Articulating Student Learning Outcomes

What are student learning outcomes?

- Learning outcomes are measurable statements that articulate what students should know, be able to do, or value as a result of taking a course or completing a program.
- These statements refer to specific knowledge, practical skills, areas of professional development, attitudes, higher-order thinking skills, etc. that faculty members expect students to develop, learn, or master during a course (Suskie, 2004).
- Student learning outcomes are also often referred to as "learning outcomes", "objectives", "expected learning outcomes" or "learning outcome statements".

Student Learning outcomes often take this form:

As a result of participating in (program/course name), you (students) will be able to (Action verb) (Learning statement).

Simply stated, student learning outcomes describe:

1. What faculty members want students to know at the end of the course AND

2. What faculty members want students to be able to do at the end of the course.

Three major characteristics of Student Learning Outcomes

1. They specify an action by the students/learners that is **observable**

2. They specify an action by the students/learners that is **measurable**

3. They specify an action that is done by the **students/learners** (rather than the faculty members)

Why create student learning outcomes?
Creating student learning outcomes will make it easier for instructors to:

- ⬜ Make hard decisions about selecting course content.
- ⬜ Design assessments that allow students to demonstrate their knowledge and skills.
- ⬜ Design teaching strategies or learning activities that will help students develop their knowledge and skills.
- ⬜ Measure student learning accurately and effectively.

Having access to articulated student learning outcomes (in a syllabus, for example) helps students:

- Decide if the course is a good fit for their academic trajectory.
- Identify what they need to do to be successful in the course.
- Take ownership of how they progress.
- Be mindful of what they are learning

How can you develop student learning outcomes?

- Ask yourself: what are the most important things a student should know (cognitive), be able to do (skills), or value (affective) after completing the course/program?
- Consult a list of action verbs, which are verbs that result in overt behavior or products that can be observed and measured. Bloom's Taxonomy of Educational Objectives provides some useful verbs to write objectives for different levels of learning.
- Avoid verbs that are unclear and cannot be observed and measured easily, for example: understand, appreciate, become aware of, become familiar with, know, and learn.
- Draft a list of possible learning outcomes. Be realistic in considering what is possible for students to accomplish in your course. Only keep the most essential learning outcomes.

When writing a measurable learning outcome, it is important to:

    A. Focus on student behavior
    B. Use simple, specific action verbs
    C. Select appropriate assessment methods
    D. State desired performance criteria

A. **Focus on Student Behavior.**

Learning outcomes are about what students are able to demonstrate upon completion of a course or a span of courses or a program. Learning outcomes are not about what the instructors can provide but what the students can demonstrate. The following are <u>not</u> learning outcomes:

- ✖ Offer opportunities for students to master integrated use of information technology.
- ✖ The program will engage a significant number of students in a formalized language/cultural studies program.
- ✖ Students who participate in critical writing seminars will write two essays on critical thinking skills.
- ✖ Students will be exposed to exceptionality in learning disabilities including visual and perception disabilities.

B. **Use Simple, Specific Action Verbs.**

When writing learning outcomes, focus on student behavior and use simple, specific action verbs to describe what students are expected to demonstrate. The wording should be something as follows:

`Students will be able to <action verbs> . . . .”`

The following are examples of learning outcomes:
- a. Students will be able to <u>collect</u> and <u>organize</u> appropriate clinical data (history, physical exam, laboratory assessments including technology advancements in diagnostic such as PCR).
- b. Students will be able to <u>apply</u> principles of evidence-based medicine to determine clinical diagnoses, and formulate and implement acceptable treatment modalities.
- c. Students will be able to <u>articulate</u> cultural and socioeconomic differences and the significance of these differences for instructional planning.
- d. Students will be able to <u>use</u> technology effectively in the delivery of instruction, assessment, and professional development.
- e. Students will be able to <u>evaluate</u> the need for assistance technology for their students.
- f. Graduates will be able to <u>evaluate</u> educational research critically and <u>participate</u> in the research community.

C. Select Appropriate Assessment Methods

Assessment methods are tools and techniques used to determine the extent to which the stated learning outcomes are achieved. A variety of methods, qualitative and quantitative, direct and indirect, should be used. The following are examples of direct and indirect assessment methods:

Examples of Direct Assessment Methods:	Examples of Indirect Assessment Methods:
ƒ Comprehensive exams ƒ Performance assessment for graduating seniors ƒ Writing proficiency exams ƒ National Major Field Achievement Tests ƒ GRE subject exams ƒ Certification exams, licensure exams ƒ Locally developed pre- and post- tests ƒ Senior thesis / major project ƒ Portfolio evaluation ƒ Reflective journals ƒ Capstone courses ƒ Internship evaluations ƒ Grading with scoring rubrics*	ƒ Peer institutions comparison ƒ Job placement ƒ Employer surveys ƒ Graduate school acceptance rates ƒ Performance in graduate school ƒ Student graduation/retention rates ƒ Exit interviews ƒ Focus group discussions ƒ Alumni surveys ƒ Tracking of alumni awards, achievements (national, state, international, etc.) ƒ Curriculum/syllabus analysis

***Note:** Grades **_alone_** do not provide adequate feedback to students' performance. However, if grading is tied to rubrics, it can be a useful tool to identify strengths and weaknesses of student performance

D. State desired performance criteria

Performance criteria express in specific and measurable/observable terms that are acceptable to a specific course or program. Note that grades alone do <u>not</u> provide adequate feedback to students' performance because grades represent overall competency of students and do not identify strengths and weaknesses on specific learning outcomes. However, if the grading system is tied to rubrics, it can be a useful tool to identify areas for improvement that should be addressed. The following is <u>not</u> an acceptable measurable learning outcome:

❌ Students will be able to communicate effectively, as demonstrated by obtaining at least a "C" grade in the course.

With slight modification, the above learning outcome can be stated in measurable terms.

❖ Students will be able to communicate effectively, as exhibited by scoring at least 8 out of 10 for all the components within the grading criteria on the final writing assignment. (see below for an example of grading rubric and how it can help identify areas for improvement)

Example of a
Grading Rubric

Grading Criteria	Student										
	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	Ave
1. State the purpose clearly	9	8	8	7	7	8	6	9	8	9	7.9
2. Clearly understand the audiences' values, attitudes, goals, and needs	8	8	7	8	7	7	6	7	8	8	7.4*
3. Consider how an audience will use the information	8	8	9	7	7	9	6	9	8	8	7.9
4. Use vocabulary appropriate to their subject and purpose(s)	9	8	8	8	7	9	6	9	9	7	8.0
5. Use correct reference forms	9	8	7	7	6	8	6	7	9	6	7.3*
6. Use correct grammar, syntax (word order), punctuation, and spelling	8	8	9	6	6	9	9	9	9	6	7.9
7. Present accurate information	7	8	9	8	6	9	8	9	9	6	7.9
8. Develop patterns or organization for ideas	9	8	9	9	9	8	8	8	9	9	8.6
9. Demonstrate good reasoning in writing	9	8	9	9	9	8	8	8	9	9	8.6
10. Summarize the main idea(s) clearly	9	8	8	8	7	9	6	9	9	7	8.0

Areas for
Improvement

Examples of criteria for success:

Grading with a scoring rubric:

> All Students will score an average of 8.00. Of the ten grading criteria, none will score less than 7.50.

Standardized test:

> Sixty-five percent of all students will score at or above the national average. No more than 20% will score lower than one standard deviation from the national average.

Survey:

> Eighty percent of students surveyed will demonstrate an increase in appreciation for . . . .