



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

Verb
Or
Action Phrase

+
"In Order To"

Why?

=

Great
Learning
Outcomes

OR

What students need
to know?

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

"In Order To"

Why do they need to
know this?

*"locate background
information and
statistics."*



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

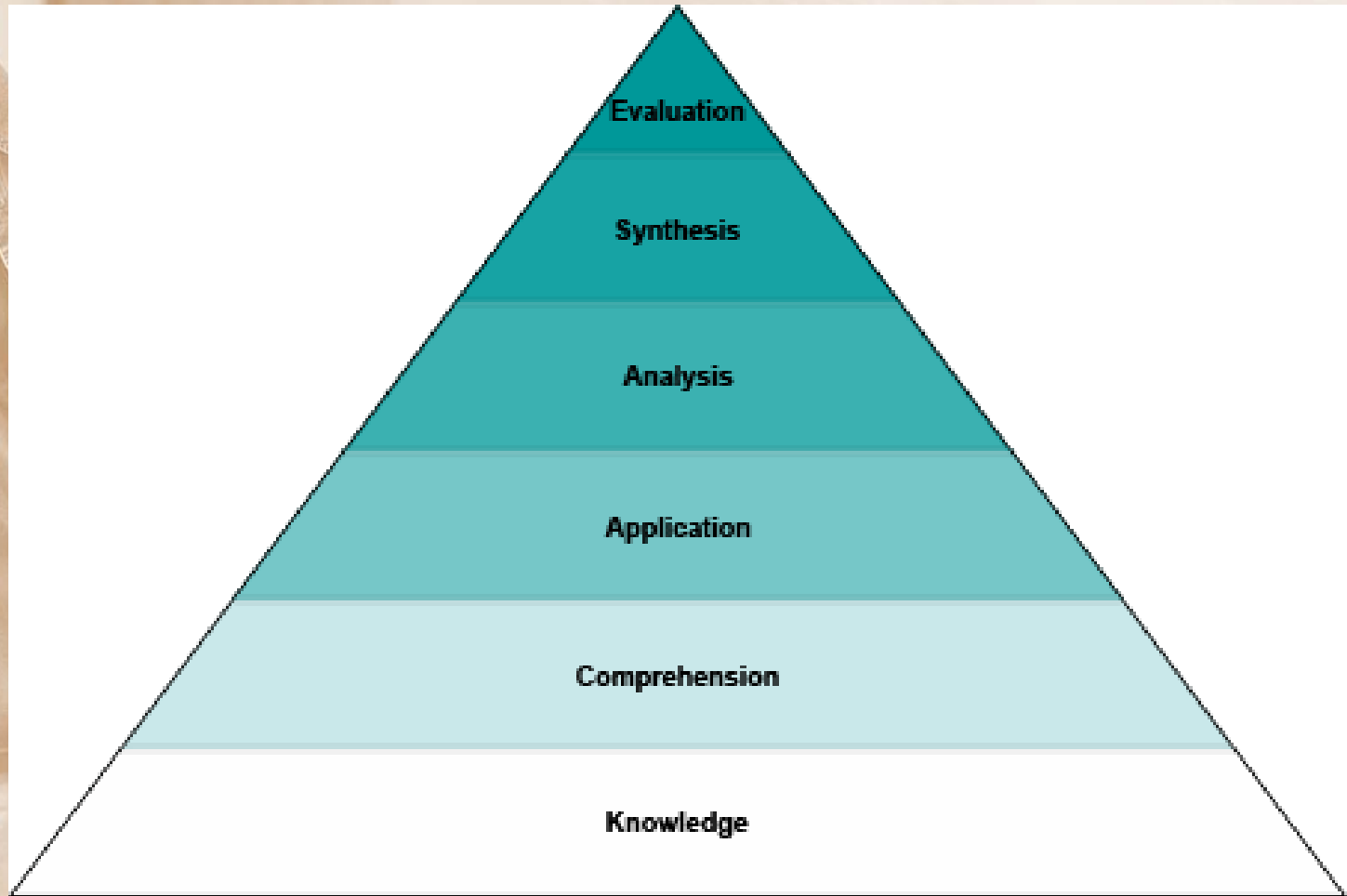
- The cognitive domain involves knowledge and the development of intellectual skills. This includes the recall or recognition of specific facts, procedural patterns, and concepts that serve in the development of intellectual abilities and skills. There are six major categories, which are listed in order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

A young man with dark hair, wearing a denim jacket over a dark shirt and light-colored pants, stands in a hallway. He is holding a stack of papers in his left hand. The background is a blurred hallway with a door and a window.

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 Taxonomy



Bloom's Taxonomy of learning. Adapted from: Bloom, B.S. (Ed.) (1956) Taxonomy of educational objectives: The classification of educational goals. Handbook I, cognitive domain. New York ; Toronto: Longmans, Green.



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



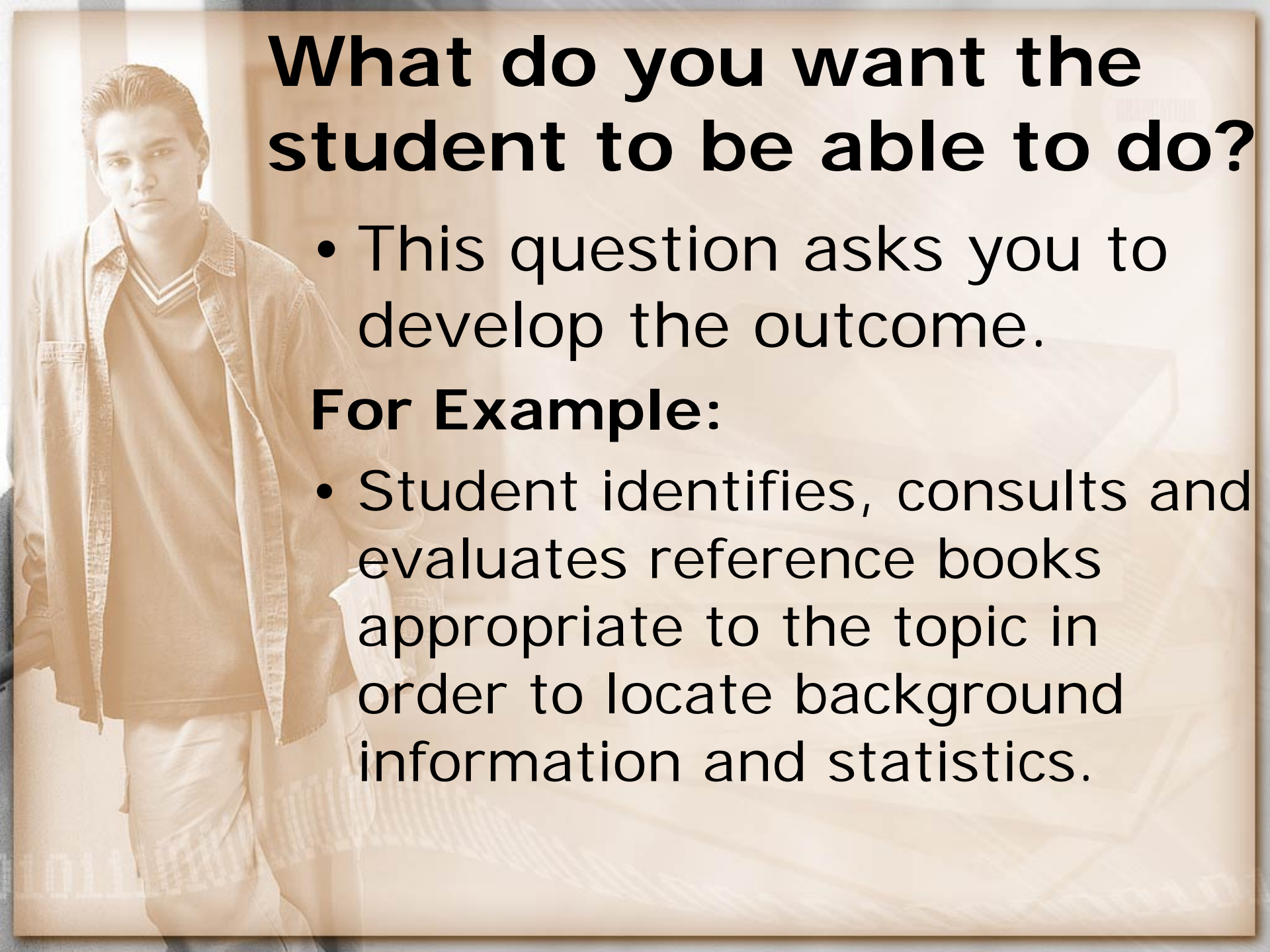
Bloom's – Higher Levels

- 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.

A young man with dark hair, wearing a denim jacket over a dark V-neck sweater and light-colored cargo pants, stands in a hallway. He is holding a book under his left arm. The background is a blurred hallway with a door and a window. The overall image has a warm, sepia-toned filter.

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

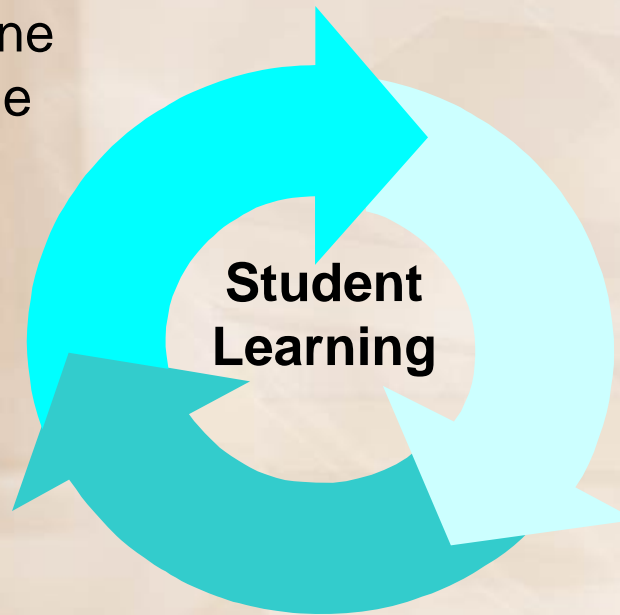
2. Write intended
Student Learning
Outcomes (SLO's)

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.