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Four major components of a behavioral objective and the advantage of using behavioral objectives

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Abstract

Certainly everyone who has ever attended a lecture, seminar, or class has undoubtedly asked themselves, what purpose was served by that presentation. Unfortunately, there may also be those times when lecturers have to ask themselves the same question. When this situation occurs the result is a waste of money, resources, time, and human energy. This waste, and many other problems, could be eliminated with the use of well-written behavioral objectives. But there seems to be a resistance to using behavioral objectives by many of those who are involved in message design and instruction. Many reasons exist which tell why message designers do not make use of behavioral objectives. Two reasons will be discussed in this paper.

FOUR MAJOR COMPONENTS OF A BEHAVIORAL OBJECTIVE
AND
THE ADVANTAGES OF USING BEHAVIORAL OBJECTIVES

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TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION	1
II. REVIEW OF THE LITERATURE	3
Definition of Behavioral Objectives	3
Four Major Components of Behavioral Objectives	4
The Subject	5
The Verb	6
The Conditions of Behavior	8
The Standards of Behavior	10
Advantages of Using Behavioral Objectives .	11
III. SUMMARY	15
References	18

CHAPTER I
INTRODUCTION

Certainly everyone who has ever attended a lecture, seminar, or class has undoubtedly asked themselves, what purpose was served by that presentation. Unfortunately, there may also be those times when lecturers have to ask themselves the same question.

When this situation occurs the result is a waste of money, resources, time, and human energy. This waste, and many other problems, could be eliminated with the use of well-written behavioral objectives. But there seems to be a resistance to using behavioral objectives by many of those who are involved in message design and instruction. Many reasons exist which tell why message designers do not make use of behavioral objectives. Two reasons will be discussed in this paper.

First, message designers are not always aware of the components, or parts, of a properly written behavioral objective. Secondly, many message designers are not always aware of the important advantages and benefits that can be gained by using behavioral objectives. In discussing the importance of behavioral objectives Kemp (1971) stated:

It is not until the value of objectives to an instructional program becomes important that the teacher will be willing to put sincere effort into

preparing them. Then the difficulties and frustrations are taken in stride and the individual gradually develops a habit and pattern for expressing the desired outcomes for student learning in specific, unambiguous terms. (p. 23)

Therefore, the goal of this paper is to discuss the required components of a properly written behavioral objective and to list some advantages of using behavioral objectives. But more specifically, there are three major behavioral objectives of this paper.

After reading this paper, and with the use of this paper as a reference, the reader will be able to

- (a) identify a correct definition of a behavioral objective,
- (b) identify four major components, or parts, of a properly written behavioral objective, and
- (c) identify six advantages of writing and using behavioral objectives.

CHAPTER II
REVIEW OF THE LITERATURE

Definition of Behavioral Objectives

The misunderstanding of what a behavioral objective is has undoubtedly been one of the main reasons for its lack of use. Many words and phrases exist that are often incorrectly thought of as behavioral objectives.

Authors Davis, Lawrence, and Yelon (1974) in their book Learning Systems Design have developed a list of what behavioral objectives are not. Behavioral objectives are not a philosophy of instruction and do not attempt to describe what should be taught or what the goal of education should be. Behavioral objectives do not attempt to describe the course, the course content, or course procedures. Nor do behavioral objectives list the goals that a teacher wishes to accomplish in the classroom.

These philosophies, descriptions, aims, and goals are usually general and cover a wide range of material. Behavioral objectives on the other hand, are narrow in scope and are very specific. Sund and Picard (1972) stated:

An objective differs from an aim or goal by stating explicitly the kind of performance a student must demonstrate as evidence that learning has taken place. In effect, an objective may be thought of as an aim

having been translated into clearly identifiable components. (p. 3)

Briggs (1977) defined a behavioral objective as ". . . statements of what learners will be able to do or how they will be expected to behave after completing a prescribed unit or course of instruction" (p. xxv). And even more precisely stated, a behavioral objective ". . . is a description of the behavior expected of a learner after the instruction" (Davis et al., 1974, p. 29).

It should be noted that in the literature there are many terms used that are synonymous to behavioral objectives. Educators Kibler and Bassett (1977) cited some terms which are synonymous to the term behavioral objective. Some of these terms include: specific instructional objective, learning objective, measurable objective, and operationally defined objective. Other terms such as instructional objective, or sometimes, just the term objective can also be found within the literature. The important thing to note when determining if a statement is a behavioral objective or not is to see if that statement makes reference to a specific learner behavior.

Four Major Components of a Behavioral Objective

Depending on what book or article is read the number of components, or parts, required in a properly written behavioral objective can be as many as nine or more. But

most writings that deal with behavioral objectives include four major components. In cases where there are more than four components listed, any of these can usually be considered as more specific subcomponents of the four major components cited in this paper.

The four major components of behavioral objectives listed by nearly all writings that deal with behavioral objectives include: (a) the subject, or receiver of a given message, (b) a verb describing an observable behavior that is to be acquired by the learner as a result of the message or unit of instruction, (c) the conditions or situation in which the required behavior will occur, and (d) the standards for the minimal acceptable level of performance when performing the behavior.

The Subject

The subject, often referred to as the learner or receiver of a message, is the first major component of a properly written behavioral objective. "A well-formed objective must specify who is to demonstrate the outcome. If the answer to the question 'Who?' is not the learner, the objective is not well formed" (Baker & Schutz, 1971, p. 4).

Often times the subject is assumed in behavioral objectives, but in the example, "To describe the proper procedure for threading a reel-to-reel tape recorder," it is not clearly understood who is to do the describing. If an

instructor is to describe the threading process, then this is an example of an objective that a teacher wishes to accomplish during a presentation and not a behavioral objective designed for the learner. If the learner is specified to describe the proper way of threading a tape recorder, there is no possibility for confusion or misinterpretation.

Baker and Schutz (1971) cited terms such as "student," "the pupils," and "the class" as synonyms to learner. Many others also exist.

The Verb

Another very important component of a properly written behavioral objective is a verb which describes an observable behavior that is to be acquired by the learner as a result of the message or instruction. Kibler and Bassett (1977) stated that:

. . . objectives must describe what the learner will be doing, because only in this way can the learner's intellect or skill be assessed. Teachers, parents, and other interested persons cannot look inside students' heads to determine what they have learned. (p. 64)

Therefore, we use a verb to describe an observable behavior and we assume that this behavior exhibits evidence that learning has taken place.

In the following example, "After viewing this movie this student will know five different kinds of birds," the instructor's intent for showing the movie is to teach the

learners five different kinds of birds. The term "will know" however, is often times used incorrectly by objective writers as is in the above example. As Baker and Schutz (1971) stated, "'To know' is an ambiguous term because it can refer to more than one type of learner behavior" (p. 7). Not to mention that there is no way to observe "knowing." This is precisely why behavioral objectives should be written with verbs that describe observable behavior. Mager (1975) listed verbs such as write, recite, identify, sort, solve, construct, build, compare, and contrast, to illustrate terms that could be used to describe an observable behavior.

Therefore, the above example would have been written more correctly by stating, "After viewing this movie the students will write the names of five different types of birds under the picture of each bird." The term "write" does describe an observable behavior and by observing a student writing the names of the five different birds under the correct picture and checking the results for correct responses, the instructor can then determine whether or not learning, or "knowing" has taken place.

In addition to "know," other words are often used incorrectly in the writing of behavioral objectives because they do not describe an observable behavior. Some of these include: understand, determine, appreciate, grasp, become familiar with, enjoy, believe, evaluate, learn, perceive,

comprehend, want, apply, interpret, and have faith in. Although all of these terms may describe desirable educational goals they serve little purpose in the writing of behavioral objectives. As Davis et al. (1974) stated:

The ambiguous words are what we have labeled instructional goals. They certainly describe desirable outcomes of instruction. Indeed, these are the words we usually use to describe the purpose of education. We cannot measure a person's achievement of instructional goals because they refer to states or qualities that are within him; to measure student achievement of an objective, we must state the objective in behavioral terms. (p. 35)

The Conditions of Behavior

In addition to observable behavior, behavioral objectives must also include a description of the conditions under which the behavior should occur. "The conditions component of learning objectives describes the test situation in which students will be required to demonstrate the terminal behavior" (Davis et al., 1974, p. 37).

Often times, many of these conditions will be assumed because they have been traditionally practiced and accepted. For example, if a student is to write three causes of the Civil War in a history test, the fact that this will be done with a paper and pencil or pen can be assumed because of tradition. But as Baker and Schutz (1971) stated:

If the usual conditions are to be altered with regard to the task performance associated with meeting the instructional objectives about to be measured, then the given conditions must be stated explicitly in the objective. If no such given conditions are explicitly stated in the objective, the usual conditions and only the usual conditions must be assumed to prevail. (p. 13)

A common example of an instructor not properly defining conditions of behavior is a math teacher who devotes many hours of class time having students solve mathematic equations on the chalkboard, then evaluates their learning by giving a paper and pencil exam in which the students are required to convert word problems into equations prior to solving the problem. In this situation the students are asked to demonstrate what they have learned under different conditions for which they have been prepared.

An example of a condition that would be considered unusual and, therefore, must be specified in a behavioral objective is an open book versus a closed book exam. The intent of a closed book exam may be to evaluate a student's ability to memorize and recall the required material. Where as the intent of an open book exam is to possibly evaluate the student's reading ability, ability to look up information, or to determine the student's familiarity with the required text book.

What ever the conditions given, or the reason for evaluating under such conditions, it is absolutely necessary that it be specifically stated in the behavioral objective.

Other examples given by Kibler, Barker, and Miles (1970) which describe conditions under which the behavior should occur include:

When presented with a typed list...

Given a slide rule...

Upon reading Chapter IV (insert name of textbook)...

Without the use of notes or references...(p. 37)

The Standards of Behavior

The fourth component of a properly written behavioral objective is the standard of behavior. The standard of behavior describes the minimal level of acceptable performance to be expected as a result of the instruction.

Two standards of behavior cited by Sund and Picard (1972) are "time" and "number." Time and number are probably the two most common standards of behavior used in writing behavioral objectives and they can be found in virtually all examples of objectives.

"Time" refers to the amount of time that the learner will be given to complete the required behavior. "Number" on the other hand, refers to the minimum number of acceptable responses that the learner should be able to perform following the instruction. An example of a behavioral objective

which utilizes a time and number standard is: "The student will write ten correct sentences in twenty minutes."

In addition to time and number, Mager (1975) also included the "standard of quality" as an additional standard of behavior. Quality standards can run the risk of being very subjective, however. For example, when requiring a first grader to draw an acceptable circle, how is it determined whether the circle is acceptable or not? To eliminate this problem of subjective evaluation, he suggests that when writing behavioral objectives, the writer should, ". . . define the amount of acceptable deviation from perfection or from some other standard" (Mager, 1975, p. 83). In this way both the learner and the instructor will know how close to the acceptable standard the learner must come in performing the behavior.

Other standards exist and vary according to the behavior to be performed. However, time, number, and quality will be found in most behavioral objectives.

Advantages of Using Behavioral Objectives

Although the use of well-written behavioral objectives will not solve every problem faced by message designers and instructors, there are some advantages to be gained by their use. Kibler et al. (1970) pointed out that, ". . . behavioral objectives serve all who are involved

in the teaching-learning process, particularly students, teachers, administrators, school boards, and parents" (p. 105).

One very important advantage of using behavioral objectives is that they help the instructors in planning their instruction. Mager (1975) stated that:

When clearly defined objectives are lacking, there is no sound basis for the selection or designing of instructional materials, content, or methods. If you don't know where you're going, it is difficult to select a suitable method for getting there. (p. 5)

In other words, by writing good behavioral objectives, an instructor can use the objectives in the selection and designing of materials and methods in helping students meet the course objectives.

A second important reason given by Mager (1975) for writing behavioral objectives is that by comparing the outcomes of the instruction to the original behavioral objectives, it can than easily be determined whether or not the goals for the instruction have been met. He stated:

Tests or examinations are mileposts along the road of learning and are supposed to tell instructors and students, alike, whether they have been successful in achieving course objectives. But, unless objectives are clearly and firmly fixed in the minds of both

parties, tests are at best misleading; at worst, they are irrelevant, unfair, or uninformative. (p. 6)

A third advantage of writing behavioral objectives is that they can be used by students as an aid in achieving the objectives of the course. Sund and Picard (1972) felt that by providing the learner with a copy of the instructional objectives at the beginning of the course the learner will know exactly what to do in order to meet the objectives. They stated, "'studying for the test' in this case, amounts to being able to perform the behaviors expected of him." (p. 6)

Two indirect advantages of using behavioral objectives discussed by Davis et al. (1974) are to evaluate the course instruction and to communicate to colleagues. In the event that students are continually not meeting the behavioral objectives of a course, it could be an indication that the instructional materials, or perhaps even the instructor, are not properly suited for aiding students in meeting the behavioral objectives.

"Objectives also enable different instructors to communicate with one another in unambiguous terms the expected outcomes for the course they teach." (Davis et al., 1974, p. 46) For example, if a particular course was part of a program of instruction, repetition could be

eliminated if all instructors within the program knew what was being taught in the other classes or units. This could be communicated to the other instructors through the use of behavioral objectives. Also, instructors who are attempting to start new classes modeled after successful and existing classes could use the behavioral objectives of that class as a starting point for establishing the new course.

The final advantage of using behavioral objectives, to be cited here, is that they can reduce ambiguity. Baker and Schutz (1971) stated that:

Well-formed objectives possess a tremendous advantage over other objectives in that they reduce ambiguity. Ambiguity reduction leads in turn to significant dividends in planning instruction and in evaluation. The less ambiguity surrounding a statement of an educational outcome, the more clues we have as to the kind of instructional sequence that will prove effective. The less ambiguity, the more readily we can devise precise measures to reflect the educational outcome. (p. 3)

These advantages are in no way all the advantages that are to be gained in using properly written behavioral objectives, but they do include major advantages cited in most articles or books that deal with behavioral objectives.

CHAPTER III

SUMMARY

As stated previously, behavioral objectives will not solve every problem that will be faced by teachers, curriculum directors, and any others who are involved in the design of media and instruction, but they can solve many of them.

In reviewing the literature and accumulating material for this paper it has become apparent that nearly all those who write about behavioral objectives deal with at least three common areas. This is not to suggest that they do not deal with other areas, however. These three areas include: (a) the definition of a behavioral objective, (b) the components or parts of a behavioral objective, and (c) the advantages to be gained in writing behavioral objectives.

In the most basic terms behavioral objectives are defined as statements that describe the desired observable behavior that students should be able to perform as a result of the instruction. The literature also points out that these statements should include four major parts. These four parts are: (a) the subject, (b) the observable behavior to be performed, (c) the conditions in which the behavior should be performed, and (d) the standards for the minimal acceptable level of performance when performing the behavior.

Ideally, if these well-written behavioral objectives are translated into good instruction and good instructional materials, the advantages to be gained will be many. Some of these advantages cited include: helping instructors in their planning, measuring the accomplishments of not only the students, but also the accomplishments of the instructional materials and the instructor. Students can also make use of behavioral objectives by understanding what it is they are to accomplish. Instructors can also use them to communicate to each other and ambiguity may be reduced by the use of behavioral objectives.

Hopefully by knowing what a behavioral objective is, by knowing its components, and by appreciating the advantages to be gained through their use, message designers and instructors can make better use of behavioral objectives.

Just as a contractor uses a blueprint to build a house, and again later to make alterations and additions to the house, so too, can an instructor use a "blueprint" (behavioral objectives) to design instruction and instructional materials, and again later, to make additions or alterations to that material.

We have all been in situations where we have had to play the role of the instructor or the learner. In either case, it becomes apparent very quickly when the instructor is not clear in the course content or course direction.

In other words, it becomes apparent when the instructor is operating without a blueprint, or behavioral objectives.

In best summarizing the major benefits to be gained in writing and using behavioral objectives, Davis et al. (1974) wrote:

Objectives are essential in all phases of the instructional design process. In planning for teaching, they provide a guide for choosing subject matter content, for sequencing topics, and for allocating teaching time. Learning objectives also guide the selection of materials and procedures to be employed to the actual teaching process. In addition, they provide standards for measuring student achievement. Finally, objectives act as criteria for evaluating the quality and efficiency of the instruction. Without well-formed objectives, instruction often tends to be poorly organized and student learning difficult to assess.

(p. 28)

References

- Baker, R. L., & Schutz, R. E. (1971). Instructional product development. New York: Van Nostrand Reinhold.
- Briggs, L. J. (1977). Instructional design. Englewood Cliffs: Educational Technology Publications.
- Davis, R. H., Alexander, L. T., & Yelon, S. L. (1974). Learning system design. New York: McGraw Hill.
- Kemp, J. E. (1971). Instructional design. Belmont: Gearon Publishers.
- Kibler, R. J., Barker, L. L., & Miles, D. T. (1970). Behavioral objectives and instruction. Boston: Allyn and Bacon, Inc.
- Kibler, R. J., & Bassett, R. E. (1977). Writing Performance Objectives. In Leslie J. Briggs (Ed.), Instructional design. (pp. 49-98). Englewood Cliffs: Educational Technology Publications.
- Mager, R. F. (1975). Preparing instructional objectives. Belmont, Fearon-Pitman Publishers, Inc.
- Sund, R. B., & Picard, A. J. (1972). Behavioral objectives and evaluational measures. Columbus: Charles E. Merrill Publishing Company.