

# Classroom Assessment Techniques

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Teaching Tuesday Session

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# Objectives

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- Define the purpose of classroom assessment techniques (CATs) and articulate their role in learning outcomes assessment
- Discern which CAT to use for several common learning outcomes, namely retention, application, and synthesis & creative thinking
- Identify CATs you're using and develop new CATS to use in the classes you teach

# Classroom Assessment Techniques (CATs)

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- Typically non-graded, in-class assessments
- Gives the instructor regular (formative) feedback about student learning
- Provides insight into day-to-day learning gains
- Helps students gauge their own learning and cues them to modify their study strategies

# Choosing the right CAT

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- The techniques work best with certain learning goals
- Grouped according to McKeachie's (1986) categories of cognition
  - I selected three distinct levels of learning: retention, application, and synthesis/creative thinking
- Strategies summarized in Angelo & Cross' (1993) *Classroom Assessment Techniques*

## Verbs to Use in Creating Educational Objectives (Based on Bloom's Taxonomy)

Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
acquire	arrange	apply	analyze	alter	appraise
attend	categorize	calculate	appraise	calculate	argue
choose	change	change	break down	categorize	assess
collect	chart	choose	categorize	change	compare
complete	cite	classify	classify	classify	conclude
copy	circle	compute	combine	combine	consider
define	classify	conduct	compare	compile	contrast
describe	compile	construct	conclude	compose	critique
detect	conclude	demonstrate	contrast	conduct	decide
differentiate	convert	develop	criticize	constitute	describe
distinguish	defend	discover	deduce	construct	discriminate
duplicate	demonstrate	employ	defend	create	explain
find	determine	generalize	detect	deduce	interpret
identify	diagram	manipulate	diagram	derive	judge
imitate	differentiate	modify	differentiate	design	justify
indicate	distinguish	operate	discriminate	devise	recommend
isolate	document	organize	distinguish	develop	relate
label	draw	predict	evaluate	discover	standardize
list	edit	prepare	formulate	discuss	summarize
mark	estimate	produce	generate	document	validate
match	explain	relate	identify	expand	
name	extend	restructure	illustrate	explain	

# Techniques for...

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- Assessing prior knowledge, recall, & comprehension
  - Background knowledge probe
  - Focused listing
  - Misconception/  
Preconception check
  - Empty outlines
  - Memory matrix
  - Minute paper
  - Muddiest point

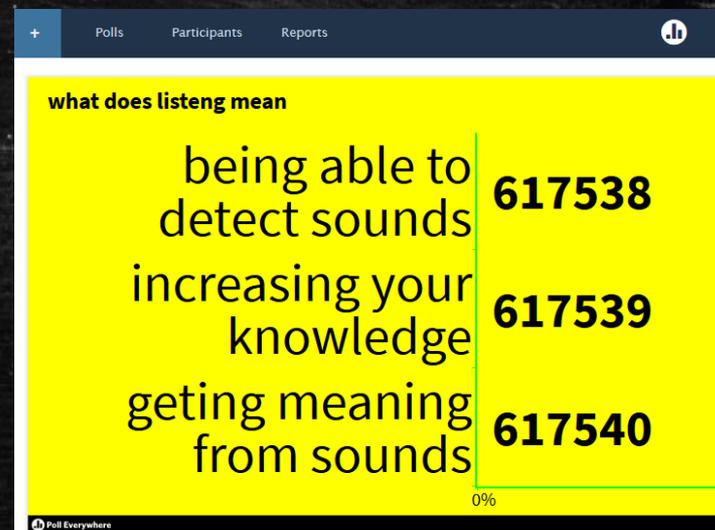
# Knowledge, Recall, & Comprehension

## – Background knowledge probe

- Example: Please put a check next to all of the following Shakespearean plays you have seen or read...
- Example: Interpret the following image of a voltmeter
- Example: What does listening mean? (polleverywhere.com)
- Example: To what extent do you agree with this statement about male and female communication styles? (polleverywhere.com)

## – Focused listing

- Example: Write a statement that describes “work” in physics
- Example: Now that you’ve seen images of Persian art, write a few statements describing Persian culture



# Knowledge, Recall, & Comprehension

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## – Misconception/Preconception check

- Example: Students answer questionnaire on how various STDs are transmitted and asks for a Likert style assessment of how certain they are of their answers
- Example: Open ended prompt—How many people lived in North America by 1491? How long had they lived on this continent by 1491?

## – Empty outlines

- Example: instructional video on PowerPoint best practices for business presentations. Empty outline helps students follow along with main points

# Knowledge, Recall, & Comprehension

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## – Memory matrix

- Example: ask students to give examples of irregular and regular spanish verb endings (two rows for reg/irregular, and columns for –ar, -er, -ir endings)
- Example: Styles of art (neoclassical, impressionist, postimpressionist, expressionist) in rows, countries in columns, and students give examples of major artists for each style in various countries

	<i>-ar</i>	<i>-er</i>	<i>-ir</i>
Irregular			
Regular			

# Knowledge, Recall, & Comprehension

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## – Minute paper

- Example: “What is the most important thing you learned during this class? What question remains unanswered?”
- Example: “What is the most significant reason Italy became a center of the Renaissance?”

## – Muddiest point

- Example: What is the “muddiest” concept on the review sheet?

# Share your CAT, Adopt a New CAT

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- In groups of about 2-3, share one knowledge/recall/comprehension CAT you are already using.
- Create a new CAT using one of these strategies you aren't yet using.



## Techniques for...

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- Assessing skill in application and performance
  - Directed paraphrasing
  - Application cards
  - Student generated test questions
  - Class modeling

# Assessing Skill in Application & Performance

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## – Directed paraphrasing

- Example: Explain in plain language and in less than five minutes, what you know about this computer virus, for a VP of a large insurance firm who is responsible for database security. Your aim is to convince her to spend time and money “revaccinating” hundreds of computers.

## – Application cards

- Example: Use the concepts CL, O, and Clalt to assess a current or past romantic relationship

# Assessing Skill in Application & Performance

- Student generated test questions
  - Example: Kate Simcox Jeopardy
- Class modeling
  - After oral communication students read about the communication process, I ask them to work with a small group to perform a model of what the communication process is like. Students might create dramatic gestures, enact a tennis match, demonstrate multicomunication using technology, etc. and the class generates observations of what the communication process is like based on the models.

**5 point application assignment:** Write TWO Jeopardy questions (formatted like either of the examples below) on your assigned topic(s). Please use note cards or paper cut to the approximate size of note cards, and write your cards on the theory that corresponds with the first letter of your last name.

**\*Sample Jeopardy Question:  
Definition-Based\***

A: According to coordinated management of meaning, reality as we experience it with others is called this.

Q: What are stories lived?

**\*Sample Jeopardy Question:  
Application-Based\***

A: If I live in a van down by the river because "particular others" have told me I would, symbolic interactionism would say this has occurred.

Q: What is a self-fulfilling prophesy?

# Share your CAT, Adopt a New CAT

- In groups of about 2-3, share one application CAT you are already using.
- Create a new CAT using one of these strategies you aren't yet using.



# Techniques for..

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- Assessing skill in synthesis and creative thinking
  - One sentence summary
  - Word journal
  - Approximate analogies
  - Concept maps
  - Invented dialogues
  - Annotated portfolios

# Assessing skill in synthesis and creative thinking

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## – One sentence summary

- Example: Write a summary of each of the five steps in the nursing process (assessing, diagnosing, planning, implementing, evaluating)
- Example: In one sentence, summarize Symbolic Interactionism Theory.

## – Word journal

- Example: In a lesson on Plato's Socratic dialogues, students word journaled and shared their chosen words and explanations. The instructor used these as a starting point for class discussion.

# Assessing skill in synthesis and creative thinking

– Approximate analogies

**From FY Composition:**

The theme is to an essay as \_\_\_\_\_ is to \_\_\_\_\_.

**From Fundamentals of Electrical Engineering:**

Voltage is to wattage as \_\_\_\_\_ is to \_\_\_\_\_.

**From Social Analysis:**

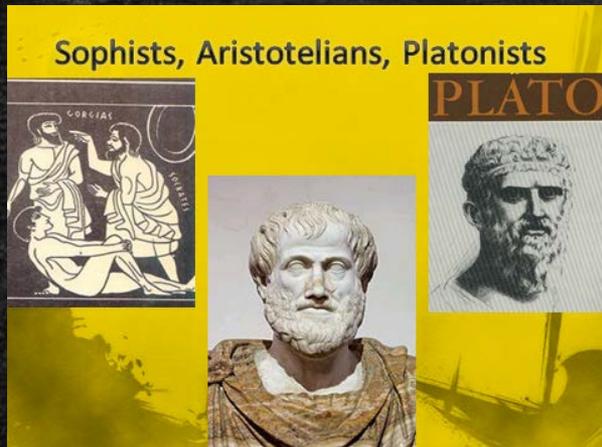
Income is to social class as \_\_\_\_\_ is to \_\_\_\_\_.

– Concept maps

\***Dr. Paris** would often write large concepts on the chalkboards around the room and have students come up and write synonyms to that concept or places/situations where that concept is demonstrated. This led to class discussion. She would also bring in magazines and divide students into groups to take only pictures from the magazines and glue them to a separate paper using only pictures and their word to demonstrate their understanding or examples of a concept.

# Assessing skill in synthesis and creative thinking

## – Invented dialogues



### Early Perspectives on Rhetoric: Interviews with Classical Theorists

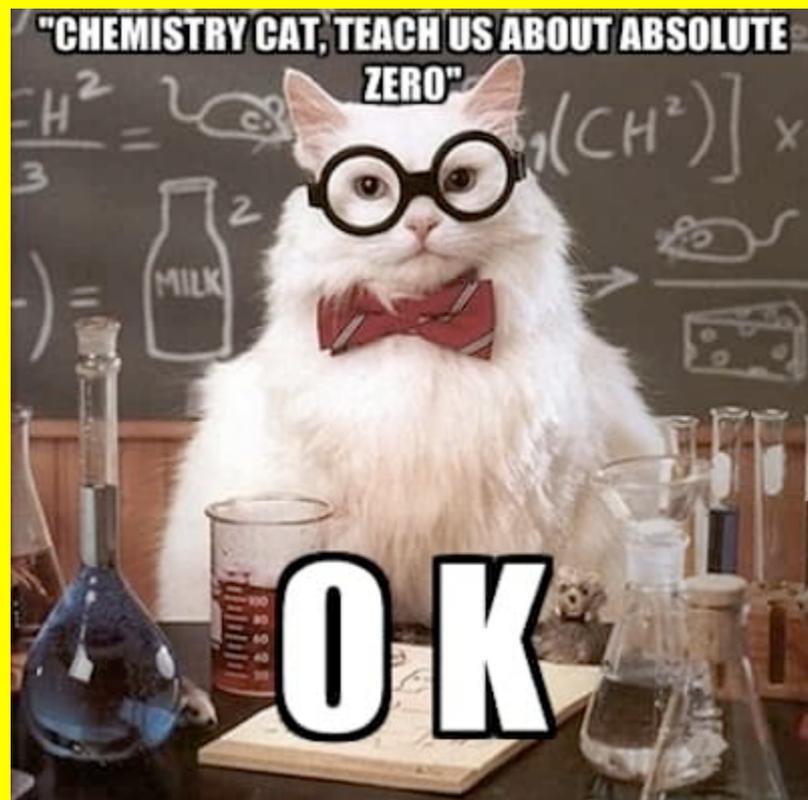
- Three teams. **Team Sophists. Team Plato. Team Aristotle.** Please answer these questions, referencing the text and the related supplemental reading (excerpts of Plato's Phaedrus, Aristotle's Rhetoric, and Poulakos' article on the Sophists).
- QUESTIONS:
  - What is rhetoric?
  - What is your *view* of rhetoric? Is it positive/negative?
  - How does ethics and truth factor into your view of rhetoric?
  - Your group will conclude with your favorite quote or tidbit you learned about your person/people from the reading.

## – Annotated portfolios

- Example: Sophomore art students from a drawing course were asked to select samples from a portfolio in order to demonstrate their grasp of line, form, shading, and perspective, and wrote explanations of how the work illustrated these concepts.

# Share your CAT, Adopt a New CAT

- In groups of about 2-3, share one synthesis/creative thinking CAT you are already using.
- Create a new CAT using one of these strategies you aren't yet using.





**YOU'RE AWESOME**

**THANK YOU!**