Writing Learning Objectives

Learning objectives are a simple but powerful tool in educational design but are often disregarded or misunderstood--disregarded in that they may be quickly put together after content has already been developed just to meet some requirement and misunderstood in that they are often written from the perspective of the educator (what I plan to cover) rather than from the perspective of the learners (what they should be able to accomplish after the learning activity). Used correctly, **learning objectives should guide the development of your content and may impact program design** if, for example, you realize that what you want the learner to be able to achieve can't be accomplished through the learning modality you had chosen. Thus they should be written early in the planning stage.

Learning objectives not only keep educators focused and organized, but give learners a snapshot of what the educator thinks is important and lets them focus their priorities. For a student, learning objectives should be an effective guide in studying for the exam.

A few guidelines: **learning objectives should be 1)** *learner (not teacher)-oriented*, **2)** *specific*, **3) contain a** *measurable* **action verb, and 4) where possible, reflect higher levels of thinking or doing** (e.g., in Bloom's taxonomy)**.** We have a tendency to use objectives that require only low level cognitive functions of memorization and regurgitation. Consider whether this is all you expect of the learner—especially where improved performance or patient outcomes is the goal—and if not revise them.

Bloom's Taxonomy level	Level attributes	Examples of measurable verbs
Knowledge	Exhibits previously learned material by recalling facts and basic concepts	define, list, name, label, choose, match
Comprehension	Demonstrates understanding of facts/ideas by organizing, comparing, interpreting, and describing.	describe, compare, explain, summarize, recognize, classify, interpret, demonstrate, identify
Application	Solves problems by applying acquired knowledge	apply, illustrate, develop, plan, construct, use
Analysis	Examines and deconstructs information into parts; makes inferences	analyze, categorize, simplify, distinguish, differentiate, calculate, relate
Synthesis	Compiles information in a different way by combining elements in a new pattern	estimate, predict, discuss, elaborate, design, assemble, construct, formulate
Evaluation	Presents and defends opinions by making judgments about information	criticize, defend, rate, prioritize, prove, judge, recommend, revise, assess, determine

The text of an effective learning objective should ideally include three parts:

1. Description of what the learner is expected to do (a measurable verb)
2. Conditions (if any) under which the performance is expected to occur
3. Criterion or standard of acceptable performance

Here are some examples of objectives that require higher-order cognitive processes:

1. Distinguish among positive, negative, secondary, and behavioral symptoms.
2. Given a clinical scenario involving alteration(s) in arterial pCO2, oxygen content, and/or blood pressure, analyze the state of cerebral blood flow and metabolism.
3. Use ICH location to predict likely underlying pathophysiology.
4. Given pupillary or eye movement findings in a comatose patient, identify the level of nervous system damage.