Writing Effective Learning Outcomes and Objectives

Learning Outcomes

A learning outcome is a broad, general statement of what the students will be able to do as a result of what they have learned in the course. Outcomes use language that allows the faculty member to observe and measure what students have learned based on what they can do. If you can't observe what students can do to demonstrate their mastery of the outcome skill, how can you measure it? If you can't measure what students can do, how can you assess it? This is why incorporating strong action verbs in outcome statements is so important. You can observe and measure and assess *calculate* and *identify* and *build*, but how can you observe and measure and assess *understand* or *know* or *appreciate*?

Below are examples of weak learning outcome statements and their stronger learning outcome counterparts. Notice the verbs used in each.

Weak Learning Outcome Statement	Strong Learning Outcome Statement
The student will *understand* the importance of cell growth and reproduction	The student will be able to *explain* the importance of cell growth and reproduction
The student will *know* about hydraulic break systems	The student will be able to *service* hydraulic break systems
The student will *demonstrate knowledge of* a 20th century British poem	The student will be able to *analyze* the form and content of a 20th century British poem

The element that distinguishes a weak outcome from a strong outcome is ***the verb used***. As a faculty member you can observe and measure *explain*, *service*, and *analyze*, but what does *understand*, *know*, and *demonstrate knowledge of* look like?

Best Practice for Writing Learning Outcomes

1. **Use strong verbs that identify a student learning outcome skill that is observable, measurable and therefore assessable.**

   It's best to avoid "fuzzy" verbs in student learning outcome statements. The verb used in the outcome should identify a skill that is observable, measurable and assessable, so avoid verbs like "understand" and phrases like "gain familiarity with" or "know about" or "demonstrate knowledge of." It's difficult to observe "demonstrate knowledge of" something. The question is – What must students do to show you and themselves that they have acquired the knowledge. Do they *explain* how something works; do they *develop* a deliverable of some kind; do they *perform* a task or *associate* people with events or responsibilities? You can observe and measure a student's ability to *explain* or *develop* or *perform* or *associate* – these are concrete skills that will indicate to you their level of mastery – but what does "demonstrate knowledge of" or "understand" look like?

2. **Use a single high-level verb in an outcome.**

   It's important to use a single strong verb to identify a single observable, measurable and assessable skill in a learning outcome. When two outcome verbs are used in a learning outcome statement, assessment becomes difficult. Consider this student learning outcome statement:

   Students will identify and explain principles of communication used in a business plan

   If, during course assessment, you find that students meet one of the outcome skills (for example *identify* principles of communication) but not the other outcome skill (*explain* principles of communication) it becomes difficult to say with certainty whether or not the outcome has been fully met.

Try This: Circle the fuzzy verb and rewrite:

1. Students will demonstrate an understanding of how to solve an algebraic equation

2. Students will appreciate a poem

3. Students will be familiar with terms and vocabulary

4. Students will know about the nutritional needs of older adults

5. Students will demonstrate knowledge of business ethics

6. Students will list and explain the steps of the scientific method

Try This: Look at one of your course outcomes and write the outcome verb in the left column below. In the right column write two or three verbs that make the outcome skill more observable and measurable. Refer to the Bloom's Taxonomy Action Verbs table for ideas.

Original Outcome Verb	Three Alternative Outcome Verbs
1.	1. 2. 3.

REVISED Bloom's Taxonomy Action Verbs

Definitions	I. Remembering	II. Understanding	III. Applying	IV. Analyzing	V. Evaluating	VI. Creating
Bloom's Definition	Exhibit memory of previously learned material by recalling facts, terms, basic concepts, and answers.	Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating main ideas.	Solve problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way.	Examine and break information into parts by identifying motives or causes. Make inferences and find evidence to support generalizations.	Present and defend opinions by making judgments about information, validity of ideas, or quality of work based on a set of criteria.	Compile information together in a different way by combining elements in a new pattern or proposing alternative solutions.
Verbs	• Choose • Define • Find • How • Label • List • Match • Name • Omit • Recall • Relate • Select • Show • Spell • Tell • What • When • Where • Which • Who • Why	• Classify • Compare • Contrast • Demonstrate • Associate • Extend • Illustrate • Infer • Interpret • Outline • Relate • Rephrase • Show • Summarize • Translate	• Apply • Build • Choose • Construct • Develop • Experiment with • Identify • Interview • Make use of • Model • Organize • Plan • Select • Solve • Utilize	• Analyze • Assume • Categorize • Classify • Compare • Conclusion • Contrast • Discover • Dissect • Distinguish • Divide • Examine • Function • Inference • Inspect • List • Motive • Relationships • Simplify • Survey • Take part in • Test for • Theme	• Agree • Appraise • Assess • Award • Choose • Compare • Conclude • Criteria • Criticize • Decide • Deduct • Defend • Determine • Disprove • Estimate • Evaluate • Explain • Importance • Influence • Interpret • Judge • Justify • Mark • Measure • Opinion • Perceive • Prioritize • Prove • Rate • Recommend • Rule on • Select • Support • Value	• Adapt • Build • Change • Choose • Combine • Compile • Compose • Construct • Create • Delete • Design • Develop • Discuss • Elaborate • Estimate • Formulate • Happen • Imagine • Improve • Invent • Make up • Maximize • Minimize • Modify • Original • Originate • Plan • Predict • Propose • Solution • Solve • Suppose • Test • Theory

Anderson, L. W., & Krathwohl, D. R. (2001). A taxonomy for learning, teaching, and assessing, Abridged Edition. Boston, MA: Allyn and Bacon.

Supporting Objectives

Supporting objectives are detailed and specific statements of what students will do in order to achieve the student learning outcome. The skill identified in the learning outcome should be at a high level – a culminating skill students will develop as a result of the content and activities designed into the course. The objectives identify the constituent or sub-skills students must acquire in order to master the higher level outcome skill. For example, in order for a student to propose a well-informed interpretation of a Cubist sculpture (*interpret* is the outcome skill) they must first be able to *identify* it as Cubist, *describe* it using accurate language, and *situate* it in its historic context. The ability to identify, describe, and situate are the constituent or sub-skills (the objectives) that lead to the higher level skill of interpretation (the outcome skill).

Consider this: The outcome statement *Students will list and explain the steps of the scientific method* should be rewritten as an outcome and supporting objective statement:

Outcome Statement: Students will *explain* the steps of the scientific method

Objective 1: *List* the steps, in chronological order, of the scientific method

Try This: Write objectives associated with two of your course outcomes using verbs that identify measurable and observable skills; write objective skills at a lower level than the outcome skills.

Outcome 1 Verb:

Objective 1

Objective 2

Objective 3

Outcome 2 Verb:

Objective 1

Objective 2

Objective 3