Department of Institutional Effectiveness and Research

Writing Student Learning Outcomes for Academic Program Assessment

The examples and tools included in this resource are intended to serve only as a reference and guide, not as an exclusive representation of all possible examples, tools, or best practices.
Introduction to Student Learning Outcomes

**What is a student learning outcome?** The Texas Higher Education Coordinating Board (2015) defines the term student learning outcomes as “what students are able to demonstrate in terms of the knowledge, skills, and attitude upon complete of a program” (para. 1). It is with this definition in mind that student learning outcomes are developed, assessed, and improved upon.

**How to begin developing student learning outcomes.** As a start, brainstorming among the departmental faculty members, with like-minded colleagues, and with knowledgeable professionals in the field can generate answers to the below questions:

- What should students be able to do upon graduating?
- What knowledge, skills, or abilities should the student demonstrate?
- How will students be able to demonstrate what they learned?

**How do we know if our student learning outcomes are comprehensive?** Because student learning outcomes should be appropriate to and comprehensive of the program’s academic discipline, consult resources such as the following to gauge the relevance of the program’s learning outcomes:

- Program mission/goals
- Program curriculum and course syllabi
- Industry or disciplinary standards
- Licensure or certification criteria
- Accreditation standards
### Strong Student Learning Outcomes

A strong student learning outcome is a S.M.A.R.T. student learning outcome

<table>
<thead>
<tr>
<th>Specific</th>
<th>Measurable</th>
<th>Attainable</th>
<th>Relevant</th>
<th>Timely</th>
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</thead>
<tbody>
<tr>
<td>• Focused on a specific category of student learning</td>
<td>• Produces from assessments actionable data that can be collected to measure student learning</td>
<td>• Is realistic</td>
<td>• Answers: Will it drive the student forward? Does it align with the mission? Does it matter?</td>
<td>• Establishes a timeframe</td>
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### Weaker Outcomes vs. Strong Outcomes

- **Weaker Outcomes**
  - Outcome verbs are vague (e.g., understand, comprehend, demonstrate an understanding of) and do not really get at the intended outcome
  - Multiple verbs per learning outcome
  - Wordy, packing in multiple ideas
  - Focus only on lower levels of thought
  - Not easy to observe/demonstrate/measure
  - Refer to general education skills

- **Strong Outcomes**
  - Outcome verbs are sharp, clear, and specific (e.g., write, calculate, describe, analyze) and make it clear what students should know and be able to do at the end of the program
  - One verb per learning outcome
  - Brief and to the point
  - Demonstrate varying levels of thought (Bloom’s Taxonomy)
  - Readily observable/demonstrable/measurable
  - Refer to knowledge or skills specific to the discipline
How are student learning outcomes structured?

There are a variety of formats and guides to structuring a student learning outcome. The below formula and the ABCDs of SLOs are two practical examples of what to include when writing a student learning outcome.

Using a formula to assist in structuring the writing of a student learning outcome:

Graduating students will be able to [**action verb**] + [clear description of measurable learning to be observed].

**action verb** can include those listed in the *Revised Bloom’s Taxonomy of Action Verbs* table included in this resource (Page 7)

Elements of an SLO – Considering the ABCDs

**Audience**

Who is expected to learn?

**Behavior**

What do you expect students to know/be able to do?

**Condition**

Under what conditions or circumstances will the knowledge, skills or abilities be demonstrated?

**Degree**

How well will the behavior need to be performed and to what level?

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**audience**

**behavior**

**condition**

*Graduating students will be able to critically evaluate information about art from a variety of historic and modern sources.*
Examples of using the ABCDs to write student learning outcomes

Graduating students will be able to apply five major behavioral theories in the creation of a health performance plan.

Graduating students will be able to compare-and-contrast multiple decision making processes in case study examples of crisis management.

In consideration of [a topic relevant to the discipline], graduating students will be able to design a research study using appropriate methodology.

Graduating students will be able to orally interpret graphs so as to explain their meaning and their problem-solving function.
**How can Revised Bloom’s Taxonomy help in creating the student learning outcome?** “The taxonomy is useful in two important ways. First, use of the taxonomy encourages instructors to think of learning objectives in behavioral terms to consider what the learner can do as a result of the instruction. A learning objective written using action verbs will indicate the best method of assessing the skills and knowledge taught. Second, considering learning goals in light of Bloom’s taxonomy highlights the need for including learning objectives that require higher levels of cognitive skills that lead to deeper learning and transfer of knowledge and skills to a greater variety of tasks and contexts.” (Adams, 2015, p.153)

**What type of language should be used to create student learning outcomes?** Verbs from Revised Bloom’s Taxonomy are a useful tool in creating student learning outcomes.

**What type of language should be avoided when creating student learning outcomes?** Be sure to avoid language that is not observable. A quick test to determine if language is observable is to ask: “Can this verb or phrase be easily measured? What would meeting this learning outcome look like?” Remember, student learning outcomes are what students are able to demonstrate in terms of knowledge, skills, and attitude upon completion of a program.

Keep in mind: Verbs such as these can be **too vague** for meaningful assessment:

- Understand
- Appreciate
- Learn/Think about
- Become familiar with
- Gain an awareness of
### REVISED BLOOM’S TAXONOMY OF ACTION VERBS

<table>
<thead>
<tr>
<th>LEVEL</th>
<th>DEFINITION</th>
<th>SAMPLE VERBS</th>
<th>SAMPLE BEHAVIORS</th>
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</thead>
<tbody>
<tr>
<td>REMEMBER</td>
<td>retrieve, recall, or recognize relevant knowledge from long-term memory</td>
<td>Cite, Define, Describe, Identify</td>
<td>Reproduce, State, Retrieve, Tabulate, Select, Tell</td>
</tr>
<tr>
<td>UNDERSTAND</td>
<td>demonstrate comprehension through one or more forms of explanation</td>
<td>Arrange, Articulate, Associate, Categorize, Clarify, Classify</td>
<td>Illustrate, Represent, Interpret, Restate, Summarize, Translate</td>
</tr>
<tr>
<td>APPLY</td>
<td>use information or a skill in a new situation</td>
<td>Apply, Calculate, Carry out, Classify</td>
<td>Interpret, Predict, Manipulate, Solve, Organize, Use</td>
</tr>
<tr>
<td>ANALYZE</td>
<td>break material into its constituent parts and determine how the parts relate to one another and/or to an overall structure or purpose</td>
<td>Analyze, Arrange, Break down, Categorize, Classify</td>
<td>Explain, Organize, Identify, Relate, Integrate, Structure</td>
</tr>
<tr>
<td>EVALUATE</td>
<td>make judgments based on criteria and standards</td>
<td>Appraise, Argue, Assess, Compare, Conclude</td>
<td>Persuade, Support, Rate, Test, Recommend, Validate</td>
</tr>
<tr>
<td>CREATE</td>
<td>put elements together to form a new coherent or functional whole; reorganize elements into a new pattern or structure.</td>
<td>Adapt, Arrange, Assemble, Build, Combine, Compile</td>
<td>Make, Reconstruct, Perform, Write, Revise, Propose</td>
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Examples of language used to develop student learning outcomes

Example 1

- The below demonstrates weak language that is too general and difficult to measure:
  - will appreciate the benefits of exercise science

- The below language is neither weak nor strong:
  - will appreciate exercise as a stress reduction tool

- The below highlights language used to develop strong, specific and measurable student learning outcomes:
  - will explain how the science of exercise affects stress

Example 2

- The below demonstrates weak language that is too general and difficult to measure:
  - will understand the scientific method

- The below language is neither weak nor strong:
  - will apply the scientific method in problem solving

- The below highlights language used to develop strong, specific and measurable student learning outcomes:
  - will design a grounded research study using the scientific method

Example 3

- The below demonstrates weak language that is too general and difficult to measure:
  - will become familiar with correct grammar and literary devices

- The below language is neither weak nor strong:
  - will demonstrate the use of correct grammar and various literary devices

- The below highlights language used to develop strong, specific and measurable student learning outcomes:
  - will use correct grammar and various literary devices in creating an essay
Do a program’s student learning outcomes always remain the same? A program’s student learning outcomes are not set in stone – they can evolve and change over time.

<table>
<thead>
<tr>
<th>When might an SLO change?</th>
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<tbody>
<tr>
<td>After continuously meeting the outcome over multiple assessment cycles</td>
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<tr>
<td>When changing the direction of the program mission or curriculum</td>
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<tr>
<td>When introducing or incorporating a new element within the discipline or type of outcome</td>
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<tr>
<td>In response to an update or revision to disciplinary or professional standards</td>
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To whom should a program’s student learning outcomes be communicated? A variety of audiences should be aware of or would benefit from being familiar with a program’s student learning outcomes.

Who should be aware of your SLOs?

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<th>Dean</th>
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<tr>
<td>Department Head</td>
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<tr>
<td>Program Coordinator</td>
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<tr>
<td>Academic Advisors</td>
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<tr>
<td>Program Faculty</td>
</tr>
<tr>
<td>Students</td>
</tr>
<tr>
<td>External Stakeholders</td>
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<tr>
<td>Potential Employers</td>
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</tbody>
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