

Writing Learning Objectives: Beginning With the End in Mind

Objectives of this handout:

- Review the definition, purposes, domains and domain levels for learning objectives
- List the 3 parts of the “ideal” learning objective.
- Write learning objectives that contain a measurable verb and communicate clearly to the student.

Definition of “Learning Objective”

- A statement in specific and measurable terms that describes what the learner will know and/or be able to do and/or feel as a result of engaging this learning activity.
- **Example:** Students will list three characteristics that make the family medicine physician distinctive from other specialists in the health care system.

The ideal learning objective has 3 parts:

1. A measurable verb
2. The important condition (if any) under which the performance is to occur and
3. The criterion of acceptable performance (standard).

NOTE: Frequently, as in the example above, you will not see the criterion or the condition specified if they are obvious. However, sometimes adding the condition(s) and/or the criterion add much clarity to a learning objective.

Purposes of Objectives

- By knowing where you intend to go, you increase the chances of you and the learner ending up there
- Guides the teacher relative to the planning of instruction, delivery of instruction and evaluation of student achievement.
- Guides the learner; helps him/her focus and set priorities
- Allows for analysis in terms of the levels of teaching and learning
- Shows colleagues and students what we value
- Guides for the learner relative to self-assessment
- Provides a basis for analyzing the level of cognitive thinking expected from the learner
- Makes teaching more focused and organized
- Provides models so that the students can write their own objectives and thus helps develop an important life long learning skill; “the setting of objectives”

Learning Objective Domains

- **Cognitive:** mental skills (*Knowledge*)
- **Affective:** growth in feelings or emotional areas (*Attitude*)
- **Psychomotor:** manual or physical skills (*Skills*)

There are really 3 domains or categories of learning objectives. In medical school the cognitive objectives are the ones that we normally think about. Psychomotor objectives are also stated, but many times they are stated in vague terms and they could be made much clearer if the criteria were included as part of the objectives. However, we rarely see objectives in the affective domain. This does not mean we don’t value the affective domain. In fact some would argue that it is the most important domain. It is just that objectives in the affective domain are a little hard to write. They are also really hard to measure, and usually that measurement involves a lot of subjectivity.

Levels of Objectives

Benjamin Bloom developed a taxonomy of levels in the mid to late 50’s. His taxonomies provide a nice stair-step approach to thinking about levels of learning. Most importantly, verbs associated with these levels help; 1) find an appropriate verb for the first step of writing an objective and 2) help us move to higher levels of more meaningful learning.

Cognitive levels: <ul style="list-style-type: none">– Evaluation– Synthesis– Analysis– Application– Comprehension– Knowledge
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Affective levels: <ul style="list-style-type: none">– Internalizing values– Organizing values– Valuing– Organizing values– Receiving phenomenon
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Psychomotor levels: <ul style="list-style-type: none">– Origination– Adaptations– Overt response– Guided response– Set (ready to act)– Perception



Levels of learning

Source: <http://www.nwlink.com/~donclark/hrd/bloom.html>

For each level of each domain there are verbs that can be used for writing instructional objectives. For example, some cognitive level domain verbs are:

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

Also see: <http://www.nwlink.com/~donclark/hrd/bloom.html> & many more by searching the web with “Bloom’s Taxonomy.”

Effective Learning Objectives

- Consistent with the goals of the curriculum
- Clearly stated
- Clearly measurable
- Realistic and doable
- Appropriate for the level of the learner
- Worthy (Important stuff)

The characteristics of effective objectives as stated above along with the verb, conditions and standard provide us with some criteria to evaluate objectives you construct.

Quick Objective writing template

- Select a **verb** for performing the task and determine if the verb you have chosen best describes the type of behavior that the learners need to display after training (see [Bloom's Taxonomy](#)).
- Under what **conditions** must the task be performed?
- Determine to what **standards** the task must be performed.

Some Examples of Some Pretty Good Objectives

- The learner will be able to: orally present a new patient’s case in a logical manner, chronologically developing the present illness, summarizing the pertinent positive & negatives findings as well as the differential & plans for further testing & management.
- The learner will be able to: describe the mechanisms of action for each of the two classes of neuromuscular blocking agents (depolarizing agents & competitive agents)
- The learner will be able to: describe suppurative arthritis. Include the usual pathways of joint infection, most common organisms, clinical manifestations, including lab diagnosis and the natural history.
- Given a ventriculogram and cath lab data of pressures, cardiac outputs and ejection fraction, identify the states of normal hearts, aortic stenosis and mitral regulation.
- Given a case problem, including history, physical findings, diagnosis, and list of prescribed drugs, state the physiologic, pathophysiologic and pharmacologic factors that could modify the drug response in that patient.
- Given the calculated results of tests compared with predicted normal values, determine the presence or absence of abnormal pulmonary function and classify it as to type and severity.

Practice

Write and critique each other – most objectives can be improved with critical editing. Use the “Effective Learning Objectives” above as a check along with the criteria for a verb, conditions and standards.

The End.