

## 50 Classroom Assessment Techniques (CATs)

“Classroom assessment helps individual college teachers obtain useful feedback on what, how much, and how well their students are learning. Faculty [and GSIs] can then use this information to refocus their teaching to help students make their learning more efficient and effective” (Angelo & Cross, 1993, p. 3). Below are the fifty classroom assessment techniques Angelo and Cross (1993) suggested.

### I. Techniques for Assessing Course-Related Knowledge & Skills

#### A. Assessing Prior Knowledge, Recall, and Understanding

The CATs in this group focus on assessing declarative learning – the content of a particular subject.

1. Focused Listing: Focuses students’ attention on a single important term, name, or concept from a lesson or class session and directs students to list ideas related to the “focus”
2. Memory Matrix: Students complete a table about course content in which row and column headings are complete but cells are empty
3. Background Knowledge Probes: Short, simple questionnaires prepared by instructors for use at the beginning of a course or at the start of new units or topics; can serve as a pretest
4. Misconception/Preconception Check: Intended to uncover prior knowledge or beliefs that may hinder or block new learning; can be designed to uncover incorrect or incomplete knowledge, attitudes, or values
5. Empty Outlines: In a limited amount of time students complete an empty or partially completed outline of an in-class presentation or homework assignment
6. Minute Paper: The most frequently used CAT; students answer 2 questions (What was the most important thing you learned during this class? What important question remains unanswered?)
7. Muddiest Point: Considered by many as the simplest CAT; students respond to the question “What was the most unclear or confusing point in (lecture, homework, discussion)?”

#### B. Assessing Skill in Analysis and Critical Thinking

The CATs in this group focus on analysis—the breaking down of information, questions, or problems to facilitate understanding and problem solving.

8. Defining Features Matrix: Students categorize concepts according to the presence or absence of important defining features
9. Categorizing Grid: Student complete a grid containing 2 or 3 overarching concepts and a variety of related subordinate elements associated with the larger concepts
10. Pro and Con Grid: Students list pros/cons, costs/benefits, advantages/disadvantages of an issue, question, or value of competing claims
11. Content, Form, and Function Outlines: In an outline form, students analyze the “what” (content), “how” (form), and “why” (function) of a particular message (e.g. poem, newspaper story, critical essay); also called “What, How, & Why Outlines
12. Analytic Memos: Students write a one- or two-page analysis of a specific problem or issue to help inform a decision-maker

### **C. Assessing Skill in Synthesis and Creative Thinking**

The CATs in this group focus on synthesis — stimulating the student to create and allowing the faculty to assess original intellectual products that result from a synthesis of course content and the students' intelligence, judgment, knowledge, and skills.

13. One-Sentence Summary: Students answer the questions “Who does what to whom, when, where, how, and why?” (WDWWWWHW) about a given topic and then create a single informative, grammatical, and long summary sentence
14. Word Journal: Involves a 2 part response; 1st the student summarizes a short text in a single word and 2nd the student writes 1-2 paragraphs explaining the word choice
15. Approximate Analogies: Students simply complete the 2nd half of an analogy—a is to b as ? is to ?; described as approximate because the rigor of formal logic is not required
16. Concept Maps: Students draw or diagram the mental connections they make between a major concept and other concepts they have learned
17. Invented Dialogues: Students synthesize their knowledge of issues, personalities, and historical periods into the form of a carefully structured illustrative conversation; students can select and weave quotes from primary sources or invent reasonable quotes that fit characters and context
18. Annotated Portfolios: Students assemble a very limited number of examples of creative work and supplement them with their own commentary on the significance of examples

### **D. Assessing Skill in Problem Solving**

The CATs in this group focus on problem solving skills — recognizing different types of problems, determining the principles and techniques to solve them, perceiving similarities of problem features, and being able to reflect and then alter solution strategies.

19. Problem Recognition Tasks: Students recognize and identify particular problem types
20. What's the Principle?: Students identify the principle or principles to solve problems of various types
21. Documented Problem Solutions: Students track in a written format the steps they take to solve problems as if for a “show & tell”
22. Audio- and Videotaped Protocols: Students work through a problem solving process and it is captured to allow instructors to assess metacognition (learner's awareness of and control of thinking)

### **E. Assessing Skill in Application and Performance**

The CATs in this group focus on students' application of conditional knowledge – knowing when and where to apply what they know and can do.

23. Directed Paraphrasing: Students paraphrase part of a lesson for a specific audience demonstrating ability to translate highly specialized information into language the clients or customers can understand
24. Application Cards: Students generate examples of real-world applications for important principles, generalizations, theories, or procedures
25. Student-Generated Test Questions: Students generate test questions and model answers for critical areas of learning
26. Human Tableau or Class Modeling: Students transform and apply their learning into doing by physically modeling a process or representing an image.

27. Paper or Project Prospectus: Students create a brief plan for a paper or project based on your guiding questions

## **II. Techniques for Assessing Learner Attitudes, Values, and Self-Awareness**

### **A. Assessing Students' Awareness of Their Attitudes and Values**

The CATs in this group are designed to assist instructors in developing students' attitudes, opinions, values, and self-awareness within the course curriculum.

28. Classroom Opinion Polls: Students indicate degree of agreement or disagreement with a statement or prompt
29. Double-entry Journals: Students record and respond to significant passages of text
30. Profiles of Admirable Individuals: Students write a brief description of the characteristics of a person they admire in a field related to the course
31. Everyday Ethical Dilemma: Students respond to a case study that poses a discipline-related ethical dilemma
32. Course-related Self-Confidence Surveys: Students complete an anonymous survey indicating their level of confidence in mastering the course material

### **B. Assessing Students' Self-Awareness as Learners**

The CATs in this group help students articulate their goals and self-concepts in order to make connections between their goals and those of the course.

33. Focused Autobiographical Sketches: Students write a brief description of a successful learning experience they had relevant to the course material
34. Interest/Knowledge/Skills Checklists: Students complete a checklist survey to indicate their knowledge, skills and interest in various course topics
35. Goal Ranking and Matching: Students list and prioritize 3 to 5 goals they have for their own learning in the course
36. Self-Assessment Ways of Learning: Students compare themselves with several different "learning styles" profiles to find the most likely match

### **C. Assessing Course-Related Learning and Study Skills, Strategies, and Behaviors**

The CATs in this group assist students in focusing attention on the behaviors they engage in when trying to learn.

37. Productive Study-Time Logs: Students complete a study log to record the quantity and quality of time spent studying for a specific course
38. Punctuated Lectures: Students briefly reflect then create a written record of their listening level of a lecture. Repeat twice in the same lecture and 2- 3 times over 2 to 3 weeks
39. Process Analysis: Students outline the process they take in completing a specified assignment
40. Diagnostic Learning Logs: Students write to learn by identifying, diagnosing, and prescribing solutions to their own learning problems

### **III. Techniques for Assessing Learner Reactions to Instruction**

#### **A. Assessing Learner Reactions to Teachers and Teaching**

The CATS in this group are designed to provide context-specific feedback that can improve teaching within a course.

41. Chain Notes: On an index card that is distributed in advance, each student responds to an open-ended prompt about his or her mental activity that is answered in less than a minute
42. Electronic Survey Feedback: Students respond to a question or short series of questions about the effectiveness of the course.
43. Teacher-designed Feedback Forms: Students respond to specific questions through a focused feedback form about the effectiveness of a particular class session
44. Group Instructional Feedback Technique: Students respond to three questions related to their learning in the course (basically, what works, what doesn't, and how can it be improved)
45. Classroom Assessment Quality Circles: A group or groups of students provide the instructor with ongoing assessment of the course through structured interactions

#### **B. Assessing Learner Reactions to Class Activities, Assignments, and Materials**

The CATS in this group are designed to provide instructors with information that will help them improve their course materials and assignments.

46. RSQC2 (Recall, Summarize, Question, Connect and Comment): Students write brief statements that recall, summarize, question, connect and comment on meaningful points from previous class
47. Group-Work Evaluation: Students complete a brief survey about how their group is functioning and make suggestions for improving the group process
48. Reading Rating Sheets: Students complete a form that rates the effectiveness of the assigned readings
49. Assignment Assessments: Students respond to 2 or 3 open-ended questions about the value of an assignment to their learning
50. Exam Evaluations: Students provide feedback about an exam's learning value and/or format

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