

WRITING COURSE GOALS/OBJECTIVES

“...an instructor will function in a fog of their own making until they know just what they want their students to be able to do at the end of instruction.”

- R. F. Mager

Objectives

At the end of reading this information, readers will be able to

- Define “objective” as it relates to teaching and learning.
- Explain the difference between a course goal and a learning objective.
- Evaluate a learning objective based on the criteria of a well written learning objective.

Why use objectives?

The functions of objectives are to:

- Provide direction and parameters for a learning session
- Direct choice of content
- Direct choice of assignments
- Suggest effective instructional methods
- Communicates purpose to others involved (learners, administrators, curriculum oversight committees)
- Drive evaluation methods
- Enable evaluation, thereby demonstrating effectiveness of curriculum

What is the difference between goals and learning objectives for learning sessions?

Goals provide information about the purpose/content of a session while learning objectives are statements describing *instructional outcomes*; therefore, objectives should be measurable in terms of observed behavior or performance.

Since goals are broad statements that communicate the overall purpose and serve as criteria for selecting the curricular components, they can be lofty ideas, using words or phrases like "appreciates", "values" or "introduction to the language of..." (See Appendix A for examples of these words).

Examples of stems used to write broad goals:

- **Students will gain a greater appreciation**
- **Students will be introduced to**
- **Students will understand**

What is an objective?

Measurable objectives allow for refinement of curricular content and guide selection of instructional and assessment methods. Objectives must be measurable and specific in order to determine if the goal was achieved. More specifically, an objective is a description of a *performance* that learners should be able to demonstrate in order to be considered competent in a given area. An objective describes the *intended instructional result*, not the process of instruction. In other words, learner achievement describes what a student or group of students will know or do as a result of instruction. See Table 1.

Table 1. Examples of Learning Objectives from a Biochemistry Course for Medical Students Year 1 and Smoking Cessation Curriculum for Residents

	<i>Level of Objective</i>	
	<i>Individual Learner</i>	<i>Aggregate or Program</i>
Biochemistry Course for MS1	By the end of the session, each student will be able to explain why fibrin degradation products (FDPs or D-dimers) are elevated in disseminated intravascular coagulation.	By the end of the semester, $\geq 92\%$ of students will be able to relate coagulation biochemistry pathways to clinical conditions.
Smoking cessation Curriculum for Residents	By the end of the curriculum, each resident will be able to list the 8-step approach to effective smoking cessation counseling.	By the end of the curriculum, $\geq 80\%$ of residents will be able to list the 8-step approach to effective smoking cessation counseling, and $\geq 90\%$ will be asked to list the 4 critical (asterisked) steps.

What are the 2 qualities of a useful objective?

Useful objectives are those that clearly communicate an intended instructional outcome. Objectives always state a performance, describing what the learner will be doing when demonstrating mastery of the objective. Useful objectives have two components:

1. **Performance** – An objective always states what a learner is expected to do in order to demonstrate mastery of the objective.
2. **Criterion** – If possible, the objective describes the criterion of acceptable performance by describing how well the learner must perform in order to be considered acceptable.

4 Elements of a Measurable Objective:

WHO will do **WHAT** and **HOW MUCH (HOW WELL)** by **WHEN**

How can objectives help students engage with the content at a higher order of thinking?

When writing objectives, you need to consider not only the content that is being taught but the cognitive skills you want students to utilize. Do you want students to simply be able to recall information or do you want them to explain, interpret, analyze or evaluate information? By asking for certain types of performance in your objectives, you can help students use higher order cognitive skills. Bloom's taxonomy identifies verbs that can require student to use a variety of cognitive skills. The taxonomy is a great tool that can be used to create objectives (See Appendix B for Bloom's Taxonomy).

***Summary:** Goals are broad, generalized statements about what is to be learned. Think of them as a target to be reached or "hit". Learning objectives are specific, measurable, short-term, observable student behaviors.*

Checklist for Evaluating Learning Objectives:

1. Does the objective describe an intended instructional outcome?
2. Is the intended outcome described in terms of student performance?
3. Does the objective describe how well the student must perform in order to be considered acceptable? An example would be that you would like the student to be able to explain the information, but the student will not be held responsible for being able to compare and contrast it to other information.

What are common problems instructors encounter when writing objectives?

1. **False objectives.** These statements often look and sound like objectives but they contain no performances. Rather than performances, these objectives often describe abstract states of being (appreciating, valuing, and understanding).

"Students will have a thorough understanding of biostatistics."

2. **Practice exercises.** These statements describe a classroom activity or exercise rather than an instructional outcome.

"Students will be able to discuss patient case histories."

3. **Instructor performance.** These statements describe what the instructor is expected to do rather than what the students are expected to do.

"The instructor will help students recognize..."

4. **False Criteria.** Sometimes otherwise useful objectives will include criteria that include little or no information about the quality of performance. Make sure that criteria say something about the quality of individual student performance and provide a real standard.

References and Resources

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Appendix A: Examples of Words to Write Goals

Adjectives:	Appropriate Proper	Beneficial Suitable	Correct	Knowledgeable
Nouns:	Appreciation Knowledge	Aptness Respect	Awareness Understanding	Introduction
Verbs:	Appreciates Aware Esteem Possess Value	Apprehend Cherish Introduce Recognize	Apprize Enhance Know Respect	Approach Enjoy Perceive Understand

Appendix B: Bloom’s Taxonomy: A Tool to Write Objectives

Bloom’s Cognitive Level	Student Performance	Words to Use in Objectives	Sample Behaviors
Knowledge	Recalling facts, terms, concepts, definitions, principles	Define, list, state, identify, label, name.	The student will define the 6 levels of Bloom's taxonomy of the cognitive domain.
Comprehension	Explaining or interpreting the meaning of information	Explain, predict, interpret, infer, summarize, convert, translate, give examples of, account for, and paraphrase.	The student will explain the purpose of Bloom's taxonomy of the cognitive domain.
Application	Using a concept or principle to solve a problem	Apply, solve, show, make use of, modify, demonstrate, compute	The student will write an instructional objective for each level of Bloom's taxonomy.
Analysis	Breaking material down into its component parts to see interrelationships/hierarchy of ideas	Differentiate, compare/contrast, distinguish, how does ___ relate to ___? Why does ___ work?	The student will compare and contrast the cognitive and affective domains.
Synthesis*	Producing something new or original from component parts	Design, construct, develop, formulate, create, hypothesize, invent	The student will design a classification scheme for writing educational objectives that combines the cognitive, affective, and psychomotor domains.
<i>*These activities require time for thought, production and feedback.</i>			
Evaluation	Making a judgment based on established criteria	Judge, recommend, critique, justify, evaluate, appraise	The student will judge the effectiveness of writing objectives using Bloom's taxonomy.

Order of Thinking Increases

