



Writing Learning Outcomes

Considering these four elements when writing a learning outcome will result in a measurable learning outcome that can be more easily understood by students and also can be used for classroom research (SOTL).ⁱ

Audience

Describe the specific audience for whom the outcome is being written. In higher education, this should indicate student-centered outcomes, not instructor-centered. Examples: "Participants will" and "Students will."

Behavior

What is it that the learners should be able to do after receiving instruction? This element consists of an action verb and a content reference. The desired behavior is the most important element of any outcome, and that behavior must be measurable, observable, and specific. Verbs like "comprehend," "know," and "understand," are not measurable and should be replaced by measurable verbs such as those found on the Bloom Taxonomy handout. Faculty might want students actually to either "explain," "deconstruct," or "evaluate," all of which are measurable. "Compare and contrast" is measurable, but it has been so overused that the instructor should be very specific about how the learner should compare the two items. Examples: "Identify cognitive strategies in your discipline," "Construct a database of American authors," or "Analyze the steps required for CPR."

Conditions

What prerequisites will be needed in order to complete the assignment (ie. what tools will the students need?). Under what circumstances must the outcome be completed? Examples: "Using Bloom's Taxonomy..." or "Given the case study involving the patient with depression..."

and sometimes Degree

What is the minimum level of performance is demanded of the learner? The degree or level of performance should be connected to real world measures. Examples: "Identify one cognitive strategy," "with a score of at least 80%," or "within twenty minutes."

Use these Action Verbs when Writing Cognitive Learning Outcomesⁱⁱ

Cognitive Level	Specific but acceptable verbs	Toss-up verbs, requiring further clarification	Too broad, unacceptable verbs	Too specific, essentially indicator verbs
Creating	combine, compile, compose, create, design, devise, develop, modify, plan, produce, reconstruct	collect compare contrast demonstrate	apply deduce do examine	check circle color the same as draw a line between draw a ring around
Evaluating	appraise, categorize, conclude, criticize, decide, develop criteria, explain, evaluate, interpret, judge, justify, support	determine differentiate discriminate distinguish give	generate infer interpret observe perform respond	put a box around put a mark on put an X on shade
Analyzing	analyze, breakdown, conclude, debate, diagram, dissect, organize, select, separate, subdivide	locate predict relate synthesize	test use	underline write the letter of write the number of
Applying	change, choose appropriate procedures, compute, construct, discover, manipulate, modify, operate, prepare, produce, show, solve			
Understanding	convert, defend, describe, estimate, expand, explain, extend, generalize, give examples, illustrate, measure, paraphrase, rewrite, summarize			
Remembering	define, describe, identify, label, list, locate, match, name, outline, recognize, reproduce, select, state, tell			

ⁱ Instructional Development Institute (c1971), unpublished instructional materials. Sponsored by NSMI; District of Columbia Public Schools, Dept. of Research and Evaluation (Aug. 1974), *An Evaluation of the Instructional Development Institute (I.D.I.) Program for the School Year 1973-74* (Washington, DC: Bureau of Elementary and Secondary Education), 62.
<http://www.eric.ed.gov/PDFS/ED099357.pdf>

ⁱⁱ Lindvall, C.M. (1976), Criteria for Stating IPI Objectives, *Design and Development of Curricular Materials: Instructional Design Articles*, Ed. D.T. Gow (Pittsburgh, PA: University of Pittsburgh, University Center for International Studies), 2:214-215.