

How To Series

Learning Design

February 2015

Writing Learning Outcomes

Learning Outcomes Definition

Learning **outcomes**—also called learning **objectives**--are statements describing what students should be able to **demonstrate, know** or **do** by the end of the course.

When planning a course and writing a syllabus, the instructor would ask:

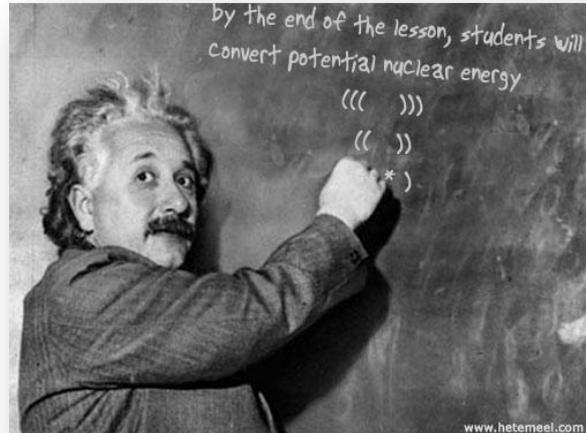
“What do I want students to be able to do by the end of the course?”

This approach, called “backwards design” (Wiggins & McTighe, 1998), helps us think about what we want to be the result of the course in terms of student learning.

Keep in mind the following questions when designing outcomes:

- What are the expectations for student learning success?
- Do the learning outcomes reflect a specific level of cognition, affect, or behavior?
- Are different types and levels of outcomes represented?
- Are the outcomes measurable?
- How will you know when students have achieved the outcome? A clear method of measuring an outcome—graded or not—is needed.

When thinking of what we want students to learn, remember that some learning is only measured informally (gains in valuing a discipline, for instance) and some gains are over time.



Origins and Explanations

Why write a learning outcome statement? Students find them useful because they are clear guides to get them through the course. These statements clearly explain your intentions for their learning.

Benjamin Bloom and a team of researchers (1956) described student learning in broad categories called “domains”:

- cognitive (thinking)
- affective (valuing)
- psychomotor (doing)

The cognitive domain of learning has been revised by Anderson and Krathwohl et al (2001) to fit more easily into our contemporary desire to measure student learning with a focus on the action of the student. The affective domain may include the value that students have for their major field of study and the value of applying learning to help their communities.

Blooms’ revised cognitive taxonomy can be helpful for course design generally. What portion is the course devoted to lower-levels versus higher levels of cognition? A recent version of the taxonomy translates it for students:

Revised Bloom’s	Bloom’s for Students
Creating	Make stuff
Evaluating	Justify stuff
Analyzing	Question stuff
Applying	Solve stuff
Understanding	Explain stuff
Remembering	Memorize stuff

... continued

STEPS

Writing learning outcomes take some time and sometimes a second reader and a few drafts are needed. However, this intentionally spent time results in a clearer plan for the course.

1st Think through what you want to happen for students.

2nd Ask yourself, how will I know what they have learned? What is the assessment?

3rd As you write an outcome, focus on student learning overall (course-based rather than units or individual lessons). Write the outcome with a focus on one aspect of learning.

Statements for the course can be worded using the following template:

By the completion of the program, students will _____

Fill in the blank with an active verb, such as: they will be able to **analyze** something or they will **do** something, or they will **demonstrate** appreciation or value.

While we tend to focus on cognitive outcomes, we can add outcomes addressing values and attitudes; these we might need to assess differently, as well as informally.

BEFORE you start, print one or more lists of verbs and use the lists to spark ideas about wording the outcome. You can use this handout: [Cognitive Verbs for Student Learning Outcome Statements](#) (posted on the tenntlc.utk.edu website).

The “Big Dog Little Dog” website has some useful lists of verbs not only in the cognitive domain but also in the other domains.

<http://www.nwlink.com/~donclark/hrd/bloom.html>

Sample from Math 123:

In this course students will learn how to

- Solve systems of linear equations using a variety of methods
- Translate a real-world problem into a mathematical problem that can be solved using a variety of methods

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A Value Model of Domain-Based Learning, revisiting Bloom's Taxonomy and Dee Fink's "Significant Learning" taxonomy.

Resources

Writing learning outcomes

1. [Cognitive Verbs for Student Learning Outcome Statements](#). TennTLC handout on verbs for learning outcomes-- readable, one page document.
2. Declan Kennedy, D., Hyland, A., & Ryan, N. (2006). *Writing measurable learning outcomes*. Dublin, Ireland: Dublin City University. Available from http://sss.dcu.ie/afi/docs/bologna/writing_and_using_learning_outcomes.pdf.
3. Maki, P. L. (2010). *Assessing for Learning. Building a sustainable commitment across the institution* (pp. 87-105). Sterling, VA: Stylus. Available online at the Hodges Library.
4. The National Institute for Learning Outcomes Assessment: <http://www.learningoutcomeassessment.org/Tfcomponents.htm> (click on Student Learning Outcomes).

Bibliography

- Anderson, L.W., Krathwohl, D.R. et. al (Eds.). (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's Taxonomy of Educational Objectives*. New York: Longman.
- Wiggins, G. P., & McTighe, J. (1998). *Understanding by design*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Fink, D. (2003). *Creating significant learning experiences: An integrated approach to designing college courses*. San Francisco: Wiley.