Writing Student Learning Outcomes
What are PLOs, SLOs, and EEOs?

• **PLO**
  – The Palestinian Liberation Organization?
  – Program Learning Outcomes!

• **SLO**
  – The Symbionese Liberation Organization?
  – Student Learning Outcomes!

• **EEO**
  – Equal Employment Opportunity?
  – Exemplary Educational Objectives!
Alignment of Outcomes

- Institutional Mission & Strategic Initiatives
- Programmatic Outcomes
- Student Learning Outcomes
What are Student Learning Outcomes?

• Formal statements that articulate:
  – The **knowledge**, **skills/abilities**, and **attributes** we want our students to be able to demonstrate.
  • From their learning experiences both curricular and co-curricular activities.

• Objectives vs. Outcomes
• Process/Fluid
Characteristics of SLOs

• They should be:
  – Based on PLOs
  – Collaborative
  – Learner centered
  – Specific
  – Action oriented
  – Cognitively appropriate
  – Behavioral
  – Measurable
  – Observable
  – Understandable
  – Achievable
  – Realistic
### Learning Outcomes Formula

<table>
<thead>
<tr>
<th>Verb</th>
<th>+</th>
<th>Why?</th>
<th>=</th>
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<tbody>
<tr>
<td>Or</td>
<td></td>
<td>&quot;In Order To&quot;</td>
<td>Great Learning Outcomes</td>
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<td>Action Phrase</td>
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**What students need to know?**

"Student identifies, consults and evaluates reference books appropriate to the topic"

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**Why do they need to know this?**

"locate background information and statistics."

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**Why?**

"In Order To"
Importance of Verbs

• Bloom’s Taxonomy

  – Affective Domain
    • This domain includes the manner in which we deal with things emotionally, such as feelings, values, appreciation, enthusiasms, motivations, and attitudes.

  – Psychomotor Domain
    • The psychomotor domain includes physical movement, coordination, and use of the motor-skill areas. Development of these skills requires practice and is measured in terms of speed, precision, distance, procedures, or techniques in execution.

  – Cognitive Domain
    • The cognitive domain involves knowledge and the development of intellectual skills. This includes the recall or recognition of specific facts, procedural patterns, and concepts that serve in the development of intellectual abilities and skills. There are six major categories, which are listed in order below, starting from the simplest behavior to the most complex. The categories can be thought of as degrees of difficulties.
Cognitive Domain

- Involves knowledge and the development of intellectual skills
  - Hierarchy of objectives according to cognitive complexity
  - Higher-level objectives include, and are dependant on lower level cognitive skills
Bloom’s – Lower Levels

• Knowledge
  – Recalling previously learned information such as facts, terminology, rules, etc.
  – Answers may be memorized or closely paraphrased from assigned material.
  – Define, list, name, recall
Bloom’s – Lower Levels

• Comprehension
  – Ability to comprehend the meaning of material.
  – Answers must be in the student’s own words while still using terminology appropriate to the course material.
  – Explain, summarize, distinguish between, restate
Bloom’s – Lower Levels

-Demonstrate rote or surface learning
-Declarative or Procedural Knowledge
-Answers found in the assigned materials
-80% of HS teachers test at these levels
Bloom’s – Higher Levels

• Application
  – Requires recognizing, identifying, or applying a concept or principle in a new situation or solving a new problem.
  – May require identifying or generating examples not found in assigned materials.
  – Demonstrate, arrange, relate, adapt
Bloom’s – Higher Levels

• Analysis
  – Ability to break material down into its component parts and to understand its underlying structure
  – May require students to compare and contrast or explain how an example illustrates a given concept or principle.
  – Require students to identify logical errors or to differentiate among facts, opinions, assumptions, hypotheses and conclusions
  – Expected to draw relationships between ideas
  – Differentiate, estimate, infer, diagram
Bloom’s – Higher Levels

• Synthesis
  – Opposite of Analysis
  – Ability to combine parts to form a new whole; to synthesize a variety of elements into an original and significant whole.
  – Produce something unique or original
  – Solve some unfamiliar problem in a unique way
  – Combine, create, formulate, construct
Bloom’s – Higher Levels

• Evaluation
  – Ability to evaluate a total situation, to judge the value of material for a certain purpose, combining elements of all the other categories and also value judgments based on defined, fixed criteria.
  – The most important part of the answer is the justification and rationale for the conclusion
  – Judge, critique, justify, discriminate
Bloom’s – Higher Levels

• Meaningful or deep learning

• Go beyond textual material in that they must be inferred or extrapolated from the material in the assigned material.

• Students’ creativity, originality and critical thinking is required at higher levels

• More authentic than lower levels
  – Thinking at this level is more likely to represent types of performances required in the real world
Questions for Assessment

1. What do you want the student to be able to do? (Outcome)
2. What does the student need to know in order to do this well? (Curriculum)
3. What activity will facilitate the learning? (Pedagogy)
4. How will the student demonstrate the learning? (Assessment)
5. How will I know the student has done this well? (Criteria)
What do you want the student to be able to do?

• This question asks you to develop the outcome.

For Example:

• Student identifies, consults and evaluates reference books appropriate to the topic in order to locate background information and statistics.
Example 1

• Students will name the three types of rock in order to differentiate among the three.

• Students will compare and contrast the characteristics of the three types of rocks in order to differentiate among the three.
Example 2

- Students will be able to use Excel.
- Given a sample dataset, students will use Excel to create a spreadsheet that incorporates simple mathematical formulas.
Example 3

• Students will analyze global political systems.
• Students will analyze 20th century western democracies and responsibilities of citizens in those democracies.
Example 4

• Students will construct bibliographies and in-text references using discipline appropriate styles in order to contribute to academic discourse in their discipline.

• Construct bibliographies and in-text references using discipline appropriate styles in order to correctly attribute others' work and ideas.
Write an SLO

- What does the student need to know?
- Why do they need to know this?
What Do I Do With SLOs?

• Put them in your Syllabus.
• Assessment them as part of your course.
• Report the assessment if necessary.
• Use the information to improve your class.
The Assessment Process: Plan-Do-Review

1. Establish goals and missions
   For courses and programs

2. Write intended
   Student Learning
   Outcomes (SLO’s)

3. Develop means of
   assessment and
   criteria for success
   for evaluating
   SLO’s

4. Incorporate
   SLO’s and
   assessment tasks
   into instruction

5. Evaluate
   assessment results

6. Use results to refine
   instruction (close the
   feedback loop)
Why Assess?

• Southern Association of Colleges and Schools Principles of Accreditation
  – Core Requirement 2.5
    • The institution engages in ongoing, integrated, and institution-wide research-based planning and evaluation processes that incorporate a systematic review of programs and services that (a) results in continuing improvement, and (b) demonstrates that the institution is effectively accomplishing its mission.
  – Comprehensive Standard 3.3.1
    • The institution identifies expected outcomes for its educational programs and its administrative and educational support services; assesses whether it achieves these outcomes; and provides evidence of improvement based on analysis of those results.
Why Assess?

• Improves students’ learning.
• Identifies instructional, course, or assignment challenges.
• Improves instruction by identifying what instructional adjustments might be needed.
• Ensures grading is reflective of students’ learning towards course objectives.
• Makes grading more systematic and objective.