

Selected CATs for Getting Feedback on Student Learning and Response to Teaching

Assessing Prior Knowledge, Recall, and Understanding			
Name:	Description:	What to do with the data:	Time required:
Background Knowledge Probe	This technique is designed to collect specific and useful, feedback on students' prior learning. These are short, simple questionnaires prepared by instructors for use at the beginning of a course, at the start of a new unit or lesson, or prior to introducing an important new topic. Students may write short answers, circle the correct response to multiple-choice questions, or both.	For fast analysis responses can be sorted into "prepared" and "not prepared" piles. For a detailed analysis answers can be classified into the following categories: [-1] = erroneous background knowledge; [0] = no relevant background knowledge; [+1] = some relevant background knowledge; [+2] = significant background knowledge. By summing the individual numerical ratings for each question, the instructor can find out whether the class as a whole has more knowledge about some topics than about others.	Prep: Med In class: Low Analysis: Med
Empty Outline	Students fill in an empty or partially completed outline of an in-class presentation or homework assignment within a limited amount of time.	You may wish to compare the actual responses to those you expected, counting the number of students who agreed or disagreed with your responses for each item. Instead of or in addition to this step, you can look at the range of responses among students, focusing more on the patterns that emerge than on how well they match your expectations.	Prep: Med In class: Low Analysis: Med
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
Minute Paper	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 following class periods emphasize the issues illuminated by your students' comments.	Prep: Low In class: Low Analysis: Low
Muddiest Point	At the end of class, ask students to jot down a quick response to one question: "What was the muddiest point in _____ ?"	As with everything else about this technique, data analysis can and should be kept very simple. Quickly read through at least half of the responses, looking for common types of muddy points. Then go back through all the responses and sort them into piles -several piles containing groups of related muddy points, and one "catch-all" pile made up of one-of-a-kind responses. You may want to count the responses in each group before you decide which to deal with. Or you may want to group together the muddy points that concern facts and principles, those that concern concepts, and those that concern skills.	Prep: Low In class: Low Analysis: Low

Assessing Skill in Analysis and Critical Thinking			
Name:	Description:	What to do with the data:	Time required:
Categorizing Grid	Students are given a grid containing two or three important categories – super-ordinate concepts they have been studying – along with a scrambled list of subordinate terms, images, equations, or other items that belong in one or another of those categories. Learners are then given a very limited time to sort the subordinate terms into the correct categories on the grid.	In most cases, you can simply check the grids to see whether students have placed the right items in the correct boxes, making note of those items that are most often miscategorized or left out entirely. Look for patterns in the incorrect responses that can help you see which kinds of examples, and/or which categories, are most difficult for students to deal with.	Prep: Low In class: Low Analysis: Low
Pro and Con Grid	This assessment forces students to go beyond their first reactions, to search for at least two sides to the issue in question, and to weigh the value of competing claims. Focus on a decision, a judgment, a dilemma, or an issue that has teaching and learning implications for your students. Write out a prompt that will elicit thoughtful pros and cons in relation to this issue or dilemma. You may wish to indicate a specific point of view that students should adopt in coming up with their lists. Finally, let students know how many pros and cons you expect and how they are to be expressed.	Start by listing the points that students have put forth as pros and as cons and by doing a simple frequency count. Which points are most often mentioned? Compare the students' grid with your. Have they omitted some points that you expected them to mention? Have they included some points that you regards as extraneous? How balanced are the two "sides" of the grid? These are possible matters to report on and to discuss in class when you give the class feedback.	Prep: Low In class: Low Analysis: Low to Med
Assessing Skill in Synthesis and Creative Thinking			
Name:	Description:	What to do with the data:	Time required:
One-Sentence Summary	Students summarize knowledge of a topic by constructing a single sentence that answers the questions "Who does what to whom, when, where, how, and why?" The purpose is to require students to select only the defining features of an idea.	Evaluate the quality of each summary quickly and holistically. Note whether students have identified the essential concepts of the class topic and their interrelationships. Share your observations with your students.	Prep: Low In class: Med Analysis: Med
Invented Dialogues	Students can create Invented Dialogues by carefully selecting and weaving together actual quotes from primary sources. Or, on a more challenging level, they may invent reasonable quotes that fit the character of the speakers and the context.	In these Invented Dialogues, you should look for the same elements you mentioned in your assignment handout. You can count the number of important points that the students adequately address in their dialogues and rate the quality of reasoning expressed in the exchanges. You might want to create a checklist of points to look for as you read through the dialogues.	Prep: Med to High In class: High Analysis: High
Assessing Skill in Application and Performance			
Name:	Description:	What to do with the data:	Time required:
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

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 good 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

The above is adapted from Angelo, T. A., & Cross, P.H. Classroom Assessment Techniques: A Handbook for College Teachers. (2nd ed.) San Francisco: Jossey-Bass, 1993.