

Writing Student Learning Outcomes

Outcomes: Detailed, specific, measurable or identifiable, and personally meaningful statements that articulate the end result of a unit, program, course, activity or process.

Outcomes should be:

- Measurable (not necessarily quantifiable) or observable
- Manageable
- Meaningful

Learning Outcomes: An easily identified action that a student is expected to demonstrate in terms of knowledge, skills, and attitudes upon completion of a program/course.

Note: When writing learning outcomes, focus on the end result of your teaching.

How will you know that the students have learned what you want them to learn?

What does it look like?

How will you identify it?

Use simple, specific action verbs to describe what the students are expected to demonstrate upon completion of a program. Examples include:

Students will be able to <action verbs to describe knowledge, skills, or attitude>....

ACTION VERBS

Concrete verbs, such as “define,” “apply,” or “analyze” are more helpful for assessment than verbs such as “be exposed to,” “understand,” “know,” “be familiar with.”

Cognitive Learning	Examples of Action Verbs
Knowledge – to recall or remember facts without necessarily understanding them	articulate, define, indicate, name, order, recognize, relate, recall, reproduce, list, tell, describe, identify, show, label, tabulate, quote
Comprehension – to understand and interpret learned information	classify, describe, discuss, explain, express, interpret, contrast, associate, differentiate, extend, translate, review, suggest, restate
Application – to put ideas and concepts to work in solving problems	apply, compute, give examples, investigate, experiment, solve, choose, predict, translate, employ, operate, practice, schedule
Analysis – to break information into its components to see interrelationships	analyze, appraise, calculate, categorize, compare, contrast, criticize, differentiate, distinguish, examine, investigate, interpret
Synthesis – to use creativity to compose and design something original	arrange, assess, defend, judge, predict, rate, support, evaluate, recommend, convince, conclude, compare, summarize
Evaluation – to judge the value of information based on established criteria	appraise, assess, defend, judge, predict, rate, support, evaluate, recommend, convince, conclude, compare, summarize
Affective Learning	appreciate, accept, attempt, challenge, defend, dispute, join, judge, praise, question, share, support

Examples of learning outcomes:

Graduates will be able to *collect* and *organize* appropriate clinical data, *apply* principles of evidence-based medicine to determine clinical diagnoses, and *formulate* and *implement* acceptable treatment modalities

Graduates will be able to *identify* various aspects of architectural diversity in their design projects

Graduates will be able to critically *analyze* and *evaluate* current research

Writing Program, Process, and Performance Objectives

Program/process objectives – The end result of what a program or process is to do, achieve, or accomplish

Note: Program objectives can be as simple as completion of a task or activity, although this is not as meaningful as it could be and does not provide information for improvement. To accomplish the latter, you should try to assess the effectiveness of what you want your program to accomplish. Program objectives, just like learning outcomes should be measurable, manageable, and meaningful.

THE PROGRAM WILL BE ABLE TO <ACTION VERB TO DESCRIBE WHAT IT WILL DO, ACHIEVE OR ACCOMPLISH>...

Program Objective: The Epidemiology Department will increase the diversity of its application pool by 50%.

Program Objective: Facilities will be able to respond to maintenance requests within 24 hours of the service request

Program Objective: Student Health Services will be able to admit students for check-ups within 24 hours of their walk-in time

Program Objective: Student Financial Aid will have full award letters out to the on-time complete applicants by April 15th.

Select appropriate Assessment Methods: Means of assessment describes the process employed to gather data that will measure each stated outcome or objective. Try to use a variety of methods, direct and indirect, quantitative and qualitative, to gather adequate information to determine the extent the outcome/objective has been achieved.

Direct Methods: Any process employed to gather data that requires subjects to display their knowledge, behavior, or thought processes

Indirect Methods: Any process employed to gather data that asks subjects to reflect upon their knowledge, behaviors, or thought processes

Examples of Direct Assessment	Examples of Indirect Assessment
<ul style="list-style-type: none"> • Student work samples • Collections of student work, e.g., portfolios • Capstone projects • Project-embedded assessment • Course-embedded assessment • Observations of student behavior • Internal juried review of student projects • External evaluations of student performance • Document analysis, e.g., meeting minutes, policies, handbooks • External juried review of student projects • Externally reviewed internship • Performance on a case study/problem • Performance on problem and analysis • Performance on national licensure examinations • Locally developed tests • Pre- and post- tests • Essay tests blind scored across units 	<ul style="list-style-type: none"> • Alumni, employers, student surveys • Focus groups (depending on the interview protocol, this could be used as direct evidence) • Exit interviews with graduates • Graduate follow-up studies • Percentage of students who go on to graduate school • Retention and transfer students • Job placement statistics • Faculty/student ratios • Enrollment trends • Percentage of students who graduate “on time” • Diversity of student body