

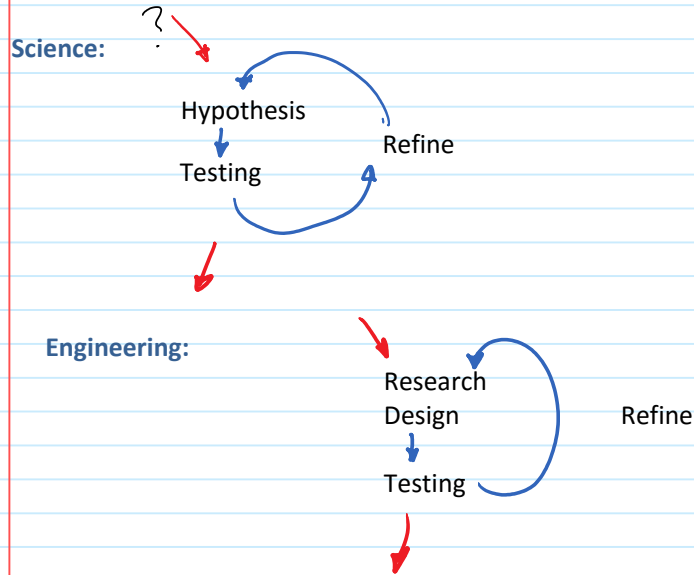
# 03 Assessments

Monday, August 12, 2013 1:19 PM

2016 Day 2

**Today: Assessments and Active Learning (Clickers)**  
**Wednesday: Practice teaching sessions**

When do you decide what tests to run?



## What assessments should I use?

To find the answer to that, you need to consider

- What are assessments that align with my learning goals and key concepts?
- What kinds of outcomes can I measure?

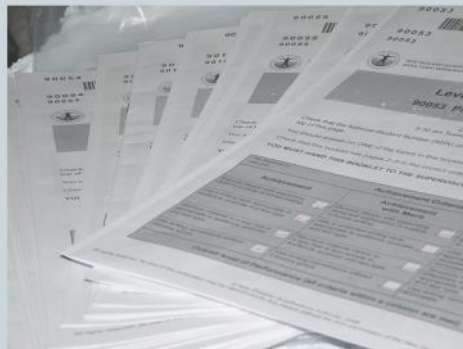
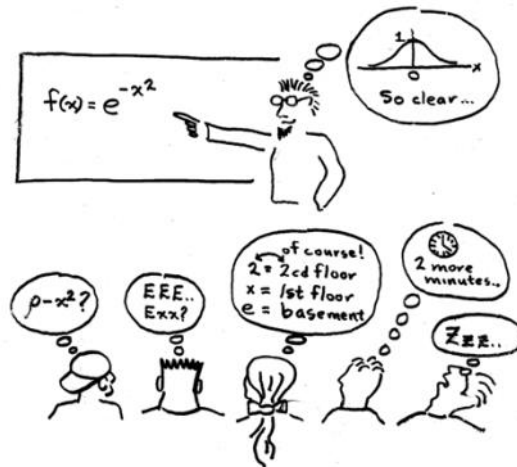


Image: Gabriel Pollard



Group brainstorm:  
Why do we assess?

- We have to; it's a requirement; university, accreditation
- Habit
- Does what is in our brain go into students' brains
- To check mastery before going on
- To reward, or acknowledge effort or mastery
- Feedback for students
- Feedback for instructors
- Accountability
- Motivate students
- Helps with funding (standardized tests)
- Helps students know what is important; practice
- What are the expectations of students
- To evaluate students performance
- To evaluate the professor's performance
- Generate the bell curve
- To guide the lesson plans
- To help students know what to study
- Highlight important concepts

### Previous years'

- Students won't learn if we don't assess them
  - They get points
  - Motivation to keep up, not procrastinate
- To evaluate and discriminate between good and bad students
- Accreditation requires it
- They can learn from exam itself
- Helps us know if they are learning
- Can be used to evaluate teaching quality
- Unreflective tradition. Happened to us, we'll do it to them.
- Encourage students to learn independently
- Helps them know what they don't know, identify weaknesses
- To help students make life choices, professional direction decisions
- Can be used to guide teaching direction
- To help students pass their exams
- To help us point out what is important
- Promote higher level thinking
- Continuous assessment empowers students to have a voice in their curriculum
- To engage students for their creative thought

To get better at teaching  
to find out how much info students actually got  
give institution credibility  
reinforces content for students  
to rank students  
see if LO's were achieved  
to find where to improve  
to motivate students  
to see if they're ready to go on to next concept

See what level the class is at, starting and at end  
to measure improvement  
To assign grades  
People pay to be graded  
People want ?  
Metric to rank students  
Politics  
Societal expectation  
Measure performance of students  
Measure performance of teaching (accountability)  
To improve teaching effectiveness  
Part of feedback loop  
To understand different levels within class  
To vary classroom dynamics; improve engagement

## Why do we assess / question?

- Gather evidence on student learning (evaluation)
- Improve a course Guide improvements
- Improve our teaching
- Improve society (?)
- Get feedback on student understanding
- Elicit misconceptions Guide teaching
- Guide your own instructional decisions
- Make expectations clear to students
- Provide feedback to students Guide students
- Give students an opportunity to gauge their progress
- Help guide student studying and learning behavior

## When can we assess students?

- Course-scale: Before or after a course.
- Class-scale: Before, during, or at the end of a class

A bit of Jargon:  
Formative vs.  
Summative Assessment

## What are some assessment methods?

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### FORMATIVE, IN-CLASS

- ✓ Concept Tests / Clickers
- ✓ Minute Papers
- ✓ Just in Time Teaching
- ✓ Listening to student discussion in class
- ✓ Weekly / Daily Surveys
- ✓ White-boarding activities
- ✓ In-class work / Tutorials
- ✓ Case studies
- ✓ Ranking / ordering tasks
- ✓ Think-pair-share.
- ✓ Student-designed reading assessments

### OTHERS

Jigsaw  
Brainstorming

Peer Review

Students as  
instructors

### SUMMATIVE EVALUATION

- ✓ Quizzes
- ✓ Exams
- ✓ Oral presentations
- ✓ Poster symposia
- ✓ Concept Inventories (cihub.org)

### SUMMATIVE FEEDBACK

- ✓ Conceptual surveys
- ✓ Attitude surveys

### FORMATIVE, OUT OF CLASS

- ✓ Homework
- ✓ Discussion boards

SELF-ASSESSMENTS  
cheat / CRIB SHEET  
WRITE EXAM QUESTIONS

Read to understand

A.k.a.  
Active  
Learning



## The various goals of questioning or assessing during class

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### BEFORE Setting up instruction

Motivate  
Discover  
Predict outcome  
Provoke thinking  
Assess prior knowledge

### DURING Developing knowledge

Check knowledge  
Application  
Analysis  
Evaluation  
Synthesis  
Exercise skill  
Elicit misconception

### AFTER Assessing learning

Relate to big picture  
Demonstrate success  
Review or recap  
Exit poll

Private Universe  
Google video

Credit: Rosie Piller and Ian Beatty.

Classic Minute Paper:

- 1) What was the most important thing you learned today?
- 2) What do you still have questions about?

## EXERCISE #3: Compare and Contrast

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- Work with 1-2 others to compare and contrast what students experience during two different types of assessment activities

5 minutes



Case 1: Each week, students are assigned a reading. All students take a 10-minute quiz that tests factual knowledge. Quizzes are handed in for points.

Case 2: Each week, students are assigned a reading. All students generate a diagram or concept map to illustrate the concepts from the reading on their own. They explain their figure to each other in small groups for 10 minutes at the start of class. After discussion, they write a one-minute paper to explain what they learned. Diagrams and papers are handed in for points.

How does the assessment motivate students to learn the material or figure out the concepts they don't understand?

How does the assessment capitalize on the diversity of learners?

Does the assessment help students gauge what they know or how well they understood the key learning goals?

Does the assessment build skills in giving and receiving critical feedback (learning how to learn)?

Write your own questions here:

whiteboard

<p>Grades motivate Question may inform them whether they know the facts</p>	<p>Have 10 min for learning what they missed Could just get info from neighbors. Maybe not sustainable. Additional link could diffuse info Information withheld in competitive environment Staged points; diagram graded separately Depends on grading policy Conversation alone can help slackers, and prepared ones. Could bore prepared people Depends on type of reading. Not much to discuss in factual reading.</p>
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	It's all about points, to read. No detailed feedback	Have to be able to articulate and contribute.
	If you test well and read well, you'll do well Shows diversity of these talents	Peer pressure.
	Slackers will be punished	Graphic representation requires whole understanding Group discussion, all will benefit from pooled knowledge Even slackers will get something Each student will have a different concept map
	They will get some feedback Depends on well written quiz Feedback not likely immediate	They will get more detailed feedback. Can judge quality of understanding from quality of concept maps
	No	Yes, some peer feedback, and teacher feedback Relationships between concepts seen as valued
Why do 1 not 2?	Class size; hard to assess 300 papers Tradition Will help attendance if nothing else	Takes more resources to grade. Maybe way more. Need a rubric, or just give participation points
Does it promote metacognitive skills?		1, yes some, but 2 is better
Does it build on prior knowledge?		Depends on concept map structure