Classroom Assessment Techniques

(Adapted from work by: Danielle Mihram, Director, USC Center for Excellence in Teaching)

1. What is "Classroom Assessment"?

"Classroom Assessment" is a formative rather than a summative approach to assessment. Its purpose is to improve the quality of student learning, not to provide evidence for evaluating or grading students. It provides faculty with feedback about their effectiveness as teachers, and it gives students a measure of their progress as learners. The aim of classroom assessments is to provide faculty with information on what, how much, and how well students are learning.

Classroom Assessment Techniques (CATs) are flexible and can be both speedy and anonymous for students (although they need not be).

Benefits to Faculty

Classroom Assessment helps faculty to focus on student learning. By determining what students have learned and what is unclear, instructors can focus the class more effectively to meet the learning needs of that group. This may mean reviewing some areas, or spending less time in other areas. Unlike student evaluation surveys [summative evaluation] which are typically given at the end of the semester, Classroom Assessment provides an on-going formative evaluation. The instructor can find out what can be changed immediately to help students to learn.

Benefits to Students

Students may be hesitant to ask questions during class. Classroom Assessments give students opportunities to provide anonymous feedback to their instructor about their learning. Students often discover, as the instructor reviews the feedback, that others in the class had similar questions. (Theirs was not a "dumb question" after all).

Classroom assessment activities can themselves be positive learning activities for students; they can be developed both to promote (and not just measure) writing skills or critical thinking skills, and to increase student motivation to take themselves and their learning more seriously. In addition, students may become more involved in their learning when they find that others in the class learned some interesting things that they had not picked up from the class session. Through greater involvement, students are likely to become more self-directed learners, and may be more motivated to successfully complete the class.

I. Assessing Prior Knowledge, Recall, and Understanding

1. <u>Background Knowledge Probe</u>: 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; typically elicits more detailed information than other techniques.
2. <u>Focused Listing</u>: 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."
3. <u>Misconception/Preconception Check</u>: focus is on uncovering prior knowledge or beliefs that hinder or block new learning; can be designed to uncover incorrect or incomplete knowledge, attitudes, or values
4. <u>Empty Outlines</u>: in a limited amount of time students complete an empty or partially completed outline of an in-class presentation or homework assignment
5. <u>Memory Matrix</u>: students complete a table about course content in which row and column headings are complete but cells are empty
6. <u>Minute Paper</u>: perhaps the most frequently used CAT; students answer 2 questions (What was the most important thing you learned during this class? And What important question remains unanswered?)
7. <u>Muddiest Point</u>: considered by many as the simplest CAT; students respond to 1 question (What was the muddiest point in ?); well suited to large, lower division courses but not to those which emphasize integration, synthesis and evaluation

II. Assessing Skill in Analysis and Critical Thinking
1. <u>Categorizing Grid</u>: student complete a grid containing 2 or 3 overarching concepts and a variety of related subordinate elements associated with the larger concepts
2. <u>Defining Features Matrix</u>: students categorize concepts according to presence or absence of important defining features
3. <u>Pro and Con Grid</u>: students list pros/cons, costs/benefits, advantages/disadvantages of an issue, question or value of competing claims
4. <u>Content, Form, and Function Outlines</u>: in an outline form, students analyze the
5. "what" (content), "how" (form), and "why" (function) of a particular message (e.g. poem, newspaper story, billboard, critical essay); also called "What, How, & Why Outlines
6. <u>Analytic Memos</u>: students write a one- or two-page analysis of a specific problem or issue to help inform a decision-maker

III. Assessing Skill in Synthesis and Creative Thinking
1. <u>One-Sentence Summary</u>: students answer the questions "Who does what to whom, when, where, how, and why?" (WDWWWWHW) about a given topic and then creates a single informative, grammatical, and long summary sentence
2. <u>Word Journal</u>: 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
3. <u>Approximate Analogies</u>: students simply complete the 2nd half of an analogy—a is to b as x is to y; described as approximate because rigor of formal logic is not required
4. <u>Concept Maps</u>: students draw or diagram the mental connections they make between a major concept and other concepts they have learned
5. <u>Invented Dialogues</u>: students synthesize their knowledge of issues, personalities, and historical periods into the form of a carefully structured illustrative conversation; 2 levels of invention (select and weave quotes from primary sources or invent reasonable quotes that fit characters and context)
6. <u>Annotated Portfolios</u>: students assemble a very limited number of examples of creative work and supplement with own commentary on significance of examples

IV. Assessing Skill in Problem Solving
1. <u>Problem Recognition Tasks</u>: students recognize and identify particular problem types
2. <u>What's the Principle</u>?: students identify principle or principles to solve problems of various types
3. <u>Documented Problem Solutions</u>: students track in a written format the steps they take to solve problems as if for a "show & tell"
4. <u>Audio- and Videotaped Protocols</u>: students work through a problem solving process and it is captured to allow instructors to assess metacognition (learner's
5. awareness of and control of thinking)

V. Assessing Skill in Application and Performance
1. <u>Directed Paraphrasing</u>: students paraphrase part of a lesson for a specific audience
2. demonstrating ability to translate highly specialized information into language the clients or customers can understand
3. <u>Application Cards</u>: students generate examples of real-work applications for important principles, generalizations, theories or procedures
4. <u>Student-Generated Test Questions</u>: students generate test questions and model answers for critical areas of learning
5. <u>Human Tableau or Class Modeling</u>: Students transform and apply their learning into doing by physically modeling a process or representing an image.

6. <u>Paper or Project Prospectus</u>: Students create a brief plan for a paper or project based on your guiding questions.

VI. Assessing Students' Awareness of Their Attitudes and Values
1. <u>Classroom Opinion Polls</u>: Students indicate degree of agreement or disagreement with a statement or prompt.
2. <u>Double-entry Journals</u>: Students record and respond to significant passages of text
3. <u>Profiles of Admiral Individuals</u>: Students write a brief description of the characteristics of a person they admire in a field related to the course
4. <u>Everyday Ethical Dilemma</u>: Students respond to a case study that poses a discipline-related ethical dilemma
5. <u>Course-related Self-Confidence Surveys</u>: Students complete an anonymous survey indicating their level of confidence in mastering the course material

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

VIII. Assessing Course-Related Learning and Study Skills, Strategies, and Behaviors
1. <u>Productive Study-Time Logs</u>: Students complete a study log to record the quantity and quality of time spent studying for a specific course.
2. <u>Punctuated Lectures</u>: 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.
3. <u>Process Analysis</u>: Students outline the process they take in completing a specified assignment.
4. <u>Diagnostic Learning Logs</u>: Students write to learn by identifying, diagnosing, and prescribing solutions to their own learning problems.

IX. Assessing Learner Reactions to Teachers and Teaching
1. <u>Chain Notes</u>: 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.
2. <u>Electronic Survey Feedback</u>: Students respond to a question or short series of questions about the effectiveness of the course.

3. Teacher-designed Feedback Forms: Students respond to specific questions through a focused feedback form about the effectiveness of a particular class session.
4. Group Instructional Feedback Technique: Students respond to three questions
related to the student's learning in the course.
5. Classroom Assessment Quality Circles: A group or groups of students provide the
instructor with ongoing assessment of the course through structured interactions.

X. Assessing Learner Reactions to Class Activities, Assignments, and Materials

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