Georgia Tech Center for Teaching and Learning

Sample Classroom Assessment Techniques (CATs)

Assessing Content Knowledge and Skills[1]

CAT Description	When & Where	Analysis	Time Required (**L**ow/**M**edium/**H**igh)		
			before	**during**	**after**
Analytic Memos. A one- or two-page analysis of a specific issue.	Use this technique to help students prepare for graded writing assignments.	Read each memo quickly against a checklist of 3-5 items. For each memo check off "well done," "acceptable," and "needs work" for each item on the checklist. Add up the number of "needs work" marks in each category and decide how you will respond.	H	H	H
Application Cards. Students write a possible application for a concept, principle, theory, or procedure on an index card.	Encourage students to keep an "applications journal" in their class notebooks.	For each application card, determine if the example is 'great', 'acceptable', 'marginal', or 'not acceptable'. Pick out a sample from each category to share and discuss with students in class.	L	L/M	L/M
Background Knowledge Probe. A short questionnaire administered at the beginning of a course or before a new unit to assess students' background knowledge of the topic.	Focus your probe on specific information or concepts rather than on general knowledge.	Divide responses into 3 or 4 groups according to how much relevant background knowledge students have. You can also classify responses as "prepared" and "not prepared."	M	L	M
Concept Maps. Drawings that show mental connections students make	Use this technique at the beginning of the semester (or a new unit) to discover what	Analyze student maps for the concepts they included and the types of relations they identified among them.	M	M	M/H

[1] This chart relies heavily on Angelo, Thomas A. and Cross, K. Patricia. (1993). *Classroom Assessment Techniques: A Handbook for College Teachers*, 2nd edition. San Francisco, CA: Jossey-Bass. See also http://ctl.gatech.edu/resources/best-practices/GnR/CATs for more information.

between concepts they have learned.	preconceptions and misconceptions students have about the topic.	Code the data according to degree of relationship (primary or secondary) and type of relationship (set/subset, part/whole, etc.).			
Defining Features Matrix. A matrix that asks students to categorize concepts according to the presence (+) or absence (-) of defining features.	Use this technique to ask students to distinguish between similar or closely related concepts.	Scan student matrices for incorrect responses and tally the answers. Look for patterns in student errors and determine how to address their misconceptions.	M	L	L
Documented Problem Solutions. A track of the steps students take in solving a problem.	Use this assessment to complement homework assignments.	Skim the answers, then select and compare well-documented solutions with both correct and incorrect answers. Locate the spots in the solution processes that determined correct or incorrect results. Note 3-4 main insights and share your them with students.	L	M	M/H
Memory Matrix. A two-dimensional diagram assessing whether students can recall course content and organize new information. Row and column labels are provided, but the cells within have to be filled in by students.	Use this technique after lectures or readings that present a large amount of information that can be categorized.	Tally the number of correct and incorrect responses for each cell. Look for differences and patterns between and among the cells to determine what students know well.	M	L	M
Minute Paper. A brief reflection at the end of the class in which students answer the following questions: “What was the most important thing you learned during this class?” and “What important	Try using this technique at the beginning of a class session to check how much students remember from the previous class.	Tabulate the responses and note any useful comments. Then, determine how you will address student questions.	L	L	L

question remains unanswered?"					
Student-Generated Test Questions. Students come up with and answer test questions.	Consider including student-generated questions in the tests.	Examine the types of questions students propose (paraphrase, summary, analysis, etc.) and the range of topics they cover. Select a few questions to discuss with students in class.	M	M/H	M/H
What's the Principle? A problem-solving activity that provides students with a few problems and asks them to state the principle that best applies to each problem.	Modify this technique by giving students only the examples and ask them to recall the principles.	Tally the number of correct and incorrect answers, and note patterns in wrong answers.	M	L	L