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).

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

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

### Types of Knowledge

**Factual**
Basic terminology students must know in a discipline

- 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

- 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

- 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

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

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References:
Can the Student...

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

Measurable Verbs

Remembering
- arrange, define, detail, duplicate, find, identify, indicate, label, list, locate, order, pronounce, recall, recognize, recite, state

Understanding
- associate, categorize, clarify, classify, decipher, describe, examine, explain, generalize, paraphrase, summarize, translate

Applying
- apply, calculate, carry out, compute, conduct, demonstrate, determine, discover, employ, execute, graph, implement, operate, perform, solve, use, utilize

Analyzing
- analyze, break down, categorize, classify, compare, contrast, differentiate, discern, dissect, distinguish, investigate, question

Evaluating
- argue, assess, choose, conclude, convince, critique, debate, defend, discredit, evaluate, judge, justify, persuade, rate, recommend, solve, validate, verify

Creating
- assemble, assimilate, build, change, combine, compose, construct, create, design, develop, formulate, generate, hypothesize, invent, produce, synthesize, theorize, write

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

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, i.e. 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.
  i.e. 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.
  i.e. “Students will be able to achieve a passing grade on the exam.”