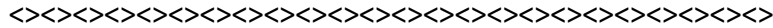


Classroom Assessment Techniques

taken from *Classroom Assessment Techniques: A Handbook for College Teachers*, 2nd edition
by Thomas A. Angelo & K. Patricia Cross



- Learning can and often does take place without the benefit of teaching – and sometimes even in spite of it – but there is no such thing as effective teaching in the absence of learning. Teaching without learning is just talking. (p. 3)
- Classroom Assessment is an approach designed to help teachers find out what students are learning in the classroom and how well they are learning it. Characteristics of Classroom Assessment: (pp. 4 – 7)
 - ✓ Learner-Centered – its focus is on observing and improving learning, rather than on observing and improving teaching
 - ✓ Teacher-Directed – the individual teacher decides what to assess, how to assess, and how to respond to the information gained through the assessment
 - ✓ Mutually Beneficial – students reinforce course content and strengthen their self-assessment skills; faculty sharpen their teaching focus by asking 3 questions: “What are the essential skills and knowledge I am trying to teach?”, “How can I find out whether students are learning them?”, and “How can I help students learn better?”
 - ✓ Formative – its purpose is to improve the quality of student learning, not to provide evidence for evaluating or grading students; it provides information on what, how much, and how well students are learning
 - ✓ Context-Specific – the assessment technique is chosen to fit the subject matter and the needs of the particular class
 - ✓ Ongoing – it is an ongoing process, i.e. the creation and maintenance of a classroom “feedback loop”; as this approach becomes integrated into everyday classroom activities, the communications loop between faculty (teaching) and students (learning) becomes more efficient and effective; it provides early feedback – before students are evaluated for grades – so that necessary adjustments can be made
- Effective assessment begins with clear goals. It usually takes some hard thinking before teachers can articulate the specific skills and competencies they hope to teach through the course content – what is most important to teach and what students should really learn. Classroom Assessment Techniques give faculty feedback on how well they are achieving their teaching goals. (pp. 8 – 9)

- Teaching goals fall into 6 categories: (p. 17)
 - 1) Higher-Order Thinking Skills
 - 2) Basic Academic Success Skills
 - 3) Discipline-Specific Knowledge and Skills
 - 4) Liberal Arts and Academic Values
 - 5) Work and Career Preparation
 - 6) Personal Development
- Summative versus Formative Evaluations: (p. 25)

Summative	Formative
Purpose: to make judgments about individual student achievement & assign grades	Purpose: to inform teaching & improve learning; used as “feedback devices”
Examples: quizzes, tests, exams; term papers, lab reports, homework	Examples: pose questions, listen to students questions & comments, monitor body language & facial expressions, Classroom Assessment Techniques

- Implementation of Classroom Assessment Techniques – tell the students why you are asking them for information, i.e. you will be assessing their learning in order to help them improve and not to grade them; usually ask for anonymous responses; teach them how to do the assessment before applying it; let them know what you learned and what difference that information will make, i.e. how you will change your teaching/the class to respond to the information they provided, so they know that their participation in the Classroom Assessment can have a positive impact on your teaching and their learning (pp. 29 – 30)
- Several Classroom Assessment Techniques (arranged by category)

ASSESSING COURSE-RELATED KNOWLEDGE AND SKILLS

ASSESSING PRIOR KNOWLEDGE, RECALL, AND UNDERSTANDING (pp. 119 – 158)

Minute Paper – ask students to answer the question “What was the most important thing you learned during this class?” or “What important question remains unanswered?” in the last 5 minutes of class; students must self-assess to answer either question; faculty collect written feedback on student learning; problem points can be shared and addressed at the beginning of the next class

Muddiest Point – ask students to write a quick response to the question “What was the muddiest point in _____?” (where _____ = the lecture, discussion, homework assignment, etc.) at the end of the _____; students must articulate what they do

not understand immediately; faculty learn which points are most difficult for students to learn and can clarify missed concepts right away

Background Knowledge Probe – ask students to answer 2 – 3 open-ended or about 10 multiple choice questions that probe the students’ existing knowledge of that concept, subject, or topic; faculty learn at what point to start teaching; the next class can begin with students asked to answer the same questions working in groups

ASSESSING SKILL IN ANALYSIS AND CRITICAL THINKING (pp. 159 – 180)

Defining Features Matrix – ask students to complete a table by checking off features that distinguish between 2 or 3 similar concepts; faculty can pinpoint areas of confusion quickly and address them right away; a simple example is given below

<i>features</i>	<i>mammals</i>	<i>reptiles</i>
skin or fur	x	
cold-blooded		X
...		

Pro & Con Grid – ask students to write the pros & cons of a given issue – a question of value; forces students to analyze a situation and consider *both* sides; faculty can assess students’ awareness of costs and benefits; sharing the results with the class initiates discussion

ASSESSING SKILL IN SYNTHESIS AND CREATIVE THINKING (pp. 181 – 212)

One-Sentence Summary – ask students to answer the questions “Who does what to whom, when, where, how, and why?” about a given topic & then to synthesize those answers into a *single* summary sentence; students practice “chunking information”; faculty learn how concisely students can summarize lots of information on a given topic; an example is given below

Who?	teachers		
Does what?	assess		
To what/whom?	their students’ learning		
When?	regularly during the semester		
Where?	in the classroom		
How?	using Classroom Assessment Techniques and other appropriate evaluative instruments	⇒	
Why?	so they can improve teaching effectiveness & student learning		

1 sentence summary:
Teachers assess their students’ learning regularly during the semester in the classroom using Classroom Assessment Techniques and other appropriate evaluative instruments so they can improve teaching effectiveness and student learning.

Approximate Analogies – ask students to complete the second part of an analogy, e.g. “The theme is to an essay as _____ is to _____” or “Mass is to volume as _____ is to _____” in a few minutes; students can connect the new relationship to

one they are already familiar with which helps them retain knowledge; present the best responses to the class as good examples

ASSESSING SKILL IN PROBLEM SOLVING (pp. 213 – 230)

Problem Recognition Tasks – ask students to recognize and identify the particular type of problem given examples represent; helps students focus on diagnosing the problem first rather than rushing to try to solve it; helps faculty assess how well students can recognize various problem types, the first step in matching problem type to solution method; e.g. in psychology – given 6 case studies, identify whether each scenario represented substance abuse, family conflicts, depression, or academic stress

Documented Problem Solutions – ask students to solve 2 or 3 problems (easy → difficult) and briefly explain each solution step in writing; students learn to keep track of the steps; teachers can gain insight into the students’ problem-solving skills – the explanation of the steps (the *process*) is emphasized not the actual solution (the *product*)

ASSESSING SKILL IN APPLICATION AND PERFORMANCE (pp. 231 – 253)

Directed Paraphrasing – ask students to paraphrase part of a lesson for a specific audience and purpose using their own words; students develop the valuable skill of translating information into words they can understand; faculty can assess how well students have understood and internalized the learning; successful paraphrases can be shared with the class; e.g. in nursing – in one or two sentences, paraphrase what you have learned about hospice care to inform a dying, but still lucid, patient of its possible advantages over hospital or home care

Applications Cards – ask students to write down one possible, real-world application of what they have just learned; students connect newly learned concepts with prior knowledge and see the relevance of what they are learning; faculty can share great examples with the class to initiate current discussions; students may work in or share with small groups

ASSESSING LEARNER ATTITUDES, VALUES, AND SELF-AWARENESS

ASSESSING STUDENTS’ AWARENESS OF THEIR ATTITUDES AND VALUES (pp. 257 – 279)

Classroom Opinion Polls – ask students to agree or disagree with a statement; students discover their own opinions about issues and compare them against others’ opinions; faculty can be aware of pre-existing opinions that might interfere with learning; polling can be used as a pre- and post-assessment technique to determine whether and how students’ opinions have changed in response to class discussions and assignments; can share tabulated data to initiate discussion; an Anthropology example is given below

Native Americans who stay on the reservation are better off than those who leave
Circle one: Strongly Disagree Disagree Don’t Know Agree Strongly Agree

Course-Related Self-Confidence Surveys – ask students to answer a short survey describing how confident they are in various skill areas; students can ‘own’ their level of confidence and work to improve it; faculty can more effectively structure assignments to build confidence and enhance motivation and learning since low self-confidence often impedes learning; faculty can share survey results with the class and ask students for suggestions on ways to improve self-confidence and performance; use these surveys before the skills in question are introduced and again after students are likely to have made significant progress toward mastering them

ASSESSING STUDENTS’ SELF-AWARENESS AS LEARNERS (pp. 280 – 298)

Interest/Knowledge/Skills Checklists – ask students to rate their interest and assess their levels of knowledge or skill in various topics by indicating responses on checklists; students can discover mismatches or good fits between their interest and skills; faculty can plan and adjust their teaching agendas; most useful with courses that have flexible content; can be administered pre- and post-course to show changes in interest and knowledge or skill levels

Self-Assessment of Ways of Learning – ask students to complete a Learning Styles inventory/test such as VARK; students learn how they best intake information and can implement better study methods; after reviewing student learning styles, faculty can choose appropriate instructional approaches; extremely useful in developmental education courses so that students improve their study skills early on in their college careers

ASSESSING COURSE-RELATED LEARNING AND STUDY SKILLS, STRATEGIES & BEHAVIORS (pp. 299 – 315)

Punctuated Lectures – ask students to listen to a lecture or demonstration then, after a portion of the lecture/demo has been completed, the instructor stops and the students spend a few minutes writing down what they were doing during the presentation and any insights they gained; students realized how they are processing or failing to process presented information and how their behavior is influencing that processing – they may be more apt to self-monitor; faculty see how well students are processing information; distractions will become apparent to both students and faculty; examples of questions to ask are given below

How fully and consistently were you concentrating on the lecture? Were you distracted at any point?

What were you doing to record the information you were receiving? How successful were you?

What do you expect to come next in the lecture and why?

ASSESSING LEARNER REACTIONS TO INSTRUCTION

ASSESSING LEARNER REACTIONS TO TEACHERS AND TEACHING (pp. 320 – 342)

Chain Notes – ask students to put their response to a question – e.g. “Immediately before this reached you, what exactly were you doing/paying attention to?” – the teacher has written on a large envelope about the class in the envelope as it is passed around the class; students must self-assess the moment they receive the

envelope what they were paying attention to/what are they learning right now – they may gain control over their behavior; faculty get a sense of the students' level of engagement and involvement; results can be shared and suggestions can be solicited from the class

E-mail Feedback – ask students to respond via e-mail to a question e-mailed to them regarding the instructor's teaching, e.g. "What is one small change I could make that would help you learn more effectively in this class?" or "If you were the teacher of this class, what would you do to make the assignments more useful?"; students become used to using their e-mail and get to respond outside of class; faculty receive information on their teaching and can make necessary adjustments quickly

ASSESSING LEARNER REACTIONS TO CLASS ACTIVITIES, ASSIGNMENTS, AND MATERIALS (pp. 343 – 361)

Reading Rating Sheets – ask students to complete a survey on given activity, reading assignment, etc.; students get to evaluate the assignments made or the materials used in class; faculty can adjust their selection of assignments or materials as necessary based on student feedback; questions to include on the survey might include the following: How useful was the reading in improving your vocabulary and reading skill? How interesting was the reading to you? Would you recommend it to a friend – why or why not? What did you learn from it that you want to make sure to remember?

Exam Evaluations – ask students to write their reactions to tests and exams; students feel that their input matters; faculty receive feedback so they can make the exams more effective as learning and assessment devices; this assessment can be included at the end of the actual exam when it is given to the class or can given soon after the exam is taken

- Analysis of Classroom Assessment Data – try to answer some of the following questions: (pp. 53 – 54)

Questions About Your Students

How many students are learning well & how many are not?

Which students are learning well & which are not?

What do successful learners do that other learners don't do, or don't do as well?

If students did poorly, why (instructional methods, poor learning skills, ...)?

Questions About Course Content

How much of the course content are students learning?

Which elements of the course content are students learning?

Questions About Teaching

How does my teaching affect student learning, positively and negatively?

What, specifically, could I change about my teaching to improve learning inside & outside the classroom?

- Results of Classroom Assessment can provide the impetus for trying different things to improve learning. (p. 49)