

Five Classroom Assessment Techniques: A Handy Handbook

Thomas A. Angelo's and K. Patricia Cross' book, *Classroom Assessment Techniques: A Handbook for College Teachers*, has helped faculty across the nation gain valuable insights about how well students are learning what faculty intend to be teaching in the classroom. At CMU and elsewhere, the discussion of academic outcomes assessment has focused most on the assessment of student learning in programs such as majors, minors, and graduate programs. However, we readily acknowledge that the classroom is still the most basic meeting ground between faculty and students and continues to be a critical arena in which learning takes place.

The classroom assessment techniques proposed by Angelo and Cross have many advantages.

- 1) They are formative in nature: they are unlike final exams or major term papers in that they provide faculty with feedback on student learning while the teaching/ learning relationship is still intact, so that we as faculty can yet intervene to help this semester's (as opposed to next semester's) students learn more completely.
- 2) They are speedy: they often consume just a few minutes of classroom time to administer and can be read easily and quickly by faculty.
- 3) They are flexible: they can be tailored to the unique and specific concerns of the instructor.
- 4) They can be anonymous for students (although they need not be): the aim of classroom assessment is not necessarily to grade individual student work or to provide individual students with feedback on their performance; rather, the aim is to provide the instructor with feedback on student learning. Anonymity may prove useful in freeing students to express not only what they do understand but also what they do NOT understand.
- 5) Classroom assessment activities can themselves be positive learning activities for students; they can be developed 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.

These authors suggest that new users of classroom assessment techniques will be most successful if they use only those techniques that appeal to their intuition and professional judgment, if they start with techniques that are quick and easy to use in a classroom setting in which the faculty member and the students are comfortable, if they only use classroom assessment techniques that they have previously tried on themselves, if they allow more time to complete the task the first time than might seem necessary, and if they "close the loop" by reporting back to students what they as faculty have learned from student feedback and how that information can be used to improve student learning.

Angelo and Cross recommend that faculty interested in using classroom assessment techniques begin with one of the five techniques outlined below.

The One-Minute Paper (also called the Minute Paper and Half-Sheet Response)

Description: The instructor stops the class two or three minutes early and asks students to respond briefly in writing to some variation of the following two questions: What was the most important thing you learned during this class (today)? What important question remains unanswered? (Or, what are you still confused about?)

Purpose: This technique allows faculty to assess the match between their instructional goals and students' perceptions of these goals and their own learning. Further, because the instructor knows what students perceive their own learning problems to be, the likelihood that the students will receive answers to those questions during the next class period is enhanced. The task asks students to evaluate information and to engage in recall.

Suggestions for Use: The task works well in small and large classes. It can be used frequently in courses that present students with large amounts of new information on a regular basis.

Using Information: Often it is sufficient for the instructor simply to tabulate the responses, making note of any especially useful comments.

The Muddiest Point

Description: The instructor asks students to jot down a quick response to the following question: What was the muddiest point in [the lecture, the homework assignment, the reading, the film, etc.]?

Purpose: This technique provides speedy feedback on what students find least clear or most confusing. Presumably, this information helps faculty decide what to emphasize (more) and how much time to spend on topics. Students must also quickly assess what they do not understand and must be able to articulate their confusion (which is itself a complex and useful skill).

Suggestions for Use: This technique can be used frequently in courses that present students with large amounts of new information on a regular basis, and it should be presented at the end of a lecture/assignment. The task should be used sparingly in classes that emphasize integrating, synthesizing, and evaluating information. (Often student responses to the muddiest point task consist of words or phrases.)

Using Information: Often it is sufficient to group responses according to the particular muddy point. An alternative is to group points according to whether they involve facts, concepts, principles, and so forth.

The One-Sentence Summary

Description: The instructor asks students to answer the questions about a given topic: Who does what to whom, when, where, how, and why? Then the student is asked to transform the responses to those questions into a single, grammatical sentence.

Purpose: Faculty gauge the extent to which students can summarize a large amount of information concisely and completely. Students are constrained by the rules of sentence construction and must also think creatively about the content learned. Students practice the ability to condense information into smaller, interrelated bits that are more easily processed and recalled.

Suggestions for Use: The task works well when there is information that can be summarized in declarative form, including historical events, political processes, the plots of stories and novels, chemical reactions, mechanical processes.

Using Information: Assess answers to each of the initial questions separately. Often it is easiest to grade responses to each of the questions as inadequate (incorrect), adequate, and more than adequate. A matrix with the questions as the columns and the three grading categories as the rows can quickly alert the faculty member to whether students are more proficient at the whos and whats rather than the hows and whys.

Directed Paraphrasing

Description: The instructor asks students to paraphrase part of a lesson for a specific audience and purpose, using their own words. This is especially useful for pre-professional students who will be asked in their careers to translate specialized information into language that clients or customers can understand.

Purpose: This technique allows faculty to examine students' understanding of information and their ability to transform it into a form that can be meaningful to specific audiences other than the student and instructor. This task is more complex than simple paraphrasing (or summary) in that the faculty member directs the student to speak/write to a particular audience and purpose.

Suggestions for Use: The task works well when students are learning topics or concepts that they will later be expected to communicate to others. When this is not the case (perhaps in general education classes in the humanities), the faculty member might want to ask students to write to other students in the class or to other freshmen at CMU.

Using Information: Answers can be grouped into four sets -- confused, minimal, adequate, and excellent. Then examine responses within and across the four evaluative categories for accuracy, suitability for the intended audience, and effectiveness in fulfilling the assigned purpose. An alternative is to circle the clearest (best) point made by each student and the worst (muddiest) point. Then the responses from students can be grouped to find patterns of clarity and confusion.

Application Cards

Description: After students have been introduced to some principle, generalization, theory, or procedure, the instructor passes out index cards and asks students to write down at least one possible, real-world application for what they have just learned.

Purpose: This technique allows faculty to determine quickly whether students understand the applications of what they have learned. Students are forced to link new information with prior knowledge. They may also have an increased interest in the material covered if they are asked to speak immediately to the ways in which this new material can be applied in realworld settings.

Suggestions for Use: Most classes cover material that can/should be applied. The technique is often used in the social sciences, in technical fields, and in pre-professional courses.

Using Information: Answers can be separated into four groups -- great, acceptable, marginal, and not acceptable. Responses might be discussed in the next class, with some attention given to factors that argue for and against sets of responses.