Student Learning Outcomes:
Lessons Learned from
SACS 2007 Meeting

Dr. Thereisa Coleman
Research Associate
Office of Institutional Research & Assessment
Overview

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

- **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

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

- 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

- 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 SACS Accreditation

- 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

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

- 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

- 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

<table>
<thead>
<tr>
<th>Observe</th>
<th>Model</th>
<th>Recognize Standards</th>
<th>Correct</th>
<th>Apply</th>
<th>Coach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students translate sensory input into physical tasks or activities</td>
<td>Students are able to replicate a fundamental skill or task</td>
<td>Students recognize standards or criteria important to perform a skill or task correctly</td>
<td>Students use standards to evaluate their own performances and make corrections</td>
<td>Students apply this skill to real life situations</td>
<td>Students are able to instruct or train others to perform this skill in other situations</td>
</tr>
<tr>
<td>Hear</td>
<td>Attempt</td>
<td>Check</td>
<td>Adapt</td>
<td>Build</td>
<td>Demonstrate</td>
</tr>
<tr>
<td>Identify</td>
<td>Copy</td>
<td>Detect</td>
<td>Adjust</td>
<td>Compose</td>
<td>Exhibit</td>
</tr>
<tr>
<td>Observe</td>
<td>Follow</td>
<td>Discriminate</td>
<td>Alter</td>
<td>Construct</td>
<td>Illustrate</td>
</tr>
<tr>
<td>See</td>
<td>Imitate</td>
<td>Differentiate</td>
<td>Change</td>
<td>Create</td>
<td>Instruct</td>
</tr>
<tr>
<td>Smell</td>
<td>Model</td>
<td>Distinguish</td>
<td>Correct</td>
<td>Design</td>
<td>Teach</td>
</tr>
<tr>
<td>Taste</td>
<td>Repeat</td>
<td>Notice</td>
<td>Develop</td>
<td>Originate</td>
<td>Train</td>
</tr>
<tr>
<td>Touch</td>
<td>Show</td>
<td>Perceive</td>
<td>Improve</td>
<td>Produce</td>
<td></td>
</tr>
<tr>
<td>Watch</td>
<td>Try</td>
<td>Recognize</td>
<td>Modify</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Usually no outcomes are written at this level

Basic knowledge, basic skills

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

<table>
<thead>
<tr>
<th>Receiving</th>
<th>Responding</th>
<th>Valuing</th>
<th>Organizing</th>
<th>Characterizing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students become aware of an attitude, behavior, or value</td>
<td>Students exhibit a reaction or change as a result of exposure to an attitude, behavior, or value</td>
<td>Students recognize value and display this through involvement or commitment</td>
<td>Students determine a new value or behavior as important or a priority</td>
<td>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.</td>
</tr>
<tr>
<td>Accept</td>
<td>Behave</td>
<td>Accept</td>
<td>Adjust</td>
<td>Authenticate</td>
</tr>
<tr>
<td>Attend</td>
<td>Comply</td>
<td>Adapt</td>
<td>Change</td>
<td>Characterize</td>
</tr>
<tr>
<td>Describe</td>
<td>Discuss</td>
<td>Balance</td>
<td>Customize</td>
<td>Display</td>
</tr>
<tr>
<td>Explain</td>
<td>Examine</td>
<td>Choose</td>
<td>Develop</td>
<td>Embody</td>
</tr>
<tr>
<td>Locate</td>
<td>Respond</td>
<td>Differentiate</td>
<td>Manipulate</td>
<td>Habituate</td>
</tr>
<tr>
<td>Recognize</td>
<td>Show</td>
<td>Defend</td>
<td>Revise</td>
<td>Produce</td>
</tr>
</tbody>
</table>

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

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

Basic knowledge level

More sophisticated higher level thinking, critical thinking
Direct Assessment Methods

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

- Questionnaires
  - Mailed
  - Web
  - Phone
  - In-class
- Interviews
- Focus groups
- Job/Grad School Placement Data
# Examples of Student Learning Outcomes by Learning Domain

<table>
<thead>
<tr>
<th>Domain</th>
<th>Specific Outcomes</th>
<th>Assessment Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge/Cognitive</td>
<td>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</td>
<td>Multiple choice questions on final exam</td>
</tr>
<tr>
<td>Ex. Microbial Control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skills/Psychomotor</td>
<td>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.</td>
<td>Components of lab assignments are used to assess these skills</td>
</tr>
<tr>
<td>Ex: Lab Safety Skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitudes and behavior/Affective</td>
<td>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</td>
<td>Take home essay question on final exam and live patient interview</td>
</tr>
<tr>
<td>Ex. Appraisal of microbiologic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>information</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Best Practices for SLO

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.