

# Student Learning Outcomes: Lessons Learned from SACS 2007 Meeting

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# Overview

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- Pertinent Definitions
- Defining Student Learning Outcomes
- Writing & Assessing Student Learning Outcomes
- Bloom's Taxonomy & Learning Domains
- Examples
- SLO Best Practices

# Conceptual Definitions

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- ❑ **Assessment:** “The systematic collection, review, and use of information about educational programs undertaken for the purpose of improving student learning and development” (Ted Marchese)
- ❑ **Goals:** Broad statements of direction, preferably linked to the institutional mission statement.
- ❑ **Objectives:** Particular statements of actions to be undertaken to fulfill goals.
- ❑ **Outcomes:** Achievement of a desired result or tangible destination. This is what actually happens.
- ❑ **Competencies:** Adequate or sufficient demonstration of defined tasks, skill, or knowledge



# Cycle of Assessment

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- Determine goals, objectives, and outcomes
- Select appropriate measures
- Gather evidence/information
- Analyze evidence/information
- Use results (for planning and improvement)



# Student Learning Outcomes

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- Sometimes referred to as “student learning objectives” and “expected student competencies”
- Basic definition: The really important things faculty think students should know, believe, or be able to do when they complete their degree requirements.



# Benefits of Student Learning Outcomes

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- Let's students know expectations
- Help faculty design effective materials
- Assist in setting examinations based on the material developed
- Ensure that appropriate assessment strategies are employed



# Teaching and Learning and SACCS Accreditation

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- Evidence of student learning is of utmost importance
- Documentation of student learning outcomes involves:
  - What we expect students to learn,
  - How and where they will demonstrate what they learn, and
  - How we will know what they have learned.

# Statements of Student Learning Outcomes

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- Statements of student learning outcomes should answer what students should:
  - Know (Cognitive)
  - Think (Affective)
  - Do (Psychomotor)

# Writing Student Learning Outcomes

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- Consider 3 domains of learning:
  - Cognitive Domain- learning outcomes related to knowledge
  - Psychomotor Domain- learning outcomes related to skills
  - Affective Domain- learning outcomes related to attitudes, behaviors, and values
- May also apply Bloom's Taxonomy of Educational Objectives:

Analysis

Synthesis

Evaluation

Application

Comprehension

Knowledge

# Writing Student Learning Outcomes

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- Focus on observable outcomes
- “Action verbs” can provide that needed focus
- For example:
  - By the end of the secondary education program, students will be able to *design* curriculum and appropriate instruction.

# Psychomotor Domain

<b>Observe</b>	<b>Model</b>	<b>Recognize Standards</b>	<b>Correct</b>	<b>Apply</b>	<b>Coach</b>
Students translate sensory input into physical tasks or activities	Students are able to replicate a fundamental skill or task	Students recognize standards or criteria important to perform a skill or task correctly	Students use standards to evaluate their own performances and make corrections	Students apply this skill to real life situations	Students are able to instruct or train others to perform this skill in other situations
Hear Identify Observe See Smell Taste Touch Watch  *Usually no outcomes are written at this level	Attempt Copy Follow Imitate Model Repeat Show Try	Check Detect Discriminate Differentiate Distinguish Notice Perceive Recognize	Adapt Adjust Alter Change Correct Develop Improve Modify	Build Compose Construct Create Design Originate Produce	Demonstrate Exhibit Illustrate Instruct Teach Train

Basic knowledge, basic skills

More sophisticated skills, higher level abilities, and critical understanding of performance

# Affective Domain

<b>Receiving</b>	<b>Responding</b>	<b>Valuing</b>	<b>Organizing</b>	<b>Characterizing</b>
Students become aware of an attitude, behavior, or value	Students exhibit a reaction or change as a result of exposure to an attitude, behavior, or value	Students recognize value and display this through involvement or commitment	Students determine a new value or behavior as important or a priority	Students integrate consistent behavior as a naturalized value in spite of discomfort or cost. The value is recognized as a part of the person's character.
Accept Attend Describe Explain Locate Recognize	Behave Comply Discuss Examine Respond Show	Accept Adapt Balance Choose Differentiate Defend	Adjust Change Customize Develop Manipulate Revise	Authenticate Characterize Display Embody Habituate Produce

Elementary values & behaviors, inherited value system, egocentric view

More highly developed attitudes, well thought-out value system, higher level abilities to identify others' values

# Cognitive Domain

<b>Knowledge</b>	<b>Comprehension</b>	<b>Application</b>	<b>Analysis</b>	<b>Synthesis</b>	<b>Evaluation</b>
Student remembers or recognizes information or specifics as communicated with little personal assimilation	Student grasps the meaning behind the information and interprets, translates, or comprehends the information	Student uses information to relate and apply it to a new situation with minimal instructor input	Student discriminates, organizes, and scrutinizes assumptions in an attempt to identify evidence for a conclusion	Students creatively applies knowledge and analysis to integrate concepts or construct an overall theory	Student judges or evaluates information based upon standards and criteria, values and opinions
Cite Label List Match Name Quote	Convert Define Summarize Estimate Explain Generalize	Apply Chart Compute Establish Prepare Solve	Analyze Compare Contrast Correlate Diagram Distinguish	Assemble Create Design Formulate Hypothesize Initiate	Access Appraise Conclude Critique Evaluate Justify

Basic knowledge level

More sophisticated higher level thinking, critical thinking



# Direct Assessment Methods

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- ❑ Written exams
- ❑ Oral exams
- ❑ Performance assessments
- ❑ Standardized tests
- ❑ Licensure exams
- ❑ Projects; Demonstrations
- ❑ Case studies
- ❑ Simulations
- ❑ Portfolios



# Indirect Assessment Methods

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- Questionnaires
  - Mailed
  - Web
  - Phone
  - In-class
- Interviews
- Focus groups
- Job/Grad School Placement Data

# Examples of Student Learning Outcomes by Learning Domain

<b>Domain</b>	<b>Specific Outcomes</b>	<b>Assessment Method</b>
<b>Knowledge/Cognitive</b>  Ex. Microbial Control	Following completion of the Microbiology Course students will be able to:  Evaluate methods of microbial control and apply the proper methods necessary when given a scenario	Multiple choice questions on final exam
<b>Skills/Psychomotor</b>  Ex: Lab Safety Skills	Following completion of the Microbiology Course students will be able to:  Correctly perform microbiologic lab skills and display a habit of good lab practices which extends to relevant situations in the student's homes.	Components of lab assignments are used to assess these skills
<b>Attitudes and behavior/Affective</b>  Ex. Appraisal of microbiologic information	Following completion of the Microbiology Course students will be able to:  Retrieve, evaluate, and use microbiologic information regarding contemporary issues in the world and relevant to everyday lives	Take home essay question on final exam and live patient interview



# Best Practices for SLO

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Student Learning Outcomes are:

- Specific to the program
- Focused on what is critical to the program
- Descriptive of what a student should gain as a result of completion
- Clear and understandable
- Realistic
- Assessable

Thank you for your attention.

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