

New Adjunct Training

Center for Teaching & Learning
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When You Arrive

(1) sign in, (2) find your name badge



- **3. On the flip chart,** write down what you hope to get out of the series & add your initials.

FYI. Goodies & drinks are available in the back of the room.

Workshop will begin PROMPTLY at 9:00 a.m.

AGENDA

- Introductions & Ground Rules
- Backwards Design
- Writing Learning Outcomes
- Classroom Assessment
- Student Engagement
- Classroom Management Techniques & Strategies

Today's Big Idea

Where are
Robert &
Susan?

- A pilot guides a plane or boat toward its destination by taking constant readings and making careful adjustments in response to wind, currents, weather, etc.



An effective instructor does the same thing:

- Plans a carefully chosen course ahead of time—SLOs
- Takes readings along the way—formative assessment
- Changes the course as conditions dictate

Based on: Wiliam, Dylan. (2006). "Integrating assessment with instruction to keep learning on track." Plenary address to NSTA Convention on Science Assessment. Anaheim, CA: April 6, 2006. Educational Testing Service.

“Speed” Introductions

- **What to Do:**

- **Part 1.** Person A interviews Person B (C & D)

- Person B interviews Person A (D & C)

- **Interview Questions**

- What's your name?
 - What's your department?
 - What is something unique about yourself that will help us remember you?

~ 3-4 minutes ~



Part 2. A introduces her/his partner B to the class and then C introduces D to the class, etc. *Can you introduce your partner in less than 30 seconds?*

Basic Ground Rules



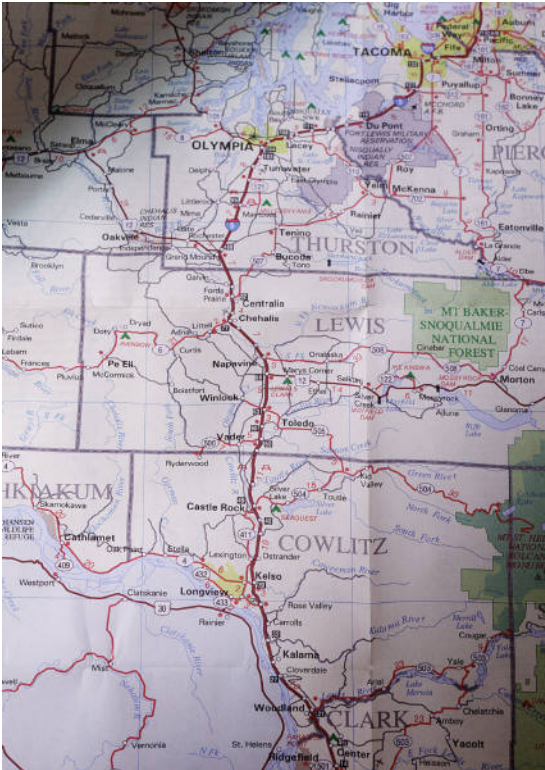
CTL Notes...

1. Mistakes are OK—have fun!
2. Work cooperatively.
3. Be an ACTIVE participant.
4. Begin & end on time.
5. Take care of personal needs.
6. Be an active listener—make eye contact, don't attend to other things.

Get involved in your own learning.



What is your destination?



- Do students know this is where they are headed?

The Teacher's Dilemma

Available Content

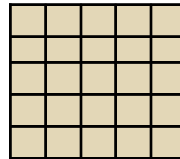
Available Time



Solution 1: Survey

Solution 2: Seminar

Solution 3: Talk Fast



Solution 4: Best Stuff

Solution 5: Give Up

How should I cover the content of several courses in only three, three hour sessions?

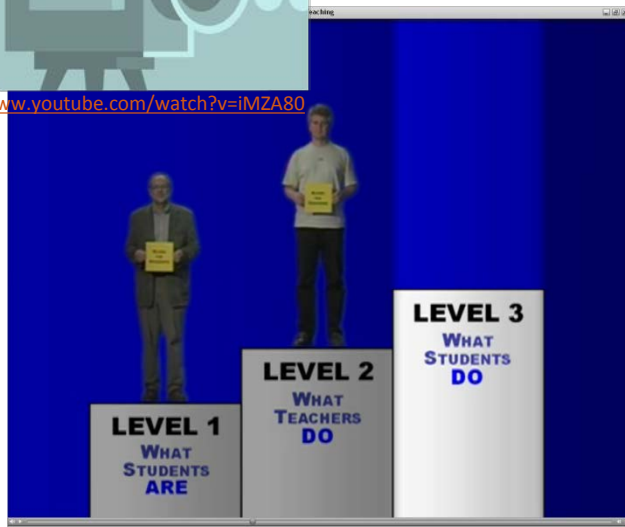


Are You a Level 1, 2, or 3 Teacher?

Teaching Teaching & Understanding Understanding



<http://www.youtube.com/watch?v=iMZA80XpP6Y>



Anticipatory Set, aka Activation:

Read the BEFORE questions on the *Viewing Guide*.

Think of possible response as you view the video.



Think-Pair-Share

Instructors asks students to answer a question or solve a problem, then . . .

Think – Silent time for individuals to think about possible responses.

Pair – Work with partner/group to share thoughts or discuss topic.

Share – Responses shared with class.



Why Is It Effective?

Provides “think time” AND time to “test” ideas and responses in safe environment AND students must articulate “*WHY*” = active learning

Debrief Video

Think – Review your notes

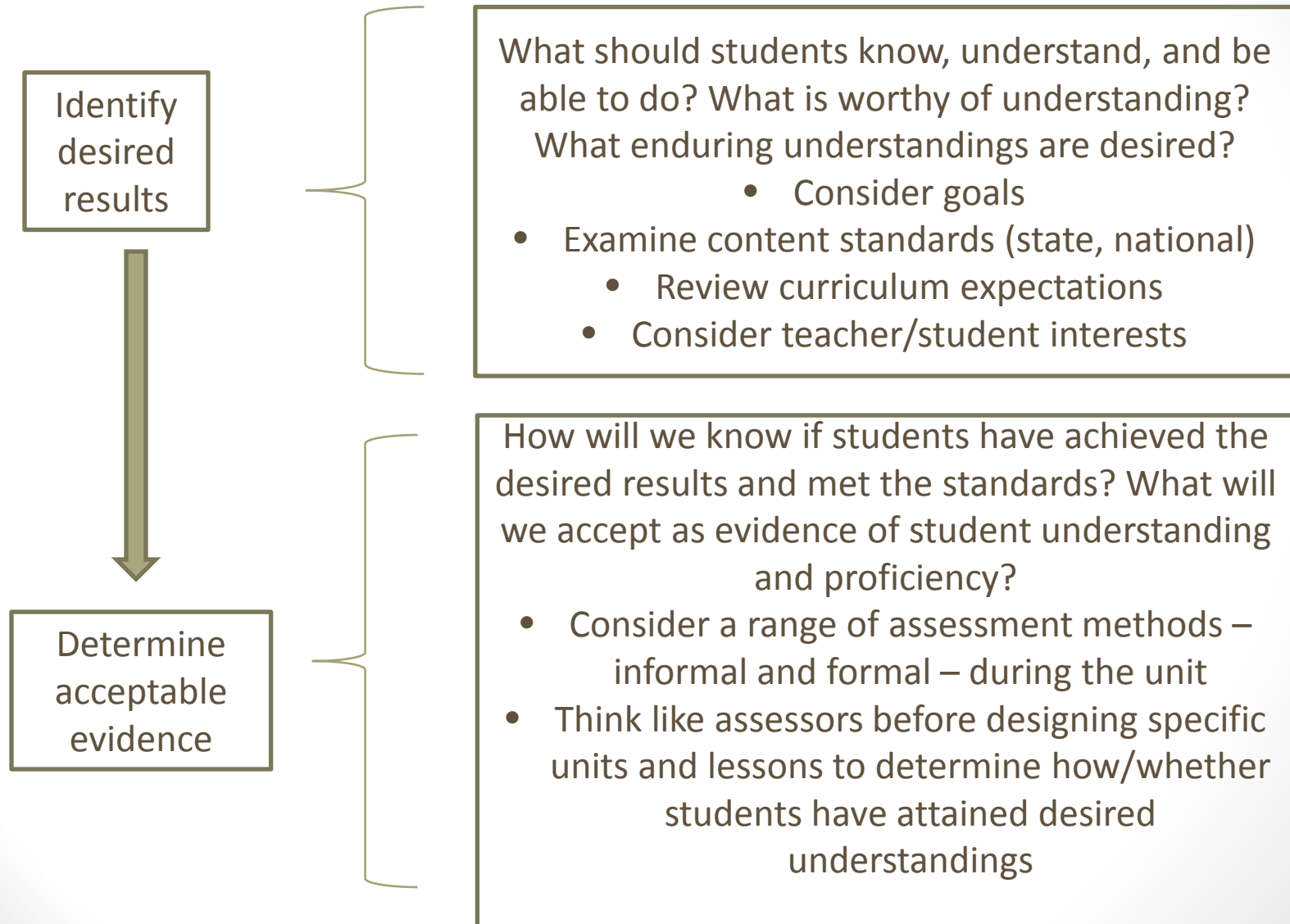
Pair – Discuss your responses to these questions:

- Were you more like Susan or Robert? How does this impact your understanding of undergraduates?
- How can you get “students’ activity” to match your intentions?
- What are some of the bottlenecks in your courses? How can you help Susan AND Robert overcome these bottlenecks?

Would you like to take a BRIEF break?



The Backward Design Process



The Backward Design Process



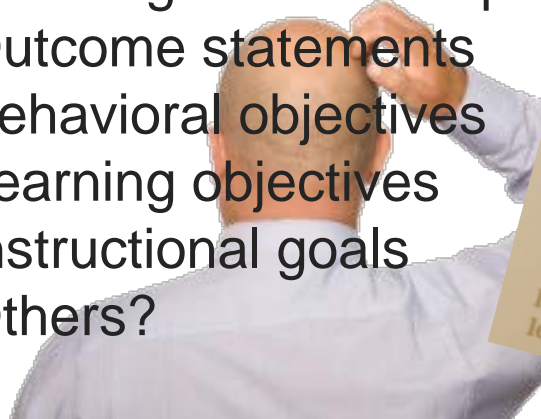
Plan learning
experiences and
instruction

- What enabling knowledge (facts, concepts, and principles) will students need to perform effectively and achieve desired results?
- What activities will equip students with the needed knowledge and skills?
- What will need to be taught and coached, and how should it best be taught in light of performance goals?
- What materials and resources are best suited to accomplish these goals?
 - Is the overall design coherent and effective?

What Are Learning Outcomes?

Terminology Varies

- SLOs** =
- Learning outcome expectations
 - Outcome statements
 - Behavioral objectives
 - Learning objectives
 - Instructional goals
 - Others?



Student learning outcomes (SLOs) =
lesson or unit level

Course objectives = course level

What Are Course Objectives? *(cont.)*

Course Objective are NOT SLOs . . .

- “Big picture” of what instructors expect students to achieve/learn **by end of the course**
- Sometimes called instructional goals
- Course objectives are NOT lesson SLOs, which are smaller units that come directly from course objectives
- Course may have 5-7 overarching outcomes, each with multiple SLOs
- Should be included in course syllabus
- Often given to instructors by departments



SLOs or Course Objectives?

- **Today you will:**

1. Identify your personal teaching goals
2. Describe learning bottlenecks that interfere with students' learning.
3. Understand the difference between poorly-written and well-written SLOs
4. Revise poorly-written SLOs so they are observable & measurable



How could you blend them together to create a course objective?



Learning outcomes should drive instruction and assessment, not vice versa.

Bloom's Taxonomy)

Bloom's Taxonomy

In the 1950s, Benjamin Bloom developed a classification taxonomy of learning that includes three overlapping domains: affective, cognitive, and psychomotor.

Affective Learning Domain

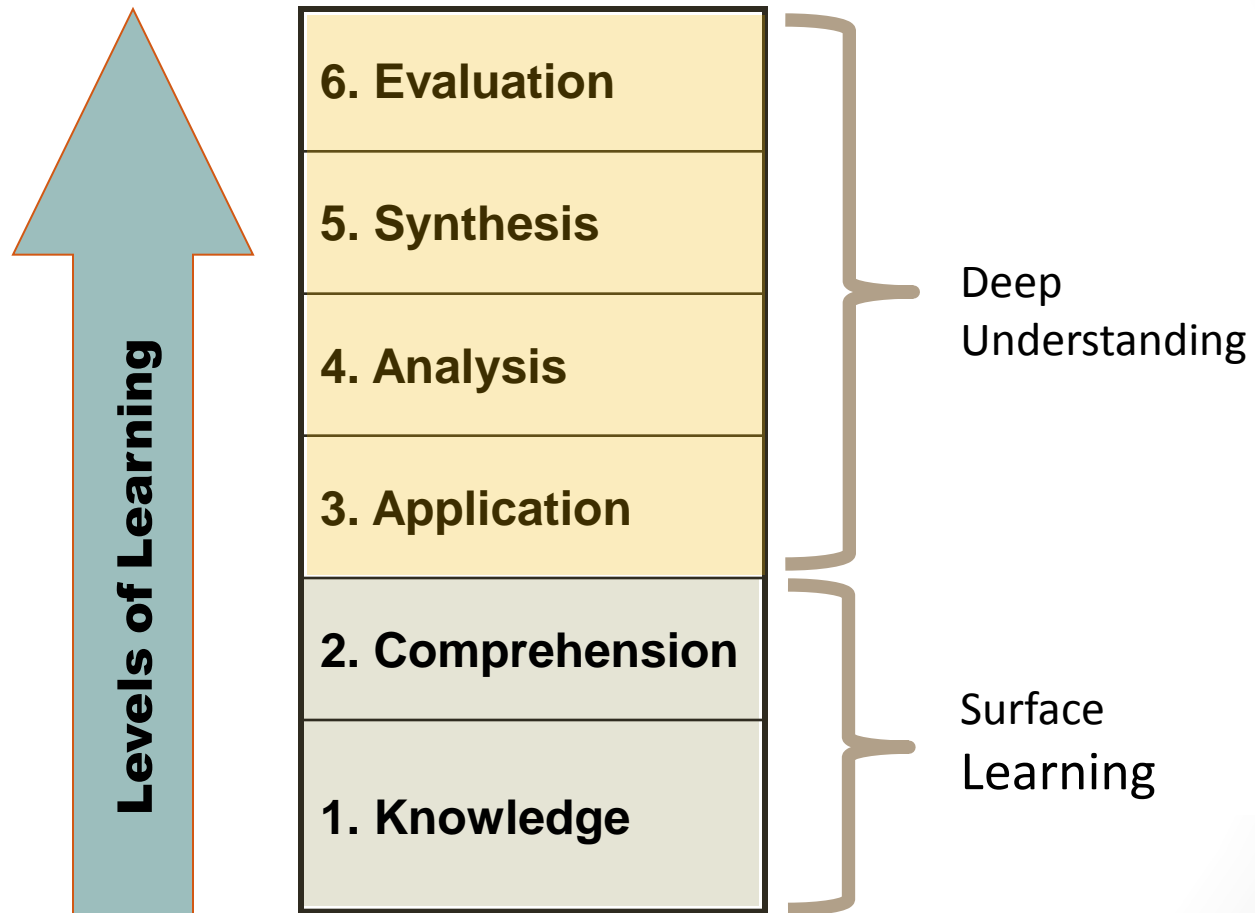
The affective learning domain pertains to emotions, attitudes, and values, things like appreciating, respecting, and supporting. Affective learning is characterized by attitudes of awareness, concern, and responsibility. Verbs that describe this domain include “accepts, attempts, challenges, defends, disputes, joins, judges, praises, questions, shares, supports, and volunteers.” Teachers focus on the affective domain when they teach appreciation of the environment, cooperation, citizenship, and respect for others. This domain is used most often in the areas of fine arts and social science.

Cognitive Learning Domain

This domain contains six levels (words in bold), from simple recall, the lowest level which is called the knowledge level, to evaluation, the highest level. Teachers focus most often on the cognitive domain when they plan and teach subjects like mathematics, science, reading, and writing. Effective teachers sequence instruction beginning at the knowledge level, then guide and direct the learning toward higher levels. As you plan for instruction, keep the learning pyramid in mind. Meaningful, long-term learning does not take place until the application level is reached. The application, analysis, synthesis, and evaluation levels are sometimes referred to as higher order thinking skills or HOTS (highlighted in gray). Examples of cognitive learning at each level include:

Knowledge	• recall • repeat	• state • name	• list • label	• define • relate	• memorize • reproduce	• recognize • arrange
Comprehension	• restate • classify	• discuss • describe	• identify • locate	• explain • report	• express • select	• review • translate
Application	• apply • use	• solve • write	• illustrate • interpret	• practice • employ	• dramatize • sketch	• demonstrate • connect
Analysis	• analyze • test	• compare • contrast	• examine • criticize	• calculate • appraise	• discriminate • differentiate	• categorize • experiment

Bloom's Taxonomy (cont.)



Test Your Knowledge



A. Knowledge

B. Comprehension

C. Application

D. Analysis

E. Synthesis

F. Evaluation

A Define the term “prevailing winds.”

F Predict weather conditions for tomorrow from data relating to air temperature, pressure, & wind taken in the past 42 hours.

B Explain how the water-cycle processes of condensation, sublimation, precipitation, and melting depend on energy transfer.



C Demonstrate, through the sequencing of photographs or drawings and a written explanation, the meaning of the term “water cycle,” including information on the role of the sun.

Outcomes adapted from: Flanagan, J.C.; Manger, R.F.; & Shanner, W.H. (1971). *Science Learning Objectives: A Guide to Individualized Learning*. Palo Alto, CA: Westinghouse Learning.

Assessment of Sample Outcomes

Part 1. Assessment of Sample Student Learning Outcomes

Directions: WORKING BY YOURSELF, identify the MOST measurable item in each of the following groups of SLO samples. Why is this item more measurable than the other two samples?

1. Which is the most measurable SLO?

- A. Students will appreciate the basic structures of atoms, ions, and molecules.
- B. The course will focus on the reactivity of atoms.
- C. Students will be able to predict the products of a chemical reaction.


2. Which is the most measurable SLO?

- A. Students will know the meaning of the term “resistance.”
- B. Students will calculate the resistance of a circuit.

WORK BY YOURSELF to select the most measurable SLOs.

3. Which

- A. Students who complete all homework assignments and quizzes will earn Bs.
- B. Students will understand the uses of systems of equations.
- C. Students will be able to correctly solve a system of two equations.

 **Challenge Question:** Why were the less measurable SLOs problematic? Identify problem areas.

Assessment of Sample SLOs

- **1. Which is the most measurable SLO?**



- A. Students will appreciate the contribution of Newton to science.
- B. The course will focus on Newton's three Laws of Motion.
- C. Students will be able to identify which of Newton's laws apply when describing an object at rest and in motion.

Assessment of Sample SLOs

- **2. Which is the most measurable SLO?**
 - A. Students will be able to compute monthly payments on a loan.
 - B. Students will reflect on the process of applying for a loan.
 - C. Students will examine the effects of increasing mortgage rates.

Assessment of Sample SLOs

3. Which is the most measurable SLO?

- A. Students who complete all homework assignments and quizzes will earn Bs.
- B. Students will understand the uses of systems of equations.
- C. Students will be able to correctly solve a system of two equations.

Assessment of Sample SLOs

4. Which is the most measurable SLO?

- A. Students will be able to name the primary colors
- B. Students will know how to use a color wheel
- C. Art 1001 will demonstrate the significance of color in painting.

Why were the less measurable learning outcomes problematic?

Significant Learning Outcomes need to:

- Describe student rather than instructor behaviors
- Include **action verbs** specifying observable behaviors that are measurable
- Focus on end-of-instruction behaviors rather than subject matter coverage
- Are clear to someone outside your discipline
- Are realistic and attainable
- Use simple language



Based on: Ball State University. (2008). Chapter 2: Shaping Departmental Goals and Objectives. Downloaded from <http://web.bsu.edu/IRAA/AA/WB/chapter2.htm>

Common Problems with SLOs

Use of vague terms like

- Know
- Understand
- Learn
- Become aware of
- Appreciate
- Become familiar with

These verbs are **inappropriate** because they are **not observable** and therefore not measurable.

Describing an action taken by someone other than the student.

- The instructor will . . .
- The unit/assignment will . . .
- The course will . . .

Fixing SLO Problems

- What's wrong with this SLO?

Students will understand Piaget's stages of cognitive development.

How could you rewrite this SLO to make it more measurable?



Work with a partner to identify the problem with each SLOs & rewrite it.

Fixing SLO Problems

1. Students will demonstrate their grasp of the impact of meter on the poetic form by analyzing poems from three different literary periods.
2. Students will write a persuasive paper.
2. Students will write a persuasive paper that is focused on a specific audience, has a clear purpose, provides appropriate supporting arguments, and is free of grammatical errors.

Fixing SLO Problems

3. Students will describe each of the major sociological perspectives and will illustrate how each perspective relates to events in their daily lives.
4. Students will design a website that incorporates elements of good website design including usability, seamless interface between design and content, and accessibility.

Are you more comfortable with writing and/or revising your own SLOs now?  to 

Based on Ideas from: Handout from Student Learning Outcomes Series Fall 2008. Facilitated by Dr. Francine Glazer & Dr. Michael Uttendorfer, New York Institute of Technology

Checking for Understanding

Are today's SLOs appropriately written?



1. Identify your personal teaching goals (PTGs).
2. Describe learning bottlenecks that interfere with students' learning.
3. Distinguish poorly-written from well-written learning outcomes.
4. Revise poorly-written learning outcomes so they are observable and measurable

- *At what level of Bloom's are these written?*
- *Are they significant?*
- *Were the "no-no" verbs avoided?*
- *If a SLO is poorly written, rewrite it.*



SLO Writing Guide



1. Use Bloom's Taxonomy—focus on **higher level** skills rather than on lower level ones.
2. State SLO as an *intended learning outcome*.
 - Stem + active verb—one that can be **observed** and communicates the instructional intent.
 - Include **only one outcome** rather than combining multiple outcomes—avoid *and*.
 - Too many outcomes can overwhelm—less is more.
3. Focus on **what students will DO**—produce or demonstrate—rather than the process or content.

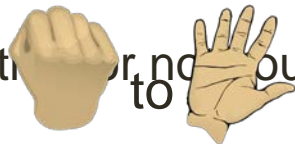
Did Instruction Match Intention?

- **What instructional strategies were used to meet today's SLOs?**

- ✓ Identify your personal teaching goals (PTGs).
- ✓ Identify learning bottlenecks that interfere with students learning.
- ✓ Distinguish poorly-written from well-written learning outcomes.
- ✓ Revise poorly-written learning outcomes so they are observable and measurable.
- ✓ Apply knowledge of PTGs & SLOs to write SLOs for a target course.

- Did these strategies help you “master” SLOs?

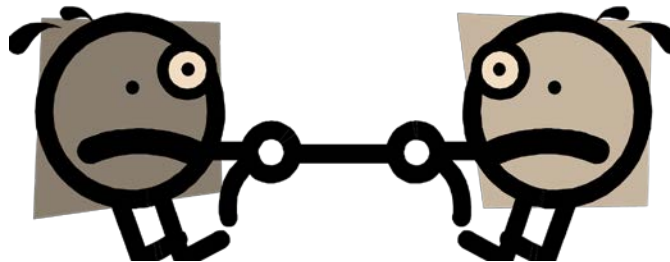
- Do I know whether or not you mastered SLOs?



Assessment vs. Evaluation

Assessment - analysis & use of data by students, faculty, and/or departments to make decisions about improvements in teaching & learning

Evaluation - analysis & use of data by faculty to make judgments about student performance, including decision regarding grades for an assignment or course



Assessment vs. Evaluation

(cont.)

Defining Features Matrix

What to Do: In the left-hand column are features which characterize or distinguish different approaches to the use of information in classrooms. In the right-hand columns, place a check (✓) in the appropriate column(s) to identify whether the feature is characteristic of evaluation or of assessment.

Characteristic Feature	Evaluation	Assessment
More closely focused on improving learning and teaching rather than on recording results.		
Used primarily at the end of a course or project.		
Diagnostic: Identifies areas for improvement.		
Judgmental: Arrives at an overall grade/score		
Summative: Final, to gauge quality.		
A faculty member corrects an exam and assigns a grade of 82% to a student.		
Engineering students are videotaped talking to clients about the clients building needs in order to create design specs for a project. They view their videotapes and evaluate their performances by writing self-assessment narratives. In the narrative they develop specific plans for improvement.		

When Planning Assessment, Consider:

- 1. What **measurable outcome** are you trying to assess?
 - 2. What **CAT or instrument** will you use to collect data?
3. How will you **introduce** the assessment activity to students?
 4. How will you **integrate** it into ongoing classroom activities?
 5. Realistically, how much **time** can you devote to this?
 6. What will a **successful** outcome look like?
 7. What is the **minimum** outcome you would consider meaningful?



Adapted from: Angelo, T.A. & Cross, K.P. (1993). Classroom Assessment Techniques. San Francisco, CA: Jossey-Bass. p. 49.



Memorable Learning Experiences

- Think

- Recall an effective learning experience you had in college.

- Pair

Explain the impact this experience had on your learning. How did it change you?

- Look for commonalities in your experiences.

combined

Share

M – Report on commonalities for your TEAM



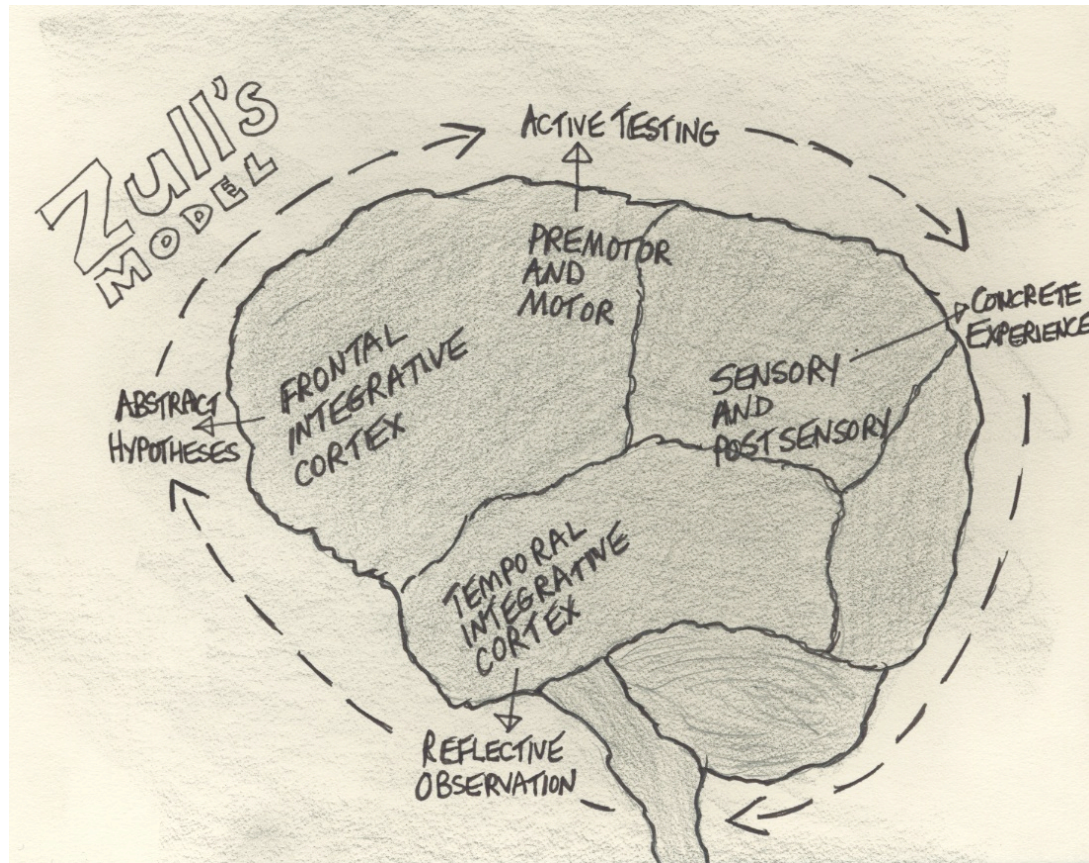
“Learning is not a spectator sport”

“Students don’t learn very much sitting and listening... Then must talk about what they are learning, write about it, relate it to past experiences and apply it to their daily lives. They must make what they learn part of themselves.”

• *Seven Principles for Good Practice in Undergraduate Education* Chickering & Gamson



Learning is about:



doing, testing, choosing, using...

Has This Ever Happened to You?

Critical Incidents in College Teaching - Scene 5



How do you get students to read assigned materials in preparation for class discussions & activities?

HO

Classroom Engagement

Classroom Management

