

Practical Classroom Assessment Techniques

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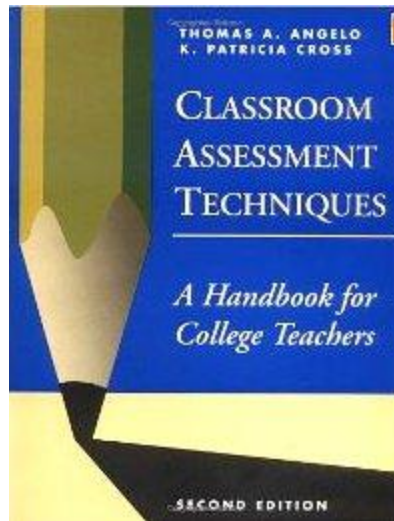
Class Assessment

- Are my students learning what I think I am teaching?
- Which students are learning and which students are not learning?
- What am I doing that is producing student learning?
- What am I doing that is not producing student learning?

Learning Goals for Participants

After the workshop, participants should be able to:

- Define, explain, and apply simple Classroom Assessment Techniques (CATs)



Students Learn Most Effectively When: (Suskie2004)

- They spend more time **actively involved** in learning and less time listening to lectures.
- They engage in “**real world**” **tasks**—realistic class assignments, field experiences, and service learning opportunities.
- They are given a **variety** of ways to learn and demonstrate what they learn.
- They have **positive interactions** with faculty and work collaboratively with fellow students.
- They receive prompt, concrete **feedback** on their work.

Lecture Formats

- “Ten to fifteen minutes is about the length in time an adult can concentrate on a lecture” (Johnson, Johnson & Smith 1991)
- What are some activities instructors can do to enrich their lectures?

What are CATs?

- **Classroom Assessment Techniques:** simple, formative assessments to help you collect data on student learning.

Benefits of CATs

- Identify prior or current knowledge & beliefs
- Respond to diverse learning styles
- Reflect on curriculum (pace or focus)
- Identify knowledge or skill gaps
- Address classroom challenges
- Gives prompt feedback to instructors & students

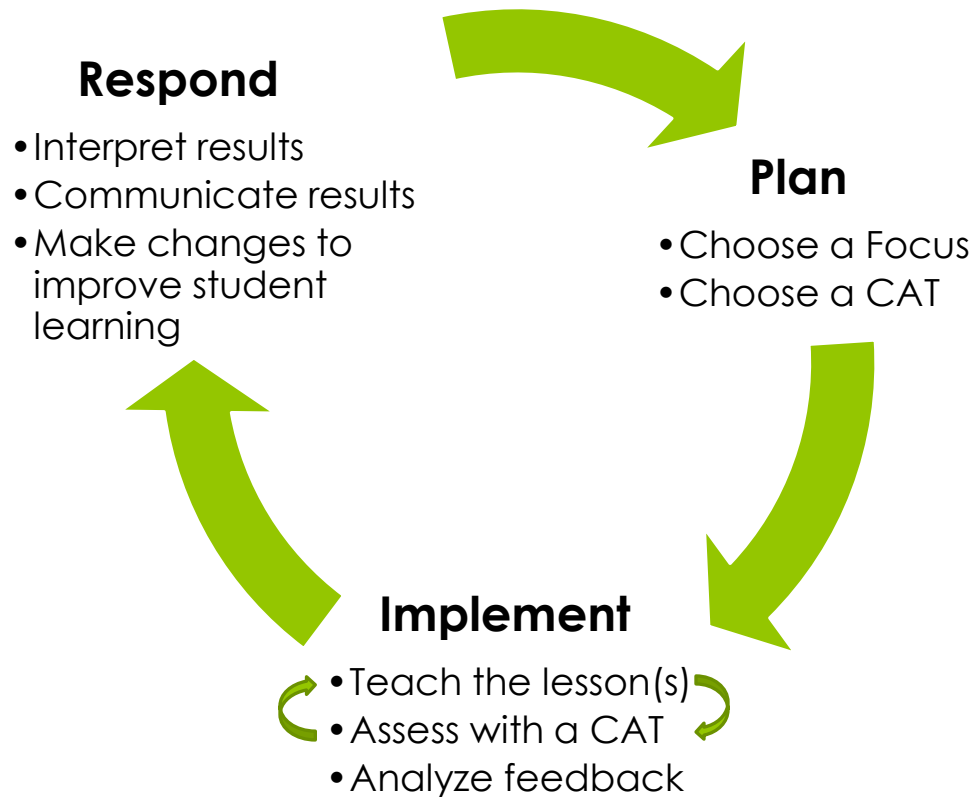
CATs Assess the Following Areas:

- Course-Related Knowledge & Skills ◀ **we are here!**
- Learner Attitudes, Values, and Self-Awareness
- Learner Reactions to Instruction

Assessing Course-Related Knowledge & Skills

- Prior Knowledge, Recall, and understanding
- Analysis and Critical Thinking
- Synthesis and Creative Thinking
- Problem-Solving
- Application and Performance

Three-Step Process for CAT



Prior Knowledge, Recall & Understanding

Minute Paper (CAT 6, pg. 148)

- Most useful in lecture/discussion courses and can also be used for a prior homework assignment.
- Students take 2-3 min to respond to a question posed by the instructor.
 - **EX: What was the most important thing you learned during this class? Why?**
 - **EX: What was the most important take away from your homework assignment last night?**
- Pros:
- Cons:
- Expansion:

Prior Knowledge, Recall & Understanding

Muddiest Point (CAT 7, pg. 154)

- Allows instructors to assess points of confusion.
- Useful in lecture/discussion courses and/or homework assignments.
- Instructor asks students to jot down a quick response to the following question:
 - **EX: What was the muddiest point about _____?**
- Pros:
- Cons:
- Expansion:

Analysis and Critical Thinking

- **Content, Form, & Function Outlines (CAT 11, pg. 172)**
 - Students analyze the content (What?) form (How?), & function (Why?) of a particular message.
 - Instructors can identify how well students can analyze not only the message but also the way in which that message is presented and its purpose.
 - **EX: Print advertisement of a cigarette commercial**

What? (Content)	How? (Form)	Why? (Function)
<ul style="list-style-type: none">• Cowboy smoking Marlboro Reds	<ul style="list-style-type: none">• Relaxed• Dirty clothes• Leaning against RV• Taking a break• Hard-working	<ul style="list-style-type: none">• Connects with audience• Working Class• Traditional/conservative

- Pros:
- Cons:
- Expansion:

Analysis and Critical Thinking

Pro & Con Grid (CAT 10, pg. 168)

- Gives instructor an overview of analysis of pros and cons, costs and benefits, or advantages and disadvantages of a topic or issue.
- **EX: (Literature) Imagine that you are Hamlet, the day after the encounter with your father's ghost. Make a list of pros and cons of murdering your stepfather, Claudius.**
- Pros:
- Cons:
- Expansion:

Synthesis and Creative Thinking

One-Sentence Summary (CAT 13, pg. pg. 183)

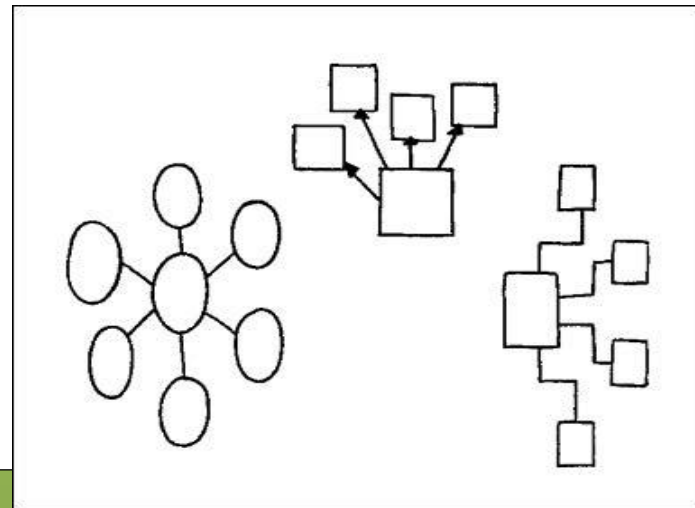
- Allows instructors to find out how concisely, completely, and creatively students can summarize a large amount of information on a given topic.
- **EX: Summarize the hydroelectric power generation process in one sentence.**
- Variation: Working as quickly as they can, students answer Who? What? When? Where? How? Why? and turn answers into a grammatical sentence.
 - **EX: Teachers (Who?) assess their students' learning (What?) regularly during the semester (When?) in their own classrooms, (Where?) by using CATs and any appropriate tools and methods of inquiry, (How?) so that they can understand and improve teaching effectiveness and the quality of student learning. (Why?)**
- Pros:
- Cons:
- Expansion:

Synthesis and Creative Thinking

Concept Maps (CAT 16, pg. 197)

- Drawings or diagrams showing the mental connections that students make between concepts.
- Provides instructors with observable record of a student's patterns of association.
 - **EX: Draw a concept map to illustrate your understanding of Earth as a System.**

- Pros:
- Cons:
- Expansion:



Problem-Solving

Problem Recognition Tasks (CAT 19, pg. 214)

- Students recognize and identify the particular type of problem each example represents.
- Instructors can assess how well students can recognize various problem types, the first step in matching problem type to solution method.
 - **EX: (Psychology/Counseling)** Students are presented with multiple mini-cases describing an adolescent referred for counseling. Give students 30 min to read the cases and make initial judgments about the main problem in each case. Substance abuse? Family conflicts? Academic Stress? Conflict with peers? Depression?
- Pros:
- Cons:
- Expansion:

Application and Performance

Directed Paraphrasing (CAT 23, pg. 232)

- Assess understanding of a concept for a specific audience and purpose.
- Helps instructors to assess a student's understanding of concepts that they will later be expected to explain to others.
- **EX: (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.
- **EX: (Computer Science)** In plain language, paraphrase what you have read about computer viruses – such as the Michelangelo virus – for a vice president of a large insurance firm who is ultimately responsible for database security. Your aim is to convince her to spend time and money “revaccinating” thousands of workstations.
- **EX: (Business Mgmt)** Imagine that you have just been invited to give a talk to a group of local small-business owners on specific ways in which proposed changes in the state tax code may affect them. Paraphrase, in one or two sentences the proposed changes that are most likely to affect this audience.
- Pros:
- Cons:
- Expansion:

Application and Performance

Applications Cards (CAT 24, pg. 236)

- After students have learned about an important concept, theory, or procedure, the instructor hands out an index card and asks them to write down at least one possible, real-world application for what they have just learned.
- Prompts students to see the relevance of what they are learning.
 - **EX: (Economics)** Gresham's law basically states that "good money drives out bad." Give at least one contemporary application of Gresham's law to something other than money.
 - **EX: (Physics)** "To every action there is always opposed an equal reaction." Give three applications of Newton's Third Law to everyday life around the house.
 - **EX: (Political Science)** "All politics is local" is an oft-repeated saying in American political life. Suggest two practical applications of this generalization to the politics of presidential campaigning. (Imagine that you are giving advice to a candidate.)
- Pros:
- Cons:
- Expansion:

Potential Challenges

- What are some potential challenges you may encounter implementing CATs in your classroom?

Questions & Comments

- What was the most important point made in the workshop today?
- What unanswered questions do you still have?

Thank you!

“Assessment is NOT a goal worth working for; it is only a tool. Assurance of learning is the goal.” --Douglas Eder