Educational Objectives and Performance Standards for Wilderness Medicine
... a Serious Attempt at Rigor.
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another Complex Subject . . .
Overview

- The definitive references
- Goals vs. Objectives
- Objectives = Performance Standards
- Types of Objectives
  - Cognitive
  - Psychomotor
  - Affective
- Defining “Objective”
- Building Objectives
- Objectives vs. Descriptions
- Bad vs. good words
- Characteristics of good objectives
- Defining conditions
- Criteria for success
In a recent study, reported on National Public Radio last week, high-school teachers in one major metropolitan area took a 10th-grade test on reading and writing.

More than half flunked.

So when I went looking for academic expertise on objectives . . .
It was not very successful.
Almost all academic articles on educational objectives, and experts in the field, reference two authors:

- Mager, Robert F.  
  Preparing Instructional Objectives (1962)

- Bloom, Benjamin S.  
  Taxonomy of Educational Objectives (1956)
A 60-page, 1/2” thick, programmed-learning booklet.

PREPARING
INSTRUCTIONAL
OBJECTIVES

ROBERT F. MAGER

A book for teachers and students... for anyone interested in transmitting skills and knowledge others.
Preparing Instructional Objectives

A critical tool in the development of effective instruction

Robert F. Mager

COMPLETELY REVISED Third Edition
Here are some questions you can ask yourself about your objectives as a guide to identifying important aspects of the terminal behaviors that you wish to develop:

1. What will the learner be provided?
2. What will the learner be denied?
3. What are the conditions under which you will expect the terminal behavior to occur?
4. Are there any skills that you are specifically NOT trying to develop? Does the objective exclude such skills?

To see if I have made myself clear, look at the objective below and turn to the page indicated under the part of the sentence you think tells something about the conditions under which the terminal behavior is to occur.

Given a list of factors leading to significant historical events,

(Turn to page 28.)

the learner must be able to select at least five factors contributing to the depression of 1929.

(Turn to page 29.)
Bloom’s Taxonomy
Educational Objectives
= Performance Standards

- Educational **GOALS** are broad and general

  “Understand the physiology of accidental hypothermia”

- Educational (instructional) **OBJECTIVES** are testable behavioral performance standards.
Types of Objectives

- Cognitive: test knowledge
  “From a list of potential answers, correctly identify the major expected response of the kidneys to cold stress.”

- Psychomotor: test skills
  “Given a HeatPac hypothermia rewarming device, an alkaline D-cell, and a fused HeatPac charcoal element, have the unit assembled and functioning properly in under one minute.

- Affective: test emotional appreciation (?)
Making Better, More Specific Objectives?

- “Understand how to operate the HeatPac rewarming device.”

- “Really understand how to operate the HeatPac rewarming device.”

- “Really, really, understand how to operate the HeatPac rewarming device.”
Mager’s Preface:
Mager’s Objectives

➢ Given one or more instructional objectives, you will be able to select those stated in performance terms.

➢ Given a well-written instructional objective, you will be able to identify the portion of it that defines minimum acceptable performance.

➢ Given one or more performance (test) items, you will be able to select those appropriate to the evaluation of the objectives.
What is an objective?

- “...an intent communicated by a statement describing a proposed change in a learner.”
- “…a meaningfully stated objective is one that succeeds in communicating to the reader the writer’s instructional intent.”
Building an Objective

- Identify terminal behavior
- Describe the important conditions
- Specify the criteria of acceptable performance
Objective or Description?

- A general survey of the organization and administration of caving trips, with emphasis on methods of developing the caving trip as an integral part of the outdoor education program. Includes functions, organization, services, equipment, and materials.
To be able to explain the principles for developing vertical ropework safety consciousness in outdoor experiential education.

Discuss principles, techniques and procedures for developing vertical ropework safety consciousness in outdoor experiential education.
To be able to explain the principles for developing vertical ropework safety consciousness in outdoor experiential education.

Discuss principles, techniques and procedures for vertical ropework safety consciousness in outdoor experiential education.

No measurable outcome
Bad vs. Good Words

- to know
- to understand
- to appreciate
- to fully appreciate
- to grasp the significance of
- to enjoy
- to believe
- to have faith in

- to write
- to recite
- to identify
- to differentiate
- to solve
- to construct
- to list
- to compare
- to contrast
Bad vs. Good Words

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To be able to write a summary of the advantages and disadvantages of using the Mattson Consensus Method in search strategy planning.

To understand the theory of search.

To know the standard climbing calls as adapted for semitechnical litter evacuations.
Which is in Performance Terms?

➢ To be able to write a summary of the advantages and disadvantages of using the Mattson Consensus Method in search strategy planning.

➢ To understand the theory of search.

➢ To know the standard climbing calls as adapted for semitechnical litter evacuations.
Characteristics of Good Objectives:

- **Outcomes** rather than content.
- Behavioral or performance terms: *doing*.
- A series of specific statements.
- The best objective is one that best communicates the instructional intent of the person selecting the objective.
Defining Conditions:

- Given a problem of the following class ...
- Given a list of ...
- Given any reference of the learner's choice ...
- Given a matrix of intercorrelations ...
- Given a standard set of tools ...
- Given a properly functioning ...
- Without the aid of references ...
- Without the aid of calculator ...
- Without the aid of tools ...
Criteria for Success:

- ... within five minutes.
- ... with no more than three mistakes.
- ... three times without error.
- ... answer 80% correctly.
- ... acceptable performance is to be within 50 meters of the correct location.
- ... correct within 10 degrees.
Again:

- Identify terminal behavior
- Describe the important conditions
- Specify the criteria of acceptable performance
Summary

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Web site resources

www.conovers.org

Wilderness EMS Institute

www.wemsi.org
If Your Brain Isn’t Overloaded Already . . . Questions?

“Curse you, Keith Conover!”: Self-Portrait of Allegheny Mountain Rescue Group Medic Mike Yee
The End

BEDTIME AT THE ESCHER'S

GOEDE NACHT

GOEDE NACHT

GOEDE NACHT