

HOW TO WRITE CLEARLY STATED, MEASURABLE OBJECTIVES

What exactly are clear, measurable instructional objectives? Before we talk about what objectives **are**, let us first talk about what objectives **are not**.

Objectives **are not** course descriptions, course contents, or educational goals. Objectives are not good intentions about what the continuing education course hopes to accomplish. Objectives are not work of mouth aims for the course. Objectives are definitely not merely proposals to offer continuing educational programs.

QUALITIES OF MEASURABLE OBJECTIVES

So, what then are clearly stated and measurable educational objectives?

Good objectives should:

- Be obtainable,
- Cover only one issue or learning aim,
- Be written,
- Express results to be attained in quantity, quality, time or cost,
- Be directly related to the program,
- Be as short, clear, concise and understandable as possible,
- Be positive statement of what is to be learned,
- Be realistic; resources must be available to accomplish the objectives.

An objective, according to Robert F. Mager, (*Preparing Instructional Objectives, 2nd Ed., 1974, Fearon Publishers, Belmont, CA*) is a description of a performance you want the learner to be able to exhibit before you consider the instruction to be complete.

To be useful, an objective must be clearly stated to succeed in communicating an instructional intent to the learner. To evaluate the effectiveness of communicating the objective to the learner, it must be measurable.

COMPONENTS OF EDUCATIONAL OBJECTIVES

According to Mager’s definition, objectives should specify in measurable terms a future condition that is the desired result of the educational program. Objectives should be understandable, measurable, achievable, and feasible. Program objectives must be clearly stated and include at least three components. The first component is **performance**: an acceptable outcome level (amount of change that is expected). Performance provides the primary direction of what the learner is desired to learn. There should only be one performance per objective.

The second component is B: a quantitative indicated of effectiveness (the achievement of results or benefits). The criteria are associated with a verb or verb form to show action has occurred. The criteria define the time, accuracy, and precision desired.

The third component is **condition**: the target group, the circumstances under which the objectives will be performed.

CLEARLY STATED OBJECTIVES

To avoid vagueness and include the three components of an instructional objective review your own objectives to see if they include each of the following:

To (action verb)	Initiates the performance
Specify result (performance)	What is to be performed
Conditions	Situations under which performance will be assessed
Criteria	How good performance has to be to meet objective

You can observe and evaluate these actions:

Action verbs can include such words as

Maintain	Compare
Reduce	Demonstrate
Increase	Mark
Identify	Name
List	State
Define	Underline
Prepare	Produce
Discriminate between	Label
Write	Discuss
Sort	Differentiate.

These verb forms are non-observable, non-measurable phrases:

Avoid verb forms such as:

To understand	To really understand
To appreciate	To fully appreciate
To grasp the significance of	

How does one measure really understand or appreciate a desired performance? You may wish this to be the overall goal, but cannot measure it because criteria or conditions do not lend themselves to such subjective phrases.

USING EDUCATIONAL PERFORMANCES OBJECTIVES

Let us now critique examples of poorly written and clearly stated, measurable objectives.

Poorly written Objective Understand circuit design diagrams of transistor amplifiers and learn how circuit design errors affect performance.
How do you measure understand and learn? What is the performance expected? What is the criteria of the educational objective?

Clearly stated, measurable objective: Identify and mark circuit design errors on circuit diagrams of transistor amplifiers, including missing or extra components, or wrong connections, with 90% accuracy.
Performance is to identify and mark the design errors on circuit diagrams. Criteria is set at 90% accuracy. The conditions under which the performance occurs will be missing and extra components or wrong connections.

Poorly written objective: Describe how genetic alterations indicate cancer, and discuss the potential and implication of molecular testing for cancer.
This "objective" is really two objectives in one. Remember to be clearly written objective, there should be only one learning aim per objective. Also, this objective does not state the conditions with which this performance should occur, nor does it state the criteria for acceptable performance. This objective was from a homestudy CE course.

Clearly stated, measurable objective Select (in writing) one potential implication of molecular techniques to identify tumor causing genes, given a multiple choice of four possible answers.
The previous multiple objectives was decreased to a single objective. Since this was a homestudy course, the objective must take into consideration how it will be evaluated. In this case the selection criteria is a multiple choice exam.

In conclusion, here is a simple checklist to use when you are creating course objectives:

- Is your main intention for the instruction stated?
- If the main intention is not obvious is an indicator performance stated?
- Is the indicator behavior simple and direct?
- Have you described what the learner will have, or not have, when performing the objective?
- Have you determined how well the learner must perform to be acceptable performance?

If you consider all of these points when you draft your objectives, you will be certain to have clearly stated, measurable objectives. Do not worry so much about form what is important is that you communicate your instructional intentions. Simply say what you want your learners to do, under what conditions will they be doing it with, and how well they will have to do it. That is all there is to it.

Now that you have clearly stated, measurable objectives what measuring instrument you will use to evaluate if the learners have met the instructional objectives. At this point you can have confidence that your program will be effective.

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