Using Behavioral Taxonomies to Write Objectives

Taxonomies are classification systems. In the case of objective writing, there are three primary behavioral classifications:

Cognitive domain: knowledge, information, other intellectual skills
Affective domain: attitudes, values, appreciations
Psychomotor domain: skeletal-muscle use and coordination

Each domain has progressive levels of higher-order behavior. We will discuss only the higher-order levels in the cognitive domain.

Cognitive Domain Levels	Possible Objectives
Knowledge – recalling information	To list four rules, to recite a poem, to match the common names of plants with their respective scientific names
Comprehension – interpreting, translating, or extrapolating information	To read a blueprint, to summarize a chapter in a book
Application – applying information (problem-solving)	To explain the effect on the earth if the moon were to double in mass, to troubleshoot an electrical problem in an automobile engine
Analysis – breaking information into parts to detect relationships of the parts and the way they are organized	To distinguish between facts and assumptions in a conversation, to determine the major parts of an instructional system
Synthesis – bringing together elements of information to form a new whole	To design an instructional unit according to specifications, to propose alternate ways of solving a problem
Evaluation – making judgments against agreed criteria	To identify errors in a reasoned argument, to develop criteria for evaluating an instructional unit

And for each level of cognition, there are specific **verbs** that can be employed when you write objectives.

Verbs Used for Different Cognitive Learning Levels

Level of Learning	Corresponding Verbs
Knowledge	arrange, define, duplicate, label, list, memorize, name, order, recognize, relate, recall, repeat, reproduce, state
Comprehension	classify, describe, discuss, explain, express, identify, indicate, locate, recognize, report, restate, review, select, translate
Application	apply, choose, demonstrate, dramatize, employ, illustrate, interpret, operate, practice, schedule, sketch, solve, use, write
Analysis	analyze, appraise, calculate, categorize, compare, contrast, criticize, differentiate, discriminate, distinguish, examine, experiment, question, test
Synthesis	arrange, assemble, collect, compose, construct, create, design, develop, formulate, manage, organize, plan, prepare, propose, set-up, write
Evaluation	appraise, argue, assess, attach, choose, compare, defend estimate, judge, predict, rate, core, select, support, value, evaluate

Finally, you should match the performance measure (assessment) to the level of learning. Don't use a higher-level performance measure, such as *actual performance*, when you only want students to be at the **knowledge** cognitive level.

Matching Cognitive Learning Levels to Performance Measures

Level of Learning	Performance Measure
Knowledge	Written or oral responses: short answer, multiple choice, true/false, matching, essay
Comprehension	Written or oral responses: short answer, multiple choice, true/false, matching, essay
Application	Actual performance, demonstration, simulation, written or oral responses: short answer, multiple choice, matching
Analysis	Actual performance, simulation, demonstration, essay questions, practical projects, short-answer questions
Synthesis	Actual performance, simulation, demonstration, essay questions, practical projects, short-answer questions
Evaluation	Actual performance, simulation, demonstration, essay questions, practical projects, short-answer questions

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