

Developing Course Learning Outcomes

December 13, 2011, R. W. Larsen

Student learning outcomes (SLOs) can be written for a course, a program, or an institution. This document focuses specifically on learning outcomes for individual courses. For most courses, it is possible to write 7 or 70 outcomes; 7 will take less work and is recommended.

When trying to decide on the 5 to 7 outcomes, try using the following approaches:

- Look at the organization of the course. Can each section of the course become the focus of a learning outcome?
- Look at the organization of the text. Can each chapter become the focus of a learning outcome?

Keep it Simple

Learning outcomes should be written as simple declarative statements. Overly complex or convoluted statements become very difficult to assess.

Poor Example: Students will be able to ride a red horse and jump a fence or throw a ball.

Better Example: Students will be able to jump a three-foot fence in a single bound.

Both examples are dumb, but at least the better example is comprehensible.

Focus on Student Learning

By beginning learning outcomes with phrases such as “After successfully completing this course, students will...” you ensure that the focus is on student learning and abilities. These are not student learning outcomes:

- Students in this course will study the masters of British literature.
- This course is designed to create the leaders of tomorrow.

Learning outcomes should focus on the expected capabilities of the students upon successful completion of the course (hence the “will” in the starter phrases).

- After successfully completing this course, students will be able to correctly compute a standard deviation for a set of values.

Note: The phrase “After successfully completing this course” is typically assumed as a given, and only “Students will...” is used to begin the learning outcomes.

General Structure of a Learning Outcome

Typical learning outcomes include a TARGET GROUP, an ACTION VERB, and an OBJECT. Sometimes a STANDARD is also included.



TARGET GROUP For student learning outcomes, the target group is “students” or “students who have successfully completed this course”.

ACTION VERB The action verb is typically selected from a Bloom’s taxonomy list. This is described in more detail below. For now, consider this very short list of possible action verbs:

- Define
- Identify
- Solve
- Compare
- Evaluate

OBJECT The object of the learning outcome is the knowledge, skill, or behavior that the student should have acquired.

STANDARD The standard (when used) indicates a required level of achievement.

Examples

Students will identify the primary sources of energy loss in public buildings.

TARGET GROUP ACTION VERB OBJECT

Students will identify at least 3 of the 4 primary sources of energy loss in public buildings.

TARGET GROUP ACTION VERB STANDARD OBJECT

Students will evaluate proposed solutions to minimize energy loss in public buildings.

TARGET GROUP ACTION VERB OBJECT

Choosing Appropriate Action Verbs

When you are developing course learning outcomes, it is important to consider the skill level that you expect your students to achieve. Typically, students completing college programs should function at a fairly high level of performance. That is, they should have a well-developed cognitive skill level in most areas. But students in freshman-level courses are expected to utilize significantly lower cognitive skill levels.

To think about cognitive skill level, consider this abbreviated table of (old) Bloom Taxonomy¹ verbs:

¹ Bloom, B. S., Engelhart, M. D., Furst, E. J., Hill, W. H., & Krathwohl, D. R. (1956). *Taxonomy of educational objectives: the classification of educational goals; Handbook I: Cognitive Domain* New York, Longmans, Green, 1956.

I: Introductory Level		D: Developing Level		M: Mastery Level	
Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
defines	comprehends	applies	analyzes	categorizes	concludes
describes	distinguishes	computes	compares	composes	critiques
identifies	interprets	demonstrates	contrasts	creates	defends
knows	summarizes	prepares	distinguishes	devises	evaluates
lists		solves		designs	interprets
recognizes				modifies	justifies

Choose your action verbs so that they align with the level of performance you expect your students to demonstrate.

Note: Two commonly used action verbs – *know* and *understand* – are to be avoided when writing course learning outcomes because they are difficult to assess. Consider using verbs that can be more readily demonstrated, such as *identifies* or *describes*.

Components of Learning Outcomes

To keep the number of outcomes to a manageable number, learning outcomes may need to be written quite broadly. These outcomes can be further defined by considering the components required to achieve the outcome. For example, most would agree that the outcome

Students will be able to communicate effectively.

would include at least the following components:

- Ability to organize a presentation in a coherent fashion.
- Ability to research a topic.
- Ability to create a persuasive argument.
- Ability to write grammatically correct sentences and paragraphs.

You do not need to write each component as a separate learning outcome, but you may need to consider the components when you assess whether or not the students are achieving the learning outcome.

Publishing Course Learning Outcomes

Your course learning outcomes should be prominently featured on your course syllabus. By letting the students know in advance what they will be expected to learn, the students become partners in their own education, not just audience members.

Other needs for course learning outcomes...

- The MUS common course numbering initiative requires learning outcomes for all courses. In the past couple of years there was little enforcement of this requirement, but we do need to work with the MUS to get learning outcomes associated with all of our courses.

- MSU's accreditation processes require that we collect and publish the learning outcomes for our courses. We will begin this process in Spring 2012.

Continuous Improvement

Some people have a decade of experience using course learning outcomes, and others are just getting started. People with experience can attest that using learning outcomes gets easier with practice. Your first learning outcomes are often hard to write and difficult to assess, but they get better each time they are updated. Faculty members who do not yet use course learning outcomes are encouraged to begin the process.

- Your students will appreciate it.
- It will get easier with time.
- MSU needs to collect learning outcomes for all of our courses.

Submitting your learning outcomes

Because the collection of learning outcomes will involve a lot of email over an extended time, I've set up a special email address just for this purpose:

outcomes@montana.edu

When you submit the learning outcomes for your course, please include the following information:

- Contact Info (in case there are questions):
 - Name
 - Email
 - phone
- Course Info:
 - Rubric
 - Number
 - CORE area (if any)
 - Semester(s) offered
- Course Learning Outcomes

If you already have your learning outcomes on your course syllabus, feel free to simply submit the entire syllabus. I will carve the learning outcomes (only) from the syllabus.

Thanks,

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