

Classroom Assessment Techniques - Overview

What is classroom assessment?

Classroom assessment is both a teaching approach and a set of techniques. The approach is that the more you know about what and how students are learning, the better you can plan learning activities to structure your teaching. The techniques are mostly simple, non-graded, anonymous, in-class activities that give both you and your students useful feedback on the teaching-learning process.

How is classroom assessment different?

Classroom assessment differs from tests and other forms of student assessment in that it is aimed at course improvement, rather than at assigning grades. The primary goal is to better understand your students' learning and so to improve your teaching.

How do I use Classroom Assessment Techniques?

- Decide what you want to learn from a classroom assessment.
- Choose a Classroom Assessment Technique (CAT) that provides this feedback, is consistent with your teaching style, and can be easily implemented in your class.
- Explain the purpose of the activity to students, then conduct it.
- After class, review the results and decide what changes, if any, to make.
- Let your students know what you learned from the CAT and how you will use this information.

Why should I use CATs?

For faculty, more frequent use of CATs can:

- Provide short-term feedback about the day-to-day learning and teaching process at a time when it is still possible to make mid-course corrections.
- Provide useful information about student learning with a much lower investment of time compared to tests, papers, and other traditional means of learning assessment.
- Help to foster good rapport with students and increase the efficacy of teaching and learning.
- Encourage the view that teaching is a formative process that evolves over time with feedback.

For students, more frequent use of CATs can:

- Help them become better monitors of their own learning.
- Help break down feelings of anonymity, especially in larger courses.
- Point out the need to alter study skills.
- Provide concrete evidence that the instructor cares about learning.

Selected CATs
For Getting Feedback on Student Learning and Response to Teaching [1]

Name:	Description:	What to do with the data:	Time required:
Minute paper ^[2]	During the last few minutes of the class period, ask students to answer on a half-sheet of paper: "What is the most important point you learned today?"; and, "What point remains least clear to you?". The purpose is to elicit data about students' comprehension of a particular class session.	Review responses and note any useful comments. During the next class periods emphasize the issues illuminated by your students' comments.	Prep: Low In class: Low Analysis: Low
Chain notes	Students pass around an envelope on which the teacher has written one question about the class. When the envelope reaches a student he/she spends a moment to respond to the question and then places the response in the envelope.	Go through the student responses and determine the best criteria for categorizing the data with the goal of detecting response patterns. Discussing the patterns of responses with students can lead to better teaching and learning.	Prep: Low In class: Low Analysis: Low
Memory matrix	Students fill in cells of a two-dimensional diagram for which instructor has provided labels. For example, in a music course, labels might consist of periods (Baroque, Classical) by countries (Germany, France, Britain); students enter composers in cells to demonstrate their ability to remember and classify key concepts.	Tally the numbers of correct and incorrect responses in each cell. Analyze differences both between and among the cells. Look for patterns among the incorrect responses and decide what might be the cause(s).	Prep: Med In class: Med Analysis: Med
Directed paraphrasing	Ask students to write a layman's "translation" of something they have just learned -- geared to a specified individual or audience -- to assess their ability to comprehend and transfer concepts.	Categorize student responses according to characteristics you feel are important. Analyze the responses both within and across categories, noting ways you could address student needs.	Prep: Low In class: Med Analysis: Med
One-sentence summary	Students summarize knowledge of a topic by constructing a single sentence that answers the questions "Who does what to whom,	Evaluate the quality of each summary quickly and holistically. Note whether students have identified the essential concepts of the class	Prep: Low In class: Med Analysis: Med

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	when, where, how, and why?" The purpose is to require students to select only the defining features of an idea.	topic and their interrelationships. Share your observations with your students.	
Exam evaluations	Select a type of test that you are likely to give more than once or that has a significant impact on student performance. Create a few questions that evaluate the quality of the test. Add these questions to the exam or administer a separate, follow-up evaluation.	Try to distinguish student comments that address the fairness of your grading from those that address the fairness of the test as an assessment instrument. Respond to the general ideas represented by student comments.	Prep: Low In class: Low Analysis: Med
Application cards	After teaching about an important theory, principle, or procedure, ask students to write down at least one real-world application for what they have just learned to determine how well they can transfer their learning.	Quickly read once through the applications and categorize them according to their quality. Pick out a broad range of examples and present them to the class.	Prep: Low In class: Low Analysis: Med
Student-generated test questions	Allow students to write test questions and model answers for specified topics, in a format consistent with course exams. This will give students the opportunity to evaluate the course topics, reflect on what they understand, and what are good test items.	Make a rough tally of the questions your students propose and the topics that they cover. Evaluate the questions and use the goods ones as prompts for discussion. You may also want to revise the questions and use them on the upcoming exam.	Prep: Med In class: High Analysis: High (may be homework)
Assessing group effectiveness	This assessment technique focuses on the group task, not on its members. It asks group members individually and anonymously to identify their sense of the task(s) before them, explain the organization they see as necessary to accomplishing the task, and reflect on the diversity of talents and effectiveness of teamwork required to conclude the task successfully.	Ideally, the completed assessment forms circulate within the group, become the focus of constructive discussion.	Prep: Med In class: High Analysis: Med (may be homework)
Background knowledge probe	A "pretest" to assess what the student already knows before coming to class.	Used to assess the mindset and language of students' private worlds. This allows the	Prep: High In Class: High

Name:	Description:	What to do with the data:	Time required:
		instructor to prepare a learning environment where the new knowledge is more likely to stick.	Analysis: High (may be used to assess student outcomes)
Characteristic features	This assessment technique asks students to fill in blanks with plus and minus signs pertaining to traits that do or do not apply to a topic.	This assessment technique is particularly useful for seeing whether students are separating items or ideas that are easily confused	Prep: Med In class: High Analysis: Low
Goal ranking and matching	A survey of students' goals, ranked, for the course.	Is designed to help make goals and expectations visible to yourself and to assist you in discussing them with others, including the instructor. If you do this exercise as an instructor yourself, it also reveals the match between your goals and those of your audience.	Prep: Med In class: High Analysis: Med
RSQC2 - recall, summarize, question, comment, and connect	Students take two minutes to <i>recall</i> and list in rank order the most important ideas from a previous day's class. Then they take another two minutes to <i>summarize</i> those points in a single sentence in order to "chunk" the information. Next, students are asked to write one major <i>question</i> that they want answered. Finally, students identify a thread or theme to <i>connect</i> this material to the course's major goal. As an option, students may add a <i>comment</i> regarding their confidence in or wariness of the specific course content.	RSQC2 is an assessment device that encourages students to recall and review class information comprehensively. In so doing, it allows the professor to compare students' perspectives against his or her own. Student feedback through RSQC2 may be crucial for aiding a professor to identify where students really need help the most but get it the least.	Prep: Low In class: Med Analysis: Med
Self-assessment	The instructor presents students with alternative ways of looking at a controversial issue and asks them to indicate, by writing on a 3x5 card, which viewpoint applies	When using this technique, an instructor's first challenge is to recognize potential obstacles to learning ahead of time, compose 2-4 fair paradigm statements, and offer 2-4	Prep: Med In class: High Analysis: Med

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	to them. The responses are then swapped 3-4 times face down, thus allowing the overall results to be read publicly and surveyed by a show of hands, this without compromising confidentiality	reasonable and revealing choices. A second challenge is to capture what is revealed and employ it as feedback so that students effectively surmount their personal obstacles. The technique is most successful when the level of trust is high.	
Guided essay	Students answer a series of questions in an integrated essay.	It yields feedback to students on the approaches they take when they deal with matters of real controversy and provides information to their instructors on the level of sophistication present as students define and defend their positions.	Prep: High In class: High Analysis: High (may be homework)
Muddiest point	Students are asked to write down what is <i>least</i> clear to them.	An interesting and potentially powerful integrative exercise because it requires students, first, to rate their own understanding across several topics and, second, to ponder, if even momentarily, <i>why</i> one particular topic should be selected as <i>least</i> understood.	Prep: Low In class: Med Analysis: High
Transfer and apply	Students are asked to recall ideas, techniques, strategies, and tactics from class and list ways they can be applied	Used to assess students' recognition of ideas they have learned and their ability to <i>transfer</i> them to applications in their own environment.	Prep: Med In class: Med Analysis: High (may be homework)

[1] Details on these and others available from Angelo & Cross, Classroom Assessment techniques, 1993.

[2] The Bureau of Evaluative Studies and Testing (BEST) can administer the Minute Paper electronically.

Published Resources:

Angelo, T.A. & Cross, P.K. (1993). *Classroom Assessment Techniques* (2nd ed.). San Francisco: Jossey-Bass.

Davis, B.G. (1993). *Tools for Teaching*. San Francisco: Jossey-Bass.