Department of Institutional Effectiveness and Research

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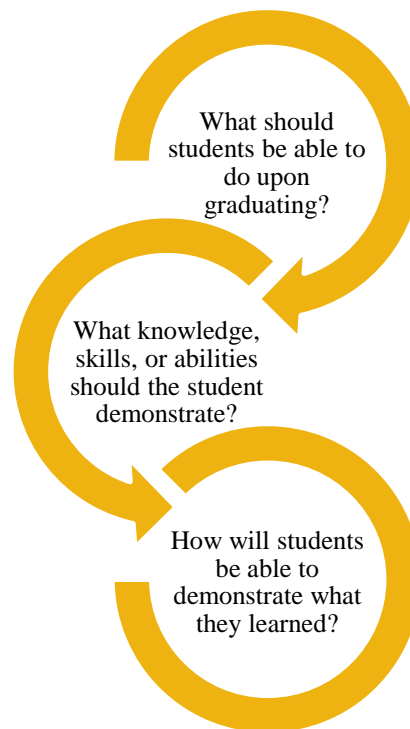
The examples and tools included in this resource are intended to serve only as a reference and guide and not as an exclusive representation of all possible examples, tools, or best practices.

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:

- Industry or disciplinary standards
- Professional association guidelines
- Licensure or certification criteria
- Accreditation standards
- Program mission
- Curriculum design
- Course syllabi

Strong Student Learning Outcomes

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

Specific	**M**easurable	**A**ttainable	**R**elevant	**T**imely
• Focused on a specific category of student learning • Answers: Who will know what and why?	• Produces from assessments actionable data that can be collected to measure student learning	• Is realisitc • Neither out of reach nor below standard performance	• Answers: Will it drive the student forward? Does it align with the mission? Does it matter?	• Establishes a timeframe • Describes activities that serve as benchmarks towards achievements

Weaker Outcomes	**Strong Outcomes**
Outcome verbs are vague (e.g., understand, comprehend, demonstrate an understanding of) and do not really get at the intended outcome	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
Multiple verbs per learning outcome	One verb per learning outcome
Wordy, packing in multiple ideas	Brief and to the point
Focus only on lower levels of thought	Demonstrate varying levels of thought (Bloom's Taxonomy)
Not easy to observe/demonstrate/measure	Readily observable/demonstrable/measurable
Refer to general education skills	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 *Bloom's Taxonomy of Action Verbs* table included in this resource

Elements of an SLO – Considering the ABCDs

Audience

Who does the outcome pertain to?

Behavior

What do you expect students to know/be able to do? (reference Bloom's or other taxonomies)

Condition

Under what conditions or circumstances will learning be demonstrated?

Degree

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

audience · degree · behavior

Graduating students will be able to critically evaluate information about art from a variety of historic and modern sources.

condition

Examples of using the ABCDs to write student learning outcomes

audience **behavior**

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

degree **condition**

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audience **behavior**

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

degree **condition**

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condition

In consideration of [a topic relevant to the discipline],

audience **behavior**

graduating students will be able to design a research study

degree

using appropriate methodology.

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audience **condition** **behavior**

*Graduating students will be able to orally interpret graphs
so as to explain their meaning and their problem-solving function.*

degree

How can Bloom's Revised 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 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 the knowledge, skills, and attitude upon completion of a program.

Keep in mind: Verbs such as these can be *too vague* to meaningfully assess:

Understand

Appreciate

Learn/Think about

Become familiar with

Gain an awareness of

BLOOM'S TAXONOMY OF ACTION VERBS

LEVEL	DEFINITION	SAMPLE VERBS					SAMPLE BEHAVIORS
KNOWLEDGE	Student recalls or recognizes information, ideas, and principles in the approximate form in which they were learned.	Arrange Define Describe Duplicate	Identify Label List Match	Memorize Name Order Outline	Recognize Relate Recall Repeat	Reproduce Select State	The student will define the 6 levels of Bloom's taxonomy of the cognitive domain.
COMPREHENSION	Student translates, comprehends, or interprets information based on prior learning.	Explain Summarize Paraphrase Describe Illustrate Classify	Convert Defend Describe Discuss Distinguish Estimate	Explain Express Generalize Give example(s) Identify Indicate	Infer Locate Paraphrase Predict Recognize	Review Select Summarize Translate Rewrite	The student will explain the purpose of Bloom's taxonomy of the cognitive domain.
APPLICATION	Student selects, transfers, and uses data and principles to complete a problem or task with a minimum of direction.	Apply Change Choose Compute Demonstrate	Discover Dramatize Employ Illustrate Interpret	Manipulate Modify Operate Practice Predict	Prepare Produce Relate Schedule Show	Sketch Solve Use Write	The student will write an instructional objective for each level of Bloom's taxonomy.
ANALYSIS	Student distinguishes, classifies, and relates the assumptions, hypotheses, evidence, or structure of a statement or question.	Analyze Categorize Compare Contrast Separate Apply	Change Discover Choose Compute Demonstrate Dramatize	Employ Illustrate Interpret Manipulate Modify Operate	Practice Predict Prepare Produce Relate Schedule	Show Sketch Solve Use Write	The student will compare and contrast the cognitive and affective domains.
SYNTHESIS	Student originates, integrates, and combines ideas into a product, plan, or proposal that is new to him or her.	Arrange Assemble Categorize Collect Combine Compose	Construct Create Design Develop Devise Explain	Formulate Generate Hypothesize Invent Plan Prepare	Rearrange Reconstruct Relate Reorganize Revise Rewrite	Set up Summarize Synthesize Tell Write	The student will design a classification scheme for writing educational objectives that combines the cognitive, affective, and psychomotor domains.
EVALUATION	Student appraises, assesses, or critiques on a basis of specific standards and criteria.	Appraise Argue Assess Attach Choose	Compare Conclude Contrast Critique Defend	Describe Discriminate Estimate Evaluate Explain	Judge Justify Interpret Predict Recommend	Relate Select Summarize Support Value	The student will judge the effectiveness of writing objectives using Bloom's taxonomy.

Reference: http://chiron.valdosta.edu/whuitt/col/cogsys/bloom.html

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

Helpful Tips for Student Learning Outcomes

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.

When might an SLO change?

After continuously meeting the outcome over multiple assessment cycles	When changing the direction of the program mission or curriculum	When introducing or incorporating a new element within the discipline or type of outcome	In response to an update or revision to disciplinary or professional standards

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?

Dean	Program Coordinator	Academic Advisors	External Stakeholders
Department Head	Program Faculty	Students	Potential Employers

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