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# Utilize Classroom Assessment Techniques to Monitor Student Learning

## Overview

Although high-stakes assessments can provide valuable information about student knowledge and competencies at one point in time, there are assessments that can measure learning on an ongoing basis. In particular, we encourage the utilization of Classroom Assessment Techniques (CATs), which are ungraded activities that provide the instructor and/or students with more regular feedback about the learning process. Examples of some notable CATs appear below:

**Warmups:** Warmups are usually brief, web-based assignments or quizzes that students complete at least a few hours prior to class. Warmups can be easily embedded into Canvas and can serve multiple purposes: for instructors, information gleaned from these exercises can provide an indication of the content that should be emphasized in the forthcoming class. For students, warmups prompt them to think about the material that will be covered in the upcoming class.

**Empty outlines:** At the end of the class, provide students with a partially completed outline of in-class content that you have covered and give them time (say, five minutes) to fill in the blank spaces. Collect the outlines and analyze the responses. Did the students seem to capture the most salient points of the lecture/discussion? This is an excellent method of determining if you and the students are on the same page. If you see patterns of incorrect responses on the empty outlines it could be a signal to you to change the way a particular topic is taught.

**Chain notes:** In its classic form, chain notes have students pass around an envelope on which the instructor has written one question about the class. When the envelope reaches a student, they submit their response into the envelope, and this process repeats until the envelope reaches the instructor. The posed question can be content-related or it can be intended to solicit anonymous feedback about the class. The themes that emerge from the responses might provide an indication of students' learning or opinions. This CAT can also be adapted to obtain real-time feedback from students about their understanding of the material through free tools such as [AnswerGarden](#). For even greater efficiency, consider asking another stakeholder in the class (e.g., a co-lecturer, course associate, or teaching assistant) to monitor responses as they come in and then ask the stakeholder to group the responses into rough themes. This method would allow you to reflect on these themes within the current class session.

Please find the table on the following page for further examples of CATs that you might use in your classes.

**For more information:** <https://cft.vanderbilt.edu/guides-sub-pages/cats/>

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## Other Classroom Assessment Techniques

Name	Instructions For Use	How to Analyze the Data
<b>Minute paper</b>	During the last few minutes of the class period, ask students to answer on a half-sheet of paper questions such as: "What is the most important point you learned today?" and, "What point is least clear to you?"	Review responses and note any trends or particularly interesting comments. During the next class period, emphasize the issues illuminated by your students' comments.
<b>Directed paraphrasing</b>	Ask students to write a layman's "translation" of something they have just learned as if they were explaining it to a friend or family member.	Categorize student responses according to characteristics you feel are important. Analyze the responses both within and across categories, noting ways you could address student needs.
<b>Application cards</b>	After teaching about an important theory, principle, or procedure, ask students to write down at least one real-world application for what they have just learned to determine how well they can transfer their learning.	Ask the students to share some of their examples with the class and note the themes that may emerge. This can provide material for class discussion while also offering a glimpse into how students apply the course material.
<b>Student-generated test questions</b>	Allow students to write test questions and model answers for specified topics in a format consistent with course exams.	Make a rough tally of the questions your students propose and the topics that they cover. Evaluate the questions and use the strongest ones as prompts for discussion. You could also revise the questions and use them on the upcoming exam.