

Learning Objectives

Resource Guide

Goal, Objective, Outcome?

These statements are used in education to specify what students should be able to do as a result of instruction. The terms goals, objectives, and outcomes are **often used interchangeably**.

Goals refer to a broader view of what you want your students to achieve.

Objectives refer to the steps students need to reach the learning goal

Outcomes are what students actually achieve based on assessment evidence (Barkley & Major, 2016).

You will come across different definitions for these terms. It can be confusing but our best advice is to not get caught up in semantics. Until there is a better consensus among educators, you can call these statements learning objectives or learning outcomes.

Learning objectives (LO) contain a measurable verb, knowledge and/or skill and additional supporting/clarifying details as needed. Creating LOs is an iterative process and you may need to refine them as you develop your instruction. This guide provides a step by step process.

Creating Learning Objectives: *Step-by-Step Process*

Basic Structure of a Learning Objective

measurable verb- *knowledge/skill-* additional details

measurable verb- what students will do

***knowledge/skill-* what students are expected to acquire**

***additional details-* supporting/clarifying language**

Step 1: Identify the knowledge/skill students are expected to learn.

Types of Knowledge

Factual

Basic terminology students must know in a discipline

examples
Parts of a cell, parts of the brain colors of the rainbow, branches of government, elements in the periodic table, names of historical figures

Conceptual

Interrelationships among basic elements; knowledge of classifications, categories, principles, generalizations, theories, models

examples
Supply and demand, principles of design, climate change, laws of physics, American foreign trade policies, function of the hippocampus

Procedural

How to do something or methods of inquiry; knowledge of discipline specific skills, techniques, methods; when to use appropriate procedures

examples
Lab skills, painting technique, research methods, methods to solve algebraic equations, counseling skills, coding skills

Metacognitive

Awareness of one's own thought processes; strategic knowledge, self-knowledge

examples
Learning strategies, elaboration, organizational and planning strategies, comprehension monitoring strategies, means-end analysis

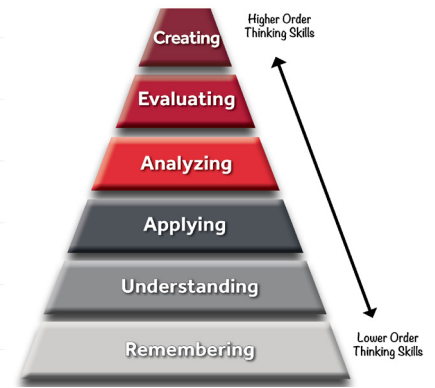
References:

Anderson, L. W., & Krathwohl, D. R. (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives*. Longman.
Barkley, E. F., & Major, C. H. (2016). *Learning assessment techniques: A handbook for college faculty*. John Wiley & Sons.
Nilson, L. B. (2016). *Teaching at its best: A research-based resource for college instructors*. John Wiley & Sons.

Step 2: Select a measurable verb to describe what you want students to engage in.

Can the Student...

...create a new product or point of view?	<i>Creating</i>
...justify a stand or decision, explain which options are better?	<i>Evaluating</i>
...distinguish between the different parts and how they are connected?	<i>Analyzing</i>
...use the info in a new context?	<i>Applying</i>
...explain ideas or concepts?	<i>Understanding</i>
...recall or remember information?	<i>Remembering</i>



Bloom's Taxonomy Framework

Measurable Verbs

Remembering	Understanding	Applying	Analyzing	Evaluating	Creating
arrange, define, detail, duplicate, find, identify, indicate, label, list, locate, order, pronounce, recall, recognize, recite, state	associate, categorize, clarify, classify, decipher, describe, examine, explain, generalize, paraphrase, summarize, translate	apply, calculate, carry out, compute, conduct, demonstrate, determine, discover, employ, execute, graph, implement, operate, perform, solve, use, utilize	analyze, break down, categorize, classify, compare, contrast, differentiate, discern, dissect, distinguish, investigate, question	argue, assess, choose, conclude, convince, critique, debate, defend, discredit, evaluate, judge, justify, persuade, rate, recommend, solve, validate, verify	assemble, assimilate, build, change, combine, compose, construct, create, design, develop, formulate, generate, hypothesize, invent, produce, synthesize, theorize, write

Step 3: Include additional supporting details to provide context.

You can add additional or supporting details to your learning objective but this is not required. See examples.

Examples: Students will be able to...

- ...**create** *a measurable learning outcome using Bloom's Taxonomy as a framework.*
- ...**evaluate** *organizational decisions based on business ethical principles.*
- ...**compare** *works of art from the Impressionism and Post-Impressionism eras.*
- ...**apply** *the quadratic equation to an algebra word problem.*
- ...**describe** *the basic theories in developmental psychology.*
- ...**identify** *elements in the periodic table.*

Best Practices in Writing Learning Objectives

Do This...

- Use **one** specific and measurable verb.
- Use **student centered** language.
- Use **specific** but language that is also **concise**.
- Make sure your outcomes are **achievable** for the given time frame, ie. semester.

Avoid This...

- Using **more than one verb**
Students may be able to achieve one part but not the other.
- Words/phrases** that are **not measurable**.
ie. understand, know, demonstrate an understanding, learn, be familiar with, be aware of, appreciate, have knowledge of
- Vague or ambiguous** words or phrases.
- References to **course activities and specific assessments**.
ie. "Students will be able to achieve a passing grade on the exam."