

Writing Quality Learning Objectives

Learning objectives (often called performance objectives or competencies) are brief, clear, specific statements of what learners will be able to perform at the conclusion of instructional activities. Learning objectives stem from course objectives; course objectives are broad statements reflecting general course goals and outcomes, while learning objectives are targeted statements about expected student performance. Generally, learning objectives are competency-based as they designate exactly what students need to do to demonstrate mastery of course material. With this in mind, learning objectives are always stated in terms of student outcomes. The purpose of learning objectives is to:

- Facilitate overall course development by encouraging goal-directed planning
- Inform students of the standards and expectations of the course
- Provide information for the development of assessments by identifying the types of evidence that students need to produce to demonstrate understanding
- Clarify the intent of instruction and guide the formation of instructional activities (textbook selection, teaching resources, instructional methods, etc)
- Provide a framework for evaluating student understanding and progress
- Serve as an implicit contract between instructor and students setting up a basis for accountability
- Drive curriculum planning (such as the development or revision of courses)
- Create a framework for evaluating overall effectiveness of an educational program
- Provide evidence of student learning to be utilized for accreditation

Guidelines for Writing Effective Learning Objectives:

Effective learning objectives highlight expected student behavior as well as the specific conditions and standards of performance.

- Behavior - Write learning objectives in terms of an observable, behavioral outcome; essentially, learning objectives should provide a description of what the student will be able to do. When writing the objective in performance terminology, the selection of an effective action verb is of utmost importance. The use of a clear, targeted verb provides directions about the expectations of student performance at the completion of instructional activities. Because the verb provides the desired direction of emphasis, it is important to choose a verb that is focused and targets a level of performance appropriate for the course.
- Student-Centered - All learning objectives should focus on the student. An effective learning objective will explain expectations for student behavior, performance, or understanding. To ensure that learning objectives are student-centered, a good objective should appropriately complete the statement "The student will..."
- Conditions - Learning objectives should be specific and target one expectation or aspect of understanding and highlight the conditions under which the student is expected to perform the task. The conditions of the objective should communicate the situation, tools, references, or aids that will be provided for the student.
- Standards - Each learning objective should be measurable and include the criteria for evaluating student performance. Generally, standards provide information to clarify to what extent a student must perform to be judged adequate; thus effective learning objectives indicate a degree of accuracy, a quantity of correct responses or some other type of measurable information. Standards serve the dual purpose of informing students of performance expectations and providing insight as to how achievement of these expectations will be measured. Since students will utilize the standards to guide their performance, be sure to use specific terminology that has limited interpretations and ensure that all students understand the same interpretation.

Tips for Improving Learning Objectives:

- Learning objectives have two parts: an action verb and a content area. Utilize the action verb to specify the desired student performance followed by a specific description of the course-specific content target.
- Keep statements short and focused on a single outcome. This allows instructors to determine whether or not an objective has been met without having to

distinguish between partial completion or success.

- To ensure that learning objectives are effective and measurable, avoid using verbs that are vague or cannot be objectively assessed. Use active verbs that describe what a student will be able to do once learning has occurred.
- Learning objectives should be student-focused and target the expected student outcome. To assist in maintaining a student-centered emphasis, start learning objectives with the phrase "The learner/student will be able to. . ."
- Learning objectives should be SMART (specific, measurable, acceptable to the instructor, realistic to achieve, and time-bound with a deadline).
- Include complex or higher-order learning objectives when they are appropriate. Most instructors expect students to go beyond memorization of facts and terminology; learning objectives should reflect instructors' expectations for student performance.
- Utilize learning objectives as a basis for course preparation. Learning objectives should match instructional strategies and assessment requirements. To ensure the connection between various course activities, it is useful to construct a table highlighting the relationship. For example:

Learning Objective	Instructional Activities	Assessment
Differentiate between qualitative and quantitative assessment	Lecture, group activity	Exam #1, Assessment Portfolio #1, Mastery Questions

Using the Taxonomy of Educational Objectives to Write Learning Objectives:

Depending on the course goals, learning objectives may target a range of skills or cognitive processes. Bloom's (1956) taxonomy of educational objectives differentiates between three domains of learning: cognitive, affective, and psychomotor.

Domain	Target	Focus
Cognitive	Knowledge, intellectual skills	Mind
Affective	Attitudes, interests, feelings, values, adjustments	Spirit
Psychomotor	Motor and manipulations skills	Body

Most courses in higher education focus on the cognitive domain, thus it is important to examine various levels of cognitive understanding. The cognitive domain is broken-down into six categories: knowledge, comprehension, application, analysis, synthesis, and evaluation. Generally, instructors will want to design learning objectives to target a range of levels of student understanding. The phrasing of learning objectives will help guide both instructional activities and assessment, thus instructors should carefully select the emphasis of learning and the relevant verb.

Domain	Emphasis	Relevant Verbs
Cognitive	Knowledge	Recall, identify, recognize, acquire, distinguish, state, define, name, list, label, reproduce, order
Cognitive	Comprehension	Translate, extrapolate, convert, interpret, abstract, transform, select, indicate, illustrate, represent, formulate, explain, classify, comprehend
Cognitive	Application	Apply, sequence, carry out, solve, prepare, operate, generalize, plan, repair, explain, predict, demonstrate, instruct, compute, use, perform, implement, employ, solve
Cognitive	Analysis	Analyze, estimate, compare, observe, detect, classify, discover, discriminate, explore, distinguish, catalog, investigate, breakdown, order, determine, differentiate, dissect, contrast, examine, interpret
Cognitive	Synthesis	Write, plan, integrate, formulate, propose, specify, produce, organize, theorize, design, build, systematize, combine, summarize, restate, argue, discuss, derive, relate, generalize, conclude, produce
Cognitive	Evaluation	Evaluate, verify, assess, test, judge, rank, measure, appraise, select, check, judge, justify, evaluate, determine, support, defend, criticize, weigh, assess
Affective		Agree, avoid, support, participate, cooperate, praise, help, offer, join
Psychomotor		Adjust, repair, taste, bend, measure, perform, operate, use, move

Avoid using verbs that are difficult to measure objectively. The following verbs are difficult to assess, thus should be used with caution:

- know	- familiarize	- gain knowledge of
- comprehend	- study	- cover
- understand	- be aware	- learn
- appreciate	- become acquainted with	- realize

If you utilize verbs like "know" or "understand", make sure that you state how "knowledge" or "understanding" will be demonstrated. Remember, a good learning objectives is one that can be assessed to determine students' mastery of course material.

Review Checklist:

<input type="checkbox"/>	Does the learning objective stem from a course goal or objective?
<input type="checkbox"/>	Is the learning objective measurable?
<input type="checkbox"/>	Does the learning objective target one specific aspect of expected performance?
<input type="checkbox"/>	Is the learning objective student-centered?
<input type="checkbox"/>	Does the learning objective utilize an effective, action verb that targets the desired level of performance?
<input type="checkbox"/>	Do learning objectives measure a range of educational outcomes?
<input type="checkbox"/>	Does the learning objective match instructional activities and assessments?
<input type="checkbox"/>	Does the learning objective specify appropriate conditions for performance?
<input type="checkbox"/>	Is the learning objective written in terms of observable, behavioral outcomes?

References:

- Aiken, L. R. (2000). *Psychological Testing and Assessment (10th Edition)*. Boston, MA: Allyn and Bacon.
- Anderson, L. W., Krathwohl, D. R., Airasian, R. W., Cruikshank, K. A., Mayer, R. E., Pintrich, P. R., Raths, J. & Wittrock, M. C. (2001). *A Taxonomy for Learning, Teaching, and Assessing*. New York, NY: Addison Wesley Longman, Inc.
- Baiocco, S.A. & DeWaters, J.N. (1998). *Successful College Teaching: Problem-Solving Strategies of Distinguished Professors*. Needham Heights, MA: Allyn and Bacon.
- Bloom, B.S. (Ed.) (1956) *Taxonomy of Educational Objectives: The classification of educational goals: Handbook I, Cognitive Domain*. New York ; Toronto: Longmans, Green.
- Bruning, R. H., Schraw, G. J., & Ronning, R. R. (1995). *Cognitive Psychology and Instruction (2nd Edition)*. Englewood Cliffs, NJ: Prentice Hall, Inc.
- Chatterji, M. (2003). *Designing and Using Tools for Educational Assessment*. Boston, MA: Allyn and Bacon.
- Davis, B.G. (2001). *Tools for Teaching*. New York: Jossey-Bass.
- Gronlund, N. E. (2003). *Assessment of Student Achievement (7th Edition)*. Boston, MA: Allyn and Bacon.
- Johnson, D. W. & Johnson, R. T. (2002). *Meaningful Assessment: A Manageable and Cooperative Process*. Boston, MA: Allyn and Bacon.
- McKeachie, W. J. (1999). *Teaching Tips: Strategies, Research, and Theory for College and University Teachers (10th Edition)*. Boston, MA: Houghton Mifflin Company.
- Popham, W. J. (2000). *Modern Educational Measurement: Practical Guidelines for Educational Leaders (3rd Edition)*. Boston, MA: Allyn and Bacon.
- Trice, A. D. (2000). *A Handbook of Classroom Assessment*. New York: Addison Wesley Longman, Inc.