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ABSTRACT

The passage of the Rodda Bill (SB 696, 1971 legislative session) mandated that evaluation of teaching take place on a regular basis in community colleges in California. The bill left the formulation of the evaluation instruments to the local governing boards and guidelines were provided by the office of the Chancellor of the California Community Colleges. One of several tools under consideration for use in teacher evaluation is the performance objective. Attitudes of educators relating to the use of performance objectives, along with some examples for comparison, are considered in this paper. A bibliography of selected readings on the evaluation of teaching is included. (Author/AL)

TWO SIDES OF PERFORMANCE OBJECTIVES:

ONE TOOL IN THE EVALUATION OF INSTRUCTION

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INTRODUCTION

The passage of the Rodda Bill (SB 696, 1971 legislative session) mandated that evaluation of teaching take place on a regular basis in community colleges in California. The bill left the formulation of the evaluation instruments to the local governing boards and guidelines were provided by the office of the Chancellor of the California Community Colleges.

One of several tools under consideration for use in teacher evaluation is the performance objective. Attitudes relating to the use of performance objectives, along with some examples for comparison, are considered in this paper.

Though more broadly based, a bibliography of selected readings on the evaluation of teaching is enclosed.

The purpose in doing this study was to identify and report the various attitudes regarding performance objectives.

The methods used were:

1.) To review the literature

2.) To interview educators regarding their use and evaluation of performance objectives

3.) To identify and examine a few representative examples of performance objectives.

Problems To Be Considered

During the course of doing the research for this study it became apparent that there was a major problem to be faced. This was a problem of semantics and one which has and will continue to have a negating effect on efforts to promote the use of performance objectives.

Various writers use the terms "behavioral objectives," "educational objectives," "instructional objectives," and "performance objectives" in a somewhat synonymous way. These terms are not, however, synonymous. "Behavioral objectives" is a fairly broad term and its use is not consistent. One use is in Bloom's Taxonomy:

"It is recognized that the actual behaviors of the students after they have completed the unit of instruction may differ in degree as well as in kind from the intended behaviors specified by the objectives." [1]

Chronister's use is somewhat different:

"It may be more than a philosophical question whether a discipline area can be taught in which behavioral objectives cannot be specified to direct the instructional process and to serve as the criteria for measuring both learning and teaching effectiveness." [2]

Mildred McQueen:

"These are statements of behavioral objectives:

1. Distinguish between mixtures that are solutions and those that are not.

2. Identify and state the meaning of five symbols on a given map." [3]

The term "behavioral objectives," then, is used variously in reference to:

1. the behavior of the student while he is learning
2. the achievement of the student on special tasks designed to show whether or not he has learned something
3. the student's use in life, or on the job, of what he has learned in school

In discussing "behavioral objectives" with educators, it became clear that many negative attitudes were a result of this semantics problem.

In this paper, preference is given to the term "performance objectives."

Definition: A <u>performance objective</u> is a statement describing a measurable skill (or knowledge) which a student is expected to achieve, how he is to demonstrate that skill, the conditions under which he must demonstrate that skill, and a standard for successful demonstration of that skill.

The case in favor of performance objectives has been widely researched. Rather than repeat these arguments, it is suggested that reference be made to Bloom[4], Popham[5], Mager[6], Johnson and Johnson[7], and Cohen[8].

If we ignore the opposition to performance objectives which is based on the problem of semantics, we still see considerable concern coming from well-respected and knowledgeable people.

In an article discussing accountability, Hartnett stated,

"Because they are highly specific, behavioral objectives permit precise measurement. On the other hand, this small precision can be restrictive, in that other highly desirable educational outcomes are omitted." [9]

Considering performance objectives in mathematics, Myers suggested,

"... another difficulty in ultimately stating all the objectives of mathematics instruction behaviorally arises in connection with the desire to develop in students the ability to do original thinking in novel situations. Presumably if these situations and these kinds of thinking were spelled out with the degree of specificity usually found in behavioral objectives, the originality and the novelty would be lost and the objective would 'evaporate in clarity'." [10]

Robert L. Ebel, Professor of Education at Michigan State University, was more than merely cautious:

"Nor should we insist that the statements be in behavioral

terms. The great majority of teachers at all levels who feel no urgent need to write out their objectives in detail, and in terms of behavior, are probably wiser on this matter than those who have exhorted them to change their ways. Too much of the current reverence for behavioral objectives is a consequence of not looking closely enough at their limitations." [11]

Ebell's statement may be depending on a broader definition of "behavioral objectives." The usage is not quite clear.

Dr. Ralph Hallman, Professor of Philosophy and Chairman, Department of Social Sciences, Pasadena City College, expressed some concern regarding the use of performance objectives, allowing that there are some definite advantages in their use. Two discussions with Dr. Hallman resulted in the identification of a number of advantages and weaknesses of performance objectives.

Advantages:

1. They can make learning clear, precise, and orderly.
2. They facilitate learning which is immediately and definably useful.
3. They have a public appeal, for they deal with measurable results.
4. They make evaluation explicit and tie it in directly with the learning process.

Weaknesses:

1. They make informational data the focus of education and not individual people.
2. They assume that education is quantifiable, is divisible into discrete units, and can be passed along without

being modifiable either by the learner or by the the transmission process.

3. They tend to regard the learner as a passive receiver rather than an active participator.
4. They assume that the teacher knows what is good for the student. That is, they assume that someone other than the student can decide what behavior is desirable.
5. They allow someone other than the student, or the teacher, to evaluate education. Early in his educational career, the individual student should be made responsible for some self-evaluation.
6. They may have a tendency to be confining, restrictive, conforming and not to encourage discovery, exploration, creativeness. That is, they call for a school-social setting which lessens support for individuality by encouraging responses to a previously fixed system.

It appears that most of those showing concern for the use of performance objectives, do so because of possible limitations which might be placed upon the learning process. On the other hand, devotees of performance objectives seem to be almost inflexible in appraising the value of those objectives. Mager suggested the following discourse:

> "'You can't measure the effects of what I do.'
> 'Why not?'
> 'They're intangible.'
> 'Oh? Why should I pay you for intangible results?'
> 'Because I've been trained and licensed to practice.'

'Hmm...all right. Here's your money.'
'Where? I don't see it.'
'Of course not...it's intangible.'" [12]

Current demands from the public and the legislature and current practices in performance contracting indicate a need for careful analysis of course content. The requirements for accountability, the key word of the seventies, will necessarily result in the use of performance objectives, at least to some extent. It is evident, however, that evaluation of instruction and instructors not be limited to the use of performance objectives. It must be recognized that demonstration of specific skills is only one aspect of the process of education.

Performance Objectives In Mathematics

Few examples of performance objectives in mathematics were found in the literature, though three different approaches for assisting students to identify their objectives and for an aid in evaluation are cited herein.

In 1966, Nassau Community College published a Mathematics Department Guidebook,[13] which contained a description for each course offered in the department. Essentially, the description was a course topic outline which was divided over the fifteen week semester. The catalog description, general objectives, specific objectives, text, and supplementary texts were listed. An example of the general and specific objectives appear to be

rather limited:

"General objectives: The need of an educated person to know how to reason and organize his thoughts in a logical sequence is all important. It is felt that one of the best ways to accomplish this is through an understanding of mathematics and mathematical operations.

"Specific objectives: To provide the student with a background that will enable him to successfully complete Freshman Mathematics. The improvement of the student's accuracy in the use of the fundamental arithmetic and algebraic operations. Stress the reasoning behind these basic operations." [14]

In addition to the foregoing information, the Guide provided a sample final examination, which was a combination of true-false, multiple-choice and short-answer items. No time limitations were given and no grading standards were indicated. Students could, however, gain some idea of the type of performance which was expected of them.

McGraw-Hill's Prescriptive Inventory, List of Objectives[15] is an example of a fairly complete list of performance objectives. No standards are given, but the list is not intended to be used in a specific class. This reference is used to illustrate a particular point, namely, that great care must be used in constructing such a list. One example:

"325. Given a line drawn on a Cartesian coordinate grid, the student will be able to specify the line's slope and intercept." [16]

This objective is open to some question. Does the statement require the x-intercept or the y-intercept? Does the line contain two lattice points or not? This latter question is quite basic. Determining the slope and y-intercept of a line containing two lattice-points is quite a different problem than one not containing two lattice points.

The objective would be better stated:

"Given the coordinates of two points of a line, the student will be able to specify the slope and y-intercept of the line."

A number of institutions have started requiring performance objectives from all instructors. There are, of course, problems in this type of undertaking, such as staff resistance and lack of understanding of the procedures involved. Mt. San Jacinto College is one of those institutions. A set of performance objectives for a class in elementary algebra included the grading procedure (with standards) and homework procedure, though no indication was given as to whether or not homework was considered in determining grades. The objectives covered the entire course and the minimum performance for a passing grade was given. The objectives were not completely defined and left some question as to the amount of depth which was expected.

For example:

"14. The student will factor four expressions by the distributive property." [17]

The statement does not specify the field over which the expressions are to be factored. No indications are given as to what type of tests are to be given or whether the student is to be allowed reference materials or not.

The three examples cited represent different levels in the use of performance objectives. The first, giving a course topic outline with a sample final examination for guidance, the second, giving very specific skill objectives, and the third, somewhat of a middle-of-the-road approach, which does allow for variability but does let the student know fairly well what he must accomplish for successfully passing the course.

Summary and Conclusions

Performance objectives are being utilized on varying levels of sophistication, partly because of the lack of verified research, partly because of the lack of knowledge regarding their formulation and use, and partly because of a real concern for their validity as the measure of success in education. Time Magazine reports the failure of the Office of Economic Opportunity's $7.2 million project studying performance contracting during 1970-71. "The overall differences are so slight, that we can conclude performance contracting was no more effective in either reading or math than the traditional classroom methods of instruction." [18] This finding may have considerable importance, since performance contracting is essentially "performance objective" oriented. Considerably more research is required and it could be years before such research becomes available.

W. James Popham, a strong promoter of performance objectives, acknowledges that "...much of the agitation about instructional objectives has abated." [19] He further recognizes that "... there are abuses of instructional objectives. These are usually perpetrated by administrators who, having read Mager's little volume on objectives, feel themselves blessed with instant expertise..." [20]

Recommendations

In light of public demands but keeping in mind the possible shortcomings, it should be recognized that there will be an increasing use of performance objectives. Guidelines for their formulation and use are necessary and should include:

1. Performance objectives should be comprehensive.
2. Performance objectives should not impose limitations on teaching. That is, it needs to be made clear that performance objectives can not describe an entire course. They only represent one segment of instruction.
3. Performance objectives should be continually updated and upgraded in terms of course expectations.
4. It must be emphasized that performance objectives can not be the only tool used for the evaluation of instruction.

In addition to these guidelines, there must be included clear statements of other goals of instruction - goals concerned with ingenuity, enthusiasm, effort, attitudes, carry-over, etc.

There may well be some clear-cut benefits derived from the use of performance objectives but it would be unwise to move too quickly before verified research supports their use.

As a final note, we must not neglect to recognize the student's responsibility in the learning process. In 1862, Professor John Grote said of the student's role:

"Success in teaching is a function of the recipient as well as of the communicator; a good deal of failure of it there must always, and in every system of education, necessarily be." [21]

This is no less true today.

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