CLASSROOM ASSESSMENT TECHNIQUE EXAMPLES

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Fifty Classroom Assessment Techniques are presented in this book with examples of how they have been used, pros, cons, time commitment, and ideas for adaptation. A shortened description of 10 CATs that either assess: course-related knowledge and skills; learner attitude, values, and self-awareness; and reactions to instruction are below. For more information, two copies of the book are located in the TLC library and many websites can be found with descriptions and examples by just searching by CAT name.

Minute Paper

Description:

No other technique has been used more often or by more college teachers than the *Minute Paper.* This technique -- also known as the *One-Minute Paper* and the *Half-Sheet Response* -- provides a quick and extremely simple way to collect written feedback on student learning. To use the *Minute Paper,* an instructor stops class two or three minutes early and asks students to respond briefly to some variation on the following two questions: "What was the most important thing you learned during this class?" and "What important question remains unanswered?" Students they write their responses on index cards or half-sheets of scrap paper and hand them in.

Step-by-Step Procedure:

Decide first what you want to focus on and, as a consequence, when to administer the *Minute Paper.* If you want to focus on students' understanding of a lecture, the last few minutes of class may be the best time. If your focus is on a prior homework assignment, however, the first few minutes may be more appropriate.

1. Using the two basic questions from the "Description" above as starting points, write *Minute Paper* prompts that fit your course and students. Try out your *Minute Paper* on a colleague or teaching assistant before using it in class.
2. Plan to set aside five to ten minutes of your next class to use the technique, as well as time later to discuss the results.
3. Before class, write one or, at the most, two *Minute Paper* questions on the chalkboard or prepare an overhead transparency.
4. At a convenient time, hand out index cards or half-sheets of scrap paper.
5. Unless there is a very good reason to know who wrote what, direct students to leave their names off the papers or cards.
6. Let the students know how much time they will have (two to five minutes per question is usually enough), what kinds of answers you want (words, phrases, or short sentences), and when they can expect your feedback.

Muddiest Point

Description:

The *Muddiest Point* is just about the simplest technique one can use. It is also remarkable efficient, since it provides a high information return for a very low investment of time and energy. The technique consists of asking students to jot down a quick response to one question: "What was the muddiest point in .....?" The focus of the *Muddiest Point* assessment might be a lecture, a discussion, a homework assignment, a play, or a film.

Step-by-Step Procedure:

1. Determine what you want feedback on: the entire class session or one self-contained segment? A lecture, a discussion, a presentation?
2. If you are using the technique in class, reserve a few minutes at the end of the class session. Leave enough time to ask the question, to allow students to respond, and to collect their responses by the usual ending time.
3. Let students know beforehand how much time they will have to respond and what use you will make of their responses.
4. Pass out slips of paper or index cards for students to write on.
5. Collect the responses as or before students leave. Stationing yourself at the door and collecting "muddy points" as students file out is one way; leaving a "muddy point" collection box by the exit is another.
6. Respond to the students' feedback during the next class meeting or as soon as possible afterward.

One-Sentence Summary

Description:

This simple technique challenges students to answer the questions "Who does what to whom, when, where, how, and why?" (represented by the letters WDWWWWHW) about a given topic, and then to synthesize those answers into a simple informative, grammatical, and long summary sentence.

Step-by-Step Procedure:

1. Select an important topic or work that your students have recently studied in your course and that you expect them to learn to summarize.
2. Working as quickly as you can, answer the questions "Who Did/Does What to Whom, When, Where, How and Why?" in relation to that topic. Note how long this first step takes you.
3. Next, turn your answers into a grammatical sentence that follows WDWWWWHS pattern. Not how long this second step takes.
4. Allow your students up to twice as much time as it took you to carry out the task and give them clear direction on the One-Sentence Summary technique before you announce the topic to be summarized.

What's the Principle?

Description:

After students figure out what type of problem they are dealing with, they often must then decide what principle or principles to apply in order to solve the problem. This technique focuses on this step in problem solving. It provides students with a few problems and asks them to state the principle that best applies to each problem.

Step-by-Step Procedure:

1. Identify the basic principles that you expect students to learn in your course. Make sure focus only on those that students have been taught.
2. Find or create sample problems or short examples that illustrate each of these principles. Each example should illustrate only one principle.
3. Create a *What's the Principle?* form that includes a listing of the relevant principles and specific examples or problems for students to match to those principles.
4. Try out your assessment on a graduate student or colleague to make certain it is not too difficult or too time-consuming to use in class.
5. After you make any necessary revisions to the form, apply the assessment.

Pro-Con Grid

Description:

Students write quick lists of pros and cons to help them more clearly consider an issue. This assessment provides information students' objectivity and extent of analysis.

Step-by-Step Procedure:

1. Identify a decision, judgment, dilemma, or issue that is relevant to the course.
2. Create a prompt to elicit pros and cons. You may specify a particular point of view for the students to adopt when considering the issue.
3. Identify how many pros and cons should be identified and then describe the response format you expect from the students.
4. Prepare the questionnaire to be display-ready by writing it on the board, a transparency, or digitally projected. It could also be written on a half-sheet of paper and distributed to the students. It is important the prompts are presented in writing. Do not only read the question(s).
5. Hand out index cards or half-sheets of paper. It is best if students do not write their names, unless there is a very good reason to know who wrote which comments.

Student Generated Test Questions

Description:

This activity allows instructors to collect written feedback about what students think are the most important concepts discussed in lecture.

Step-by-Step Procedure:

1. Give students time to write their own test question.
2. Provide directions such as, “In your groups (or individually), write 2 (or more) test questions that test concepts discussed in today's lecture. Your questions can be of the following forms (this is up to the instructor): multiple choice, short answer, programming exercise. Please be sure to include the question as well as the answer.
3. After groups or individuals have written their test questions, have them "quiz" the other members of the class with their question. If the class is stumped, have the group or individual presenting explain the answer.
4. Make a rough tally of the types of questions the students propose. Note the level of the question, relevance of the topic, difficulty, and clarity. Revise as necessary and share with the class.
5. The instructor should also monitor the content of the questions to see what students think are important concepts -- be sure to address this issue if question content is something other than what the instructor thinks is central to the course.
6. If the questions fit the instructor's testing style, then the instructor might want to include some of the student-generated test questions on the next graded quiz or exam. Students will feel like they are contributing to the course if they see their question on graded material.

Classroom Opinion Poll

Description:

Instead of raising hands to poll students, a written poll assures anonymity and more accurate data. Students can be polled about material they will encounter in the course. This activity assists in determining an effective starting point and the appropriate level of a lesson.

Step-by-Step Procedure:

1. Examine questions or issues about which student opinion may affect learning.
2. Prepare 1 or 2 issues for a classroom poll.
3. Decide type of response required. Will “yes” or “no” be sufficient or will a scale running from “strongly agree” to “strongly disagree” be needed? Will multiple choice be more appropriate?
4. Prepare the poll to be display-ready by writing it on the board, a transparency, or digitally projected.
5. Hand out answer sheet, with or without questions. It is best if students do not write their names, unless there is a very good reason to know who wrote which comments.
6. Share results with students, telling them how you will use the info to guide your lessons.

Goal Ranking and Matching

Description:

An excellent CAT for the first or second day of class. Students list/rank learning goals and match these to instructor goals. This assessment technique assesses the "degree of fit" 1) between students' personal learning goals and teachers; course-specific instructional goals and 2) between teachers' and students' rankings of the relative importance of those goals. Students learn to identify and clarify their own learning goals.

Step-by-Step Procedure:

1. Before coming to class, make sure you have clearly identified your goals for the course.
2. Decide if you are willing to substitute or alter your goals to accommodate student interests.
3. Hand out a simple form (see below) and have students fill in 3-5 goals they hope to achieve by taking you course. These should be specific things they hope to learn.
4. Have the students rank these goals by their importance.
5. Articulate your instructional goals to the class.
6. Have students determine if their goals will be met by circling yes/no to each item
7. Collect and review the responses. Can unmatched goals be incorporated into the course? If not, suggest other courses or programs that might address those goals.

SAMPLE FORM: **Your Goals for this Session**	**Your Rankings**	**Do they match the instructors?**
_____	_____	YES NO
_____	_____	YES NO
_____	_____	YES NO
_____	_____	YES NO

Process Analysis

Description:

A Process Analysis requires that students keep records of the actual steps they take in carrying out a representative assignment and asks them to comment on the conclusions they draw about their approaches to that assignment. This diagnostic information can be used to help student pinpoint problems in their methods of working and, ultimately, improve them.

Step-by-Step Procedure:

1. Choose an assignment that a) you are genuinely interested in how students work through it b) your students are likely to benefit from focusing on it and c) the assignment is complex enough to provide and interesting analysis.
2. Inform students that they will be required to keep a record of their work process – actual steps, time taken for each step, and a description for each step.
3. Ask students to hand in the Process Analysis along with the assignment or immediately after they have handed in the assignment.
4. Look over the analyses for areas where students spend the most time, areas that should be part of the process but are not, etc.
5. Report findings back to the class and/or have students share with each other how they completed the process.

Chain Notes

Description:

Students in a lecture course respond to a question written by the instructor on a large envelop which is passed around the class. The purpose is to provide feedback about what he or she noticed about the teaching and learning, engagement and involvement occurring at a given moment during a class session.

Step-by-Step Procedure:

1. Compose a question that will help you – and your students – capture a moment of their mental activity during the class session. Your Chain Note might ask students what they are focusing attention on, or how well.
2. Make sure the question can be answered quickly, regardless of the moment during the class when the Chain Note reaches him or her. Ex. Immediately before this reached you, what exactly were you paying attention to?
3. One a large envelope print the question and directions for responding.
4. At the beginning of class, explain what you are doing and why, and go over directions for responding to the Chain Note. Emphasize the importance of not writing before the envelope arrives, and of writing a quick, honest, and anonymous response when it does. Pass out index cards or slips of paper.
5. Pass the envelope.
6. Review the data and detect patterns of responses. Are students engaged/not engaged, focused on self/teacher/others/content, question/praise/neutral comment or complaint, on target/off target/can't tell.
7. Discussing patterns of response with the class can often lead to suggestions for more effective teaching and learning.

Group Work Evaluations

Description:

Simple questionnaires used to collect feedback on students' reactions to group work. Group Work Evaluations can help students and teachers see what is going well and what is not going well.

Step-by-Step Procedure:

1. Compose four or five questions regarding group work (see below).
2. Before handing out the forms, explain the purpose of the assessment and the process to students. If you want to analyze responses by group, make sure that students indicate the groups they belong to without giving away their individual identities.
3. Tally the responses and summarized between groups and for the entire class.
4. Have groups suggest solutions to the concerns raised through the assessment.

1. Overall, how effective did your group work together on this assignment? (Check the appropriate response)
   ☐ Poorly ☐ Adequately ☐ Well ☐ Extremely well

2. How many of the ***five?*** group members participated actively most of the time? (Check the appropriate response)
   ☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

3. How many of you were fully prepared for the group-work most of the time? (Check the appropriate response)
   ☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

4. Give one specific example of something you learned from the group that you probably wouldn't have learned working alone.

5. Give one specific example of something the other group members learned from you that they probably wouldn't have learned otherwise.

6. Give one specific change that the group could make to improve its performance.