Classroom Assessment Techniques


“To improve learning, students need to receive appropriate and focused feedback early and often; they also need to learn how to assess their own learning.” (Page 9). “Classroom Assessment is a systematic approach to formative evaluation, and Classroom Assessment Techniques (CATs) are simple tools for collecting data on student learning in order to improve it.” (Page 25).

Using CATs to assess SI participants’ knowledge level at the beginning or at the end of an SI session. These can be used to provide information at the beginning of the SI session to allow the SI leader to change the suggested agenda of activities or used at the end of the SI session as another comprehension checkpoint for the participants and the SI Leader. These activities “…assess students’ learning of facts and principles, often called declarative learning; that is, they assess how well students are learning the content of the particular subject they are studying.” (p. 119)

- Misconception/Preconception Check (pp. 132-137) This is a technique is focused on uncovering prior knowledge or beliefs that may hinder or block further learning. It is important that students connect to the correct schema.

- Minute Paper (pp. 148-153). This is the most popular of all the CATs. Students are asked to take one or two minutes to respond to the following two questions: “What was the most important thing you learned during this SI session?” and “What important question remains unanswered?” SI leaders can use these to help guide the upcoming SI session and also to see what students most valued from the session. Comments from the students can be used at the following SI session as an opening activity or discussion item.

- Muddiest Point (pp. 154-158). Students take one minute to respond to what was the “muddiest” or most unclear point in the SI session. This gives feedback on what points need additional time or another approach to be taken in dealing with them.

Using CATs during SI sessions as a modeled study strategy. These are activities that can be done in a large group and then used by the SI participants when they are alone or studying with other students.

- Focused Listing (pp. 126-131). Students focus on a single important term, name, or concept and are directed to list several ideas that are closely related to that “focus point.” This helps the students to see the connections of the ideas. The group would then share their lists with each other.

- Empty Outlines (pp. 138-141). The SI leader provides a skeleton outline of the lecture. SI participants use their lecture notes and textbook to complete the outline. This helps them recall and organize the main points of a lesson within an appropriate knowledge structure, making retention more likely and aiding understanding. It also provides a model of a schema for organization that could be used with other lecture material.
Memory Matrix (pp. 142-147). The matrix is a two-dimensional diagram, a rectangle divided into rows and columns used to organize information and illustrate relationships. The SI leader may provide the row and column headings, or it may be a group activity to create the matrix box and name the headings as a group. In addition to the matrix, a variety of other visual organization diagrams could be used. Research suggests that most students fail to use visual organizers with review of their course material.

Categorizing Grid (pp. 160-163). Somewhat opposite of the Memory Matrix, in this activity the matrix and the headings are provided by the SI leader. A list of the contents of the matrix is also provided. The SI participant is then to fill the matrix with the individual items. This allows an evaluation of the students’ “sorting rules.” Students discuss as a group the rules that they used in sorting the information.

Pro and Con Grid (pp. 168-171). This activity provides important information of students analyses and on their capacity for objectivity. Students must search for at least two sides.

One Sentence Summary (pp. 183-187). Students are asked to synthesize an entire lecture into a single informative, grammatical, and long summary sentence.

Word Journal (pp. 188-192). First, the student summarizes a short text in a single word. Second, the student writes a paragraph or two explaining whey he or she chose that word. This helps students to write highly condensed abstracts and to “chunk” large amounts of information for more effective storage in long-term memory.

Concept Maps (pp. 197-202). Students draw or diagram the mental connections between a major lecture concept and other concepts that the students already know. This helps students to see connections. It also provides feedback to the SI leader how the students are connecting the information.

Problem Recognition Tasks (pp. 214-217). The students’ task is to recognize and identify the particular type of problem each example represents. This strategy is very helpful in problem-solving SI sessions (e.g., math, chemistry). Identifying the problem type and the first step to take in solving are significant hurdles for many students.

What’s the Principle? (pp. 218-221). This assesses students’ ability to associate specific problems with the general principles used to solve them. The focus is on the general principle and not the precise individual steps taken to solve the problem.

Documented Problem Solutions (pp. 222-225). Students are asked to identify the specific steps taken to solve the problem. By analyzing these detailed protocols in the SI session, students can see the different steps taken by other students. The group can build a protocol for others to use in solving future problems of the same category.

Application Cards (pp. 236-239). After students have dealt with an important principle, generalization, theory, or procedure, the SI leader hands out an index card and asks them to write down at least one possible, real-world application for what they have just learned. This helps them to connect newly learned concepts with prior knowledge. This helps to increase relevance of what they are learning.

Student-Generated Test Questions (pp. 240-243). Students are asked to generate possible examination questions. This provides feedback through seeing what students consider the most important content, what they understand as fair and useful text questions, and how well they can answer the questions that they have posed. It also empowers students to believe that they can predict and study for examinations in a proactive manner rather than believing that exams are chance events and that study is often unpredictable.