

APPENDIX B: HOW TO DEFINE AND WRITE LEARNING OUTCOMES

WHAT ARE LEARNING OUTCOMES?

Learning outcomes are statements that describe the **knowledge, skills, and values/attitudes** students should work to develop in a course or module. They say to students, “I designed the following lessons and activities to help you develop these skills or bodies of knowledge. If you do the work and take the feedback into account, you will become more practiced at these things. To pass this class, you have to demonstrate that you have developed these skills.” For each course you teach, you will want to come up with 4-6 learning outcomes that summarize the overarching expectations you have of students. For each of the modules that make up a face-to-face, blended, or online course, you should have 3-4 learning outcomes and they should relate (or lead up) to the overall course-level learning outcomes.

It is a good idea to **share learning outcomes with students**. First, explicitly articulated learning outcomes give you and your students **a clear, shared sense of what holds the course together**. Second, communicating expectations with students is **fair, helps avoid misunderstandings, and gives a reference point** should grading problems arise. Third, learning outcomes **set a (high) minimum standard** for students to meet or exceed. Finally, learning outcomes provide **a good blueprint** for a module or course because they allow you to ensure course activities, assessments, and content are aligned in a coherent way. In a sense, learning outcomes are like thesis statements for course design!

HOW DO I DEFINE LEARNING OUTCOMES FOR MY MODULE OR COURSE?

You can begin by asking yourself the following sets of questions:

1. What is the purpose of this **module within the course**? Or what is the purpose of this **course within students' larger program** of study? Are there prerequisite modules or courses? Is this module or course a prerequisite for something else?
2. What **skills, knowledge, or values/attitudes** should students be cultivating through participating in this module or course?
3. Can I expect this outcome of **all** students who are allowed to register for this class regardless of background knowledge, cultural background, or other characteristics and abilities?
4. Which **domains of learning** does this module or course engage? How deep should students' learning be at this point in the course or program? (see page 2)

5. How much and what can I expect students to learn in one module or in one course?
6. What are the most important things students must **demonstrate** to get at least a passing grade for this module (for module-level outcomes) or course (for course-level outcomes)?

STEPS TO WRITING LEARNING OUTCOME

You can follow these steps to write a learning outcome:

1. Start with one **stem** to introduce the outcomes (see the list of possible stems below).
2. Use the four tables on the next pages to:
 - a. identify the domain of learning you want students to work within,
 - b. select the appropriate level of skill within the domain,
 - c. read over the definition to make sure it is what you mean, and
 - d. choose the **action word** that is best for your students and the context of the course.
3. Start with your action word and add specific content/attitude/behavior (**learning statement**).
4. Evaluate learning outcome (see page 4).
5. Revise as necessary.

LO FORMULA

LO = **stem** + **ACTION WORD** + learning statement

STEM OPTIONS

By the end of this course, students will be able to

By the end of this module, students should be able to

By the end of this class, successful students will be able to

In order to pass this course, students must demonstrate the ability to

EXAMPLE

By the end of this module, students should be able to

1. **DISTINGUISH** between Bloom's domains of learning.
2. **CONSTRUCT** course level learning outcomes using Bloom's taxonomy.
3. **ASSESS** course learning outcomes against degree level expectations.
4. **DEVELOP** methods to evaluate student achievement of learning outcomes.

BLOOM'S DOMAINS & HIERARCHY OF LEARNING			
DEPTH OF LEARNING	COGNITIVE DOMAIN	PSYCHOMOTOR DOMAIN	AFFECTIVE DOMAIN
Higher order skills  Lower order skills	Creating	Coaching	Characterizing
	Evaluating	Applying	Organizing
	Analyzing	Recognizing Standards	Valuing
	Applying	Modeling	Responding
	Understanding	Observing	Receiving
	Remembering		

ACTION VERBS FOR COGNITIVE DOMAIN LEARNING OUTCOMES		
LEVEL NAME	LEVEL DEFINITION	ACTION WORDS
Creating	combine elements to develop new models/ideas	assemble, build, create, construct, design, develop, formulate, generate, hypothesize, invent, modify
Evaluating	assess effectiveness, coherence, rationale and make strategic judgments	appraise, assess, choose, compare, conclude, critique, defend, explain, justify, review, recommend, support
Analyzing	identify assumptions, key components, & internal relationships; infer main principles; structure information	break down, catalogue, compare, contrast, correlate, deconstruct, differentiate, dissect, extrapolate, infer, investigate, outline, separate
Applying	apply or relate information to new contexts	calculate, change, construct, compute, demonstrate, discover, execute, extrapolate, implement, manipulate, predict, show, relate
Understanding	know meaning of, and interpret or translate, information	critique, convert, describe, discuss, estimate, explain, formulate, interpret, infer, illustrate, justify, paraphrase, represent, summarize, translate
Remembering	recognize or recall facts, details, and information	define, identify, label, list, match, recall, recite, recognize, state

ACTION VERBS FOR PSYCHOMOTOR DOMAIN LEARNING OUTCOMES

LEVEL NAME	LEVEL DEFINITION	ACTION WORDS
Coaching	Provide instructions to others to perform task	assess, assist, correct, demonstrate, illustrate, instruct, manage, specify
Applying	Apply criteria with no instruction to perform task and evaluate performance in new contexts	adapt, assess, build, calibrate, coordinate, design, infer, manipulate, modify, produce, solve, test
Developing standards	Identify criteria for optimal task performance	compose, distinguish, formulate, integrate, judge, perceive, select, synthesize
Modeling	Reproduce task based on instruction or memory	copy, display, follow, execute, mimic, recreate, reenact, repeat, reproduce
Observing	Use sensory cues to guide or define appropriate action	adhere, choose, copy, detect, follow, identify, observe, relate, replicate, repeat

ACTION VERBS FOR AFFECTIVE DOMAIN LEARNING OUTCOMES

LEVEL NAME	LEVEL DEFINITION	ACTION WORDS
Characterizing	Integrates and behaves in line with values in new contexts	act, display, embody, habituate, influence, plan, practice, propose, represent, solve, validate, verify
Organizing	Prioritizes values and resolves internal/personal conflict	alter, adjust, arrange, compare, develop, generalize, integrate, modify, order, reconcile, rank, revise
Valuing	Displays attachment, involvement, or commitment in class context/assignments	adapt, argue, balance, challenge, critique, confront, differentiate, defend, influence, initiate, invite, justify, persuade, seek
Responding	Change behavior to reflect attitude; actively react to or participate in new attitude	answer, behave, clarify, comply, cooperate, discuss, examine, explain, model, practice, present, recite, report, show, summarize
Receiving	Become aware of attitude and open to potential value	acknowledge, accept, ask, attend, describe, observe, read, recognize

EVALUATING YOUR WRITTEN LEARNING OUTCOMES

You can use the checklist below to evaluate your learning outcomes for **clarity and specificity**:

- Specific skill/value/content
- Measurable and demonstrable
- Attainable by students at current level and matched to purpose of course
- Relevant for students, course, program, degree
- Timed appropriately for class length

RESOURCES

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