniques (CATs)

CATs are spot checks for understanding that are quick, easy, and effective. Students benefit from the opportunity to check their own comprehension and reorganize their ideas if necessary. These activities are appropriate for initiating, clarifying, and summarizing information at any point in a given class session.

Identifying Learner Attitudes, Values, and Self-awareness

- **Self-confidence Survey:** Ask students to complete a brief *Course-related Self-confidence Survey* that measures their confidence in at least three skills or abilities important to success in the course (Angelo & Cross, 1993). Make sure your students know their responses are anonymous.
- **Punctuated Lecture:** Suspend a lecture with a low-preparation *Punctuated Lecture* that allows students to listen, stop, reflect, write, and give feedback to the instructor in the form of short, anonymous notes (Angelo & Cross, 1993).
- **Classroom Opinion Poll:** Conduct a *Classroom Opinion Poll* related to one or two issues where students can respond yes or no on a short polling form (Angelo & Cross, 1993).

Assessing Prior Knowledge, Recall, and Understanding

- **Background Knowledge Probe:** Draft one or two open-ended questions as a *Background Knowledge Probe* to emphasize important information and to determine an appropriate starting point for a given lesson (Angelo & Cross, 1993).
 1. Prepare a brief questionnaire to give students at the beginning of a course or before introducing a new topic.
 2. Use either a few open-ended questions, short answer questions, or ten to twenty multiple choice questions on the content to be covered.
 3. Be sure to let students know that these are not tests or quizzes and that they will not be graded.
- **Minute Paper:** Assign a *Minute Paper* during the first or last few minutes of class (Angelo & Cross, 1993). Have students write a paragraph about their understanding of a particular topic or an assignment.
 1. Stop class two or three minutes early and ask students the following two questions (or some variation of them): "What was the most important thing you learned during this class?" and/or "What important question remains unanswered?"
 2. Students write their responses on index cards or half-sheets of scrap paper and hand them in.
 3. Faculty can quickly find out what students see as the most significant things they are learning and what other questions they have and can then decide whether any changes or adjustment in instruction are needed.
- **Muddiest Point:** Have students describe the *Muddiest Point* in a lecture, discussion, homework assignment, or field experience in a course that emphasizes integrating, synthesizing, and evaluating information (Angelo & Cross, 1993). This technique will help faculty determine which particular aspects of the course content are most difficult for students to learn.
 1. Ask student to jot down a quick response to one question: "What was the muddiest point in _____?"
 2. The question could be asked about a homework assignment, a video, a lecture, or some other component of the course.

- **Focused Listing:** Have students identify a web of concepts connected to one point in a *Focused Listing* (Angelo & Cross, 1993). This listing can help students focus attention on the significant aspects of one theory, person, or concept. This technique will help faculty identify what students think are the most important points related to a given topic and can be given before, during, or after addressing the topic.
 1. Identify a single concept, term, name, or principle that you expect students to understand.
 2. Have students quickly make a list of related terms that are important for understanding that topic.
 3. Give them a time limit or a limit on the number of items they should write – usually two or three minutes or five to ten items are appropriate.
- **One-Sentence Summary:** This technique involves having students answer the questions “Who does what to whom, when, where, how and why?” about a given topic. They must do this in one informative and grammatical sentence (usually a long one). This technique will help faculty find out how well students can concisely and appropriately summarize information on a selected topic.
 1. Select an important topic that you expect your students to be able to summarize.
 2. Try to answer the WDWWWWHW question yourself, as quickly as you can.
 3. Give students about twice as much time as it took you to come up with the sentence.
- **Empty Outlines:** To assess how well students have learned course content, give students a partially completed outline on a topic and have them fill in the blank spaces. This will help faculty determine how well students have learned the important aspects of a topic and will help students become more aware of the organization of the main points of the material.

Assessing Higher Order Thinking Skills (analysis, synthesis, problem solving, and application)

- **Pro and Con Grid:** Provide a prompt eliciting thoughtful advantages and disadvantages in relation to an issue or dilemma. Then assign a *Pro and Con Grid* that allows students to analyze the costs and benefits of an issue (Angelo & Cross, 1993).
- **Concept Map:** Have students create a *Concept Map* that analyzes and synthesizes ideas from readings or discussions (Angelo & Cross, 1993). Afterwards, ask students to post their maps (electronically or physically) for peer feedback. Students can organize their map around one idea or question. Using this technique will give faculty a visual representation of the associations that students have formed between different concepts.
 1. Select a concept that is both important for students to understand and that has a fair number of connections to other concepts.
 2. Have students begin by brainstorming a list of terms, phrases, or concepts related to the target concept.
 3. Then have students make a drawing or diagram that show the connections between the target concept and other concepts that they have learned.
 4. The concept map might look like a wheel with spokes, a geographical map, a flowchart, or some other form of representation.
 5. Having a simple example of a concept map using a different concept may be helpful for students who are unfamiliar with the idea of concept mapping.
- **Application Card:** Ask students to make an *Application Card* that presents one possible, real-world application of a principle, theory, or procedure (Angelo & Cross, 1993). Encourage creativity instead of reliance on text-book and lecture examples. This technique will help faculty determine how well students understand specific ideas and will encourage students to connect the concepts with real-life and their own previous knowledge.
 1. Choose a principle, generalization, theory, or procedure that students have been exposed to through reading or lecture.
 2. Give students an index card and have them write down a possible real-world application for the concept you chose.

References

Angelo, T.A. & Cross, P.K. (1993). *Classroom assessment techniques: A handbook for college teachers*. (2nd ed.). San Francisco: Jossey-Bass.