Fall 9-2018

Low Stakes, No Stakes: Formative Classroom Assessment Techniques

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For one of the courses you teach, think of a particular skill you'd like your students to develop.
Or, is there one concept that students struggle with?

→ What student learning outcome (SLO) are you addressing?

Low Stakes; No Stakes

Formative Classroom Assessment Techniques

Wendi Flynn, Aaron Haberman
2018-19 CETL Workshop Series
9/25/2018

UNC

Think-Pair-Share!

* 1 - 2 minutes *

Turn to someone near you, and:

1) Introduce yourself

2) Share the name of the course you're focusing on, and a little about the skill you've identified to be developed or challenge students often face

Workshop Outline

- Introduction and Background
  - Survey Results: Your Background
  - Define: Formative vs. Summative
- Advantages and Disadvantages
- Examples of CATs: Classroom Assessment Techniques
- Using CATs to assess student understanding
- *Design your own Low-Stakes or No-Stakes Assessment!*
- Summary
- Resources

Workshop Outcomes

Explain the differences between formative and summative assessment

Describe value of low/no stakes assessment

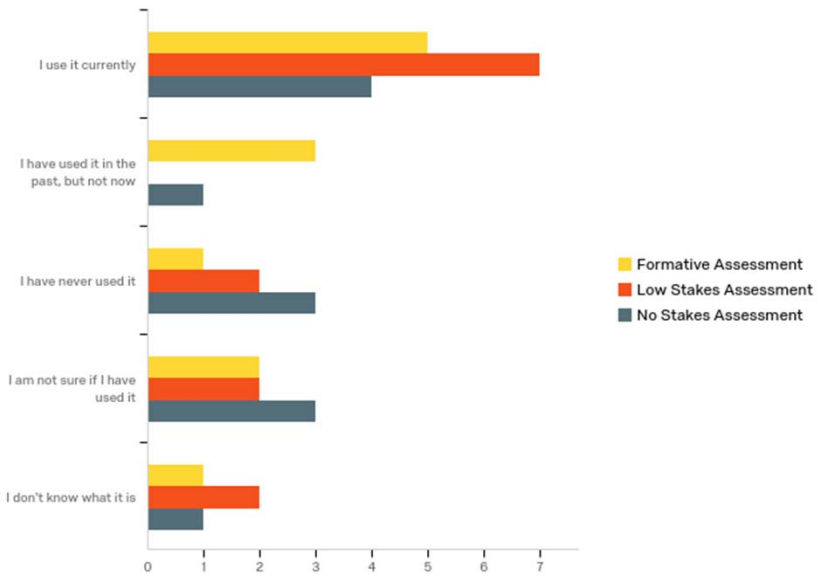
Develop your own Low-Stakes or No-Stakes CAT

Pre-Workshop Survey: Do you…

know the difference between formative and summative assessment?

know what low-stakes or no-stakes types of assessment are?

already use low-stakes or no-stakes types of assessments in a course?



"Assessment is not simply an end-of-course exercise to determine student grades. Assessments can be learning experiences."
(McKeachie and Svinicki, 2007)

"To be effective, assessments must be frequent, early, and formative."
(Tinto, 2012)

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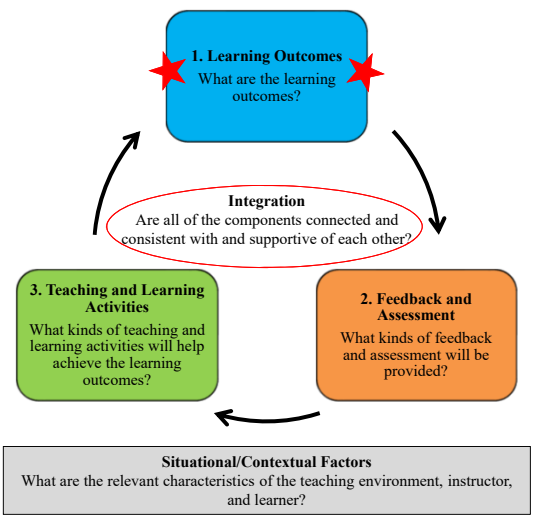


based on Fink (2013)

Assessment Types

Formative vs. Summative Assessments

Formative – evaluates students' abilities while they are still learning in the course
Summative – evaluates students' abilities as they are about to complete the course

Formative ⟷ Summative

improvement vs. accountability
learning vs. demonstration

- *Which is based more on Student Learning Outcomes?*
- *Which will demonstrate mastery of Student Learning Outcomes?*
- *Which should carry more weight in their final course grade?*
- *Where do "Low-Stakes or No-Stakes" Assessments fit?*

Low-Stakes; No-Stakes Assessments

- Time investment – "small"
- In class or outside of class
- Weight in overall grade – "small" to none

What's in it for me?
What's in it for my students?

Advantages to Students:

- Check their understanding in low-risk environment
- Activities break up class time

  Students' attention typically increases from the beginning of lecture to 10 minutes into the lecture, decreases after that point, and picks up toward the end. (Hartley and Cameron 1967)

- Build skills incrementally

Advantages to the Instructor:

- Check students knowledge, understanding
  - Misconceptions?
- Immediate feedback
- Interact, build rapport with students
  - Open lines of communication
- Communicates your goals to students so that they can learn more effectively

Possible Pitfalls?

Students refuse/fail to participate due to perceived low to no impact on grade

Combat by:

→ emphasizing scaffolding
→ including as portion of grade

Assessment Types

Classroom Assessment Techniques

One Sentence Summary

What's the Principle?

Misconception/Preconception Check

Defining Features Matrix

Minute Paper

Directed Paraphrasing

Active Learning:

"students participate in the process and students participate when they are doing something besides passively listening" (Bonwell 1991)

- Subset of CATs
- Concept Mapping
- Discussion
- Think-Pair-Share
- Game-ified Activities

Communication through Technology:

- Clickers
- Cell Phones

→ Browse your "CAT Kit!"


One Sentence Summary

The One Sentence Summary (OSS) challenges students to answer the questions "who does what to whom, when, where, how, and why?" about a given topic, and then to synthesize these answers into a single summary sentence.

Procedure for Creating a OSS

1. Select an important class topic or work that you expect student to learn to summarize.
2. Quickly answer "who did/does what to whom, when, where, how, and why?". Note how long it took you to answer.
3. Turn that answer into a sentence. Note how long it took you to write the sentence.
4. Allow your students twice as much time as it took you to carry out the task and give them clear directions on the One-Sentence Summary technique before you announce the topic.

Pros & Cons

Pros

- Quick and easy way to assess student's ability to summarize a topic.
- Good technique for helping students grasp complex processes and explain them in nontechnical language.
- Requires students to organize the information within a useful, memorable framework making it easier to recall.

Cons

- Some material cannot easily be summarized because some questions will have more than one answer.
- Some instructors and students may feel that putting lesson material into one sentence oversimplifies the material.

Now that you've learned about some of the formats, which do you think would work well in your course?

No Stakes Example – HISTORY

SLO Addressed	**Evaluate and apply methods of historical inquiry.**
Activity: How to do historiography 	**Part 1)** Watch and discuss 2 minute youtube video describing historiography. **Part 2)** Display and explain model historiographical paragraph **Part 3)** Pass out sheet that has excerpts of thesis statements from four works on the same historical subject. **Part 4)** In groups students will draft a historiographical paragraph into a Canvas discussion board post, based on the excerpts. **Part 5)** Display the historiographical paragraphs and critique
Time, % of Grade	20-25 min, 0 % of grade, must be completed.
How Activity is Assessed	Cumulative, group – Professor evaluates the submitted paragraphs and provides direct feedback to the class
Value to Student	Gain practice at an unfamiliar concept Learning how to work collaboratively Receive feedback on expectations for this concept.
Value to Faculty	Gain understanding of the extent to which the class understands the concept to inform future instruction.

Pre-activity preparation?

- Create sheet with excerpts from four historical works on the same topic.
- Prepare PowerPoint with a copy of the model historiographical paragraphs and link to youtube video.
- Set up Canvas discussion board

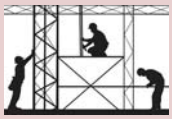
No Stakes Example – Meteorology

SLO Addressed	**Perform scientific calculations; understand physical significance**
Activity 	**Part 1)** Instructor sets up problem on the board **Part 2)** Students execute calculation **Part 3)** Instructor asks for student responses, and discusses reasonable solutions (including units), and physical significance
Time, % of Grade	<5 min (no score for this participation)
How Activity is Assessed	Interactive, individual – instructor checks in with students Cumulative, group – form conclusions as a class
Value to Student	Practice necessary calculations Understand relevance of problem within Earth's atmosphere
Value to Faculty	Check on student abilities & understanding

Pre-activity preparation?

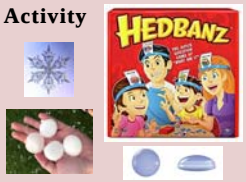
- Expectation: Students have calculators ready
- Problem prepared before class; anticipate complications/pitfalls

Low Stakes Example – HISTORY

SLO Addressed	**Demonstrate critical and analytical thinking skills by evaluating primary and secondary sources**
Activity: Annotated Bibliography of Primary Sources 	**Part 1)** Students complete an annotated bibliography of their primary sources that they will use for their term research paper. Students are asked to identify key quotes from those sources that they would use in their research paper. Following the quotes students write a short analysis of the quotes, explaining how the excerpts help answer their guiding research question. **Part 2)** Grade assignment based on detailed rubric that has separate evaluative categories for the quotes they chose and the analysis they offered.
Time, % of Grade	No class time-Student assignment (5 % of overall course grade)
How Activity is Assessed	Individual-apply rubric with evaluative categories connected to the excerpts they chose, the analysis they offered, correct citation, and writing presentation.
Value to Student	Gain practice identifying and citing material they will use in larger research project. Receive feedback on expectations for material they will be evaluated on for larger research project.
Value to Faculty	Gain data on the degree to which the class might have been having difficulties with key historical thinking skills to inform future instruction.

Pre-activity preparation? Designing the assignment and grading rubric.

Low Stakes Example – Meteorology

SLO Addressed	**Justify scientific reasoning behind choice of weather radar wavelength**
Activity 	**Part 1)** What's your precipitation particle & size? **Part 2)** Students use size of their particle and 3 different radar wavelengths to calculate ratio on worksheet **Part 3)** Students add data points to chart on board **Part 4)** Ask students to summarize results as a group: demonstrates that radar wavelength choice depends on particle size and desired scattering regime (Rayleigh)
Time, % of Grade	25-30 min, Participation (10% of overall course grade)
How Activity is Assessed	Interactive, individual – instructor checks in with students Cumulative, group – form conclusions as a class
Value to Student	Calculate and contribute unique values Practice necessary calculations Understand physical relationships represented by complex graph (directly related to SLO)
Value to Faculty	Intervene where needed, classroom interaction/rapport

Pre-activity preparation?
- Make cards for different particles and sizes
- Make worksheet to guide them through activity
- Provide and explain graph

Design your own Low-stakes or No-stakes Assessment

* ~15-20 minutes *

- Is there a Classroom Assessment Technique that could be adopted to the specific Learning Outcome you identified earlier?
- OR, create your own low-stakes or no-stakes assessment to target a Learning Outcome.
- Briefly describe the activity in writing.

Additional Considerations – steps toward implementation:
- What would you need to prepare before class?
- TEST IT on yourself or others (e.g. graduate students!) before introducing it to your class

Resources:

Upcoming Workshops: https://www.unco.edu/cetl

- **Learning Theory**
- **Community-Engaged Learning**
- **Inclusive & Equitable Classrooms**

Register and participate in four workshops: CETL Certificate

UNC – CETL: https://www.unco.edu/cetl

- **Teaching Toolbox → CAT Kit**

UNC – Office of Assessment: https://www.unco.edu/assessment

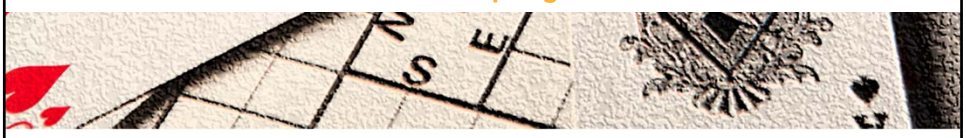
- **Assessment Kit → Developing Student Learning Outcomes**

Books:

- **Classroom Assessment Techniques: A Handbook for College Teachers** (Angelo and Cross, 1993)
- **McKeachie's Teaching Tips** (McKeachie and Svinicki, 2006)
  - Chapter 7: Assessing, Testing, and Evaluating: Grading is Not the Most Important Function

THANK YOU!

Please share your experiences with us in the spring!



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