

CAT Samples!



COLLEGE OF MEDICINE TUCSON
Curricular Affairs

FID in the
Transition



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“One of the most promising ways to improve learning is to improve teaching.”

Angelo & Cross (2005, 7)

What are CATs?

The acronym CATs refers to Classroom Assessment Techniques

- CATs are strategies for ongoing assessment of student knowledge and performance in adult and higher education
- The goals of using CATs are to:
 - Guide curriculum content
 - Enhance teaching methods
 - Monitor how much and how well students are learning

Angelo & Cross (2005)

CAT Samples from Category 1



Summaries of Classroom Assessment Techniques
(strategies) that assess prior knowledge,
comprehension, and analytic thinking

Purpose

- To determine what students already know
- Help determine effective starting point for course or session

Description

- Short, simple surveys (polls), typically multiple choice or short answer in response to “known answer” questions

Teaching Goal

- Establish baseline knowledge
- Improve Memory
- Learn fundamental terms or concepts

Effort

- Faculty: Medium
- Student: Low
- Data Analysis: Low/Medium

Technology

- Low tech
 - Questions on slides
 - Verbal questions
 - Hands raised, signs held
- Medium tech
 - Poll Everywhere
 - Qualtrics

Background Knowledge Probe

CAT 1

Any Subject Matter; any context

Purpose

- To determine an fundamental concepts students already know
- Help determine effective starting point for course or session

Description

- Students create a list of key concepts and identify related concepts and/or questions about those concepts or connections

Teaching Goal

- Reinforce fundamental concepts
- Improve listening skills
- Learn conceptual underpinning s of session objectives

Effort

- Faculty: Low
- Student: Low
- Data Analysis: Low

Technology

- Low tech
 - Paper & pencil
- Medium tech
 - Poll Everywhere
 - Qualtrics

Focused Listing

Particularly useful in case-based scenarios for individuals, pairs or groups

CAT 2

| Purpose | Description | Teaching Goal | Effort | Technology |
|---|---|--|---|--|
| <ul style="list-style-type: none"> • Determine prior knowledge that might disrupt learning • Clarify misunderstandings to enhance learning | <ul style="list-style-type: none"> • Instructor identifies common misconceptions or pre-conceptions • Creates anonymous polls or other inquiry activities with questions designed to promote reflection • Consider how to respond to student misconceptions • Explain reasoning | <ul style="list-style-type: none"> • Reinforce fundamental concepts • Improve listening skills • Learn conceptual underpinnings of session objectives | <ul style="list-style-type: none"> • Faculty: Low • Student: Low • Data Analysis: Low - Medium | <ul style="list-style-type: none"> • Low tech (Increases faculty effort) <ul style="list-style-type: none"> • Paper & pencil Concept Map • Smart Art • Medium tech (reduces faculty effort) <ul style="list-style-type: none"> • Poll Everywhere (Rank, multiple choice) • Qualtrics |

Misconception/Preconception Check

CAT 3

Any subject matter, any context

Purpose

- Assess students' skills at digesting and categorizing important information according to a given set of critical defining features

Description

- Requires students to categorize concepts according to the presence or absence of important defining features

Teaching Goal

- Improve analytic skills, ability to draw inferences and generate taxonomies of knowledge
- Develop study skills
- Learn concepts, facts & theories of subject

Effort

- Faculty: Medium (content expertise)
- Student: Low
- Data Analysis: Low(technology)

Technology

- Low tech
 - Paper matrix
 - PDF matrix
- Medium tech
 - Poll Everywhere (Rank Poll)
 - Qualtrics (Sort poll)

Defining Features Matrix

CAT 9

Especially applicable to Pharmacology

Purpose

- Assists faculty in understanding how students reason their assertions of knowledge
- Promotes students' consideration of ethical underpinnings for decision-making

Description

- Instructor creates a decision-making exercise
- Students identify facts in support of or contradicting their decision
- e.g., develop differential diagnosis with reasoning for and against each possible diagnosis on the differential

Teaching Goal

- Develop analytic skills & capacity to make informed decisions
- Differentiate fact from opinion
- Make reasonable inferences from facts
- Evaluate facts

Effort

- Faculty: Low (content expertise)
- Student: Low
- Data Analysis: Low - Medium (technology)

Technology

- Low tech
 - Paper & pencil
- Medium tech
 - Recommended - *Qualtrics* (sorting question)

Pro & Con Grid

CAT 10

Particularly useful in case-based scenarios for individuals, pairs or groups

Purpose

- Enables faculty to determine how well students can evaluate content, understand how content is presented and why presentation form can affect whether and how information is utilized

Description

- Instructor provides raw curriculum content for students to analyze and outline (individuals, groups)
- e.g., students could identify components of decision-making process in patient situation, analyze how information was elicited and evaluated, & describe roles of various participants and how these might have influenced the process or outcomes
- e.g., students evaluate resources in support of reasoning

Teaching Goal

- Develop analytic, reading & writing skills
- Improve study skills and habits
- Learn to evaluate HOW one learns and HOW to evaluate resources
- Fosters independent thinking
- Promotes consideration of peer thinking processes and ideas

Effort

- Faculty: Low- Medium (content expertise)
- Student: High
- Data Analysis: High - requires qualitative assessment

Technology

- Low tech
 - Verbal
 - Paper & pencil
- Medium tech
 - Poll Everywhere
 - Qualtrics (open ended)
 - Document upload to LMS

Content, Form & Function Outlines

CAT 11

Particularly helpful for self-directed learning or materials before flipped sessions

Purpose

- Enables faculty to find out how concisely, completely and creatively students can organize and summarize sizeable and significant information
- Promotes ability to articulate

Description

- Instructor asks students to summarize in one sentence the import of content addressed in a given session -
- e.g., What do we need to know in order to do X and why?

Teaching Goal

- Enhance memory
- Improve listening and reasoning skills
- Develop ability to synthesize related concepts
- Improve ability to summarize knowledge and articulate reasoning

Effort

- Faculty: Low
- Student: Medium
- Data Analysis: Medium - *requires qualitative assessment*

Technology

- Low tech
 - Verbal
 - Paper & pencil
- Medium tech
 - Poll Everywhere
 - *Qualtrics* (open ended)
 - Document upload to LMS

One Sentence Summary

CAT 13

Any subject matter, any context

Reference & Resources

- Teaching Goals Inventory
 - Self-scoring ([online](#), [PDF](#))
 - [Online scoring](#) (University of Iowa)
- Text
 - Thomas A. Angelo and K. Patricia Cross. Classroom Assessment Techniques: A Handbook for College Teachers, Jossey-Bass Publishers:San Francisco, CA; 2005.

THOMAS A. ANGELO
K. PATRICIA CROSS

CLASSROOM ASSESSMENT TECHNIQUES

*A Handbook for
College Teachers*



Related Resource -

- [SAMR Model](#)
- *By Julie Youm
PhD, Instructional
Technologies
Group, University of
California, Irvine,
School of Medicine

Redefinition

*Tech allows for the creation of new tasks,
previously inconceivable*

Modification

Tech allows for significant task redesign

[SAMR Model Videoscribe Guide*](#)

Augmentation

*Tech acts as a direct tool substitute, with
functional improvement*

Substitution

*Tech acts as a direct tool substitute, with no
functional change*

For Faculty & Block Team Support

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