Examined are differences of opinion among educators in regard to the value of using behavioral objectives in the classroom. Noted are objections such as that cognitive and affective goals are often difficult to describe and to assess in behavioral terms. The author concludes that both advocates and critics of behavioral objectives are involved in describing the teaching-learning process and that behavioral terms are the clearest means educators currently possess for communicating their instructional intentions. (LH)
Introduction

In training programs for teachers of exceptional children, considerable attention is being given to the notion of educational objectives. "Define your objectives so that appropriate learning experiences and evaluative techniques can be selected to form a plan of instruction," prospective teachers are told. The authoritative ring of this dictum has a somewhat hollow tone, however, if the teacher educator does not practice what he preaches. Unfortunately, this is often the case, and "objectives" have already achieved the classic status of the "do as I say, not as I do" dilemma.

Predictably, the use of educational objectives by classroom teachers is the exception rather than the rule. A look at the average teacher's course outline usually indicates a meager application of this instructional prescription. Ammons (1961) found that teachers not only failed to define their course objectives but also were unable to identify the statements of objectives from other statements of fact in their own lesson plans. Few of the lesson plans examined contained behavioral descriptions of what the learner would be able to do at the end of his learning experience. Also absent were references to the means by which the learner would achieve the terminal behaviors. It is tempting to generalize that the practice of developing lesson plans appeared to be more ritualistic than rational.

Are the statements of educational objectives essential--the veritable sine qua non--for successful teaching? If so, then how does one account for the fact that after 25 years of intensive work in producing well defined rationales and instructional strategies, use of educational objectives proves to be the exception rather than the rule? The realities of classroom practice definitely challenge objectives. There are questions regarding validity, and there are questions dealing with instructional tactics. Do educational objectives actually specify the primary intent of an instructional experience or are the described behaviors only secondary manifestations of more basic, nonobservable phenomena? When educational objectives are used, to what extent do they apply to the student's behavior--during instruction process? In a test assessing his performance? to his post-instructional activities? Finally, is too much of the current reverence for educational objectives a consequence of having failed to examine more critically the rationales for their existence?

The purpose of this paper is to examine some of these doubts concerning educational objectives and to consider the desirability of their use within the classroom.
Educational Objectives: What Are They?

Simply put, educational objectives are statements that describe the learning that results from an educational experience. Objectives, then, are what education is all about, but stated in terms of the learner's behavior. Behavior can be viewed in a variety of ways, however. First, a behavior can be named outright—typewriting, for example. Second, a behavior can be described in terms of its characteristic qualities—such as speed, accuracy, and consistency. Third, a behavior can be referred to in terms of one of its outcomes or applications—the accurate typing of a letter from a dictation tape.

Preparing an instructional sequence to develop a learner's skill in typewriting requires much more than a description of such behaviors. Statements of goals and their means of attainment are equally necessary. Mager (1962) has outlined one set of conditions that these statements must meet in order to be classified as educational objectives. Employing Mager's criteria in the description of objectives, teachers can leave no misunderstanding as to the behavior that is desired or how well and under what conditions such behavior is to be performed. Such a specification of intended learner behaviors lends direction to the learning process by helping to identify what is to be learned and how it is to be taught.

A "good" educational objective has been described by Ohm (1966, p. 699) as one in which the learner behavior is clearly and precisely specified in relation to some aspect of the subject matter with which the learner is expected to deal. That is, the educational objective must specify not only the learner's terminal behavior, but also the particular aspects of the subject matter to which the learner must address himself in order that learning may occur. There is a considerable literature describing guidelines to be followed for constructing educational objectives (Mager, 1962; Ohm, 1966; Popham, 1970; to mention a few). Some basic guidelines are:

1) write a concise definition of the terminal behaviors the learner is expected to demonstrate as a consequence of the learning experience;

2) specify observable learner attributes that can be measured;

3) delineate the materials, methods, or experiences needed to achieve such terminal behaviors;

4) decide upon a criterion of acceptable performance for judging whether the terminal behaviors have been achieved.

These four elements represent "bare bones" for structuring educational objectives, which themselves can be viewed as the "bare bones" of a teacher's instructional intent.
There exists, perhaps, no better way of achieving clarity of instructional intent than to couch one's educational goals in behavioral terms. Whenever educational objectives are stated in terms of specifically measurable and observable behaviors, they are labeled "behavioral objectives." Mager (1962), Komisar (1966), Esbensen (1967), and Ojemann (1968) demonstrated that behaviorally stated educational objectives tended to make instructional intent clearer, first, by identifying the area of knowledge to be learned, and second, by describing the demonstrable characteristics of the acquired knowledge and the manner in which such knowledge is expected to affect the learner's behavior.

Most adaptive learner behaviors are affected by conceptual elements and conditioning factors acting together. Consequently, a behaviorally stated educational objective might reflect the actions of a single operant brought about through conditioning, or the objective might encompass a more global behavior involving both conceptual and operant elements. The learner acquires conditioned behaviors through a set of psychological dynamics quite different from those of concept learning. Basically, concept learning is characterized as a "learning for doing" experience wherein the direction of learner activities extends from (a) the perception of objects, events, and consequences, to (b) the conception of generalizations and principles, to (c) verbal codings, and (d) symbol strategy mappings for decision-making purposes. In operant conditioning, however, there is only incidental concept formation. The limited conceptual activity involved merely enables the learner to be aware of what he is doing as he develops his skill. Because learning in this context is more dependent upon trials and reinforcement, it can be referred to as "learning by doing." Both of these dimensions, concept development and operant conditioning, substantially affect learner behavior. It is of no small consequence, then, that if the learner is to acquire a repertoire of behaviors, the instructional goals must be clearly identified and communicated.

The success of any educational program is measured in student outcomes. To be successful, the program's instructional intent (its philosophy) must be translated into action. Successful communication of instructional intent within the classroom depends in large part on the degree to which the teacher's instructional objectives dovetail with the student's learner objectives.
The translation of instructional intent is schematically outlined in the figure below. The linear, one-way direction of communication represents diagramatic simplicity rather than cybernetic reality.

![Diagram showing the communication of a program's philosophy through precise statement of objectives.]

Figure. The Communication of a Program's Philosophy through Precise Statement of Objectives.
It is the role of program administrators to outline major educational goals. Teachers then translate the broad goals into behaviorally specified instructional objectives. It is the responsibility of the teacher to clearly establish the intent of instruction so that the student's learning objectives can be given appropriate direction. It thus appears that the welding of instructional objectives with learner objectives and ultimately the quality of an educational experience depend upon: (a) the relevance of the teacher's behavioral objectives as perceived by the student; (b) clarity in communication with the student; (c) student motivation; and (d) appropriateness of the teacher's technique in orchestrating the learning experiences to accomplish the objectives. Despite the evident danger of this arbitrary simplification of the "quality learning experience," considerable attention is focused on the desirability of specifying one's instructional goals in terms of clearly definable behaviors.

Some Objections

The issue of whether writing behavioral objectives is critical to developing instructional sequences has produced a colorful debate within the teaching profession. Admittedly, the enumeration of educational objectives is an arduous task. A much more attractive alternative would be to subscribe to the intuitive assertion that if you do not know where you are going, then any road will take you there.

Many teachers rankle at the assertions of Mager (1962), Ohm (1966), Bloom (1956), Kratwohl (1964), and others, who claim that overt and measurable behaviors are the only indicators educators have to actually demonstrate student learning. Nash (1970) fears that teacher training programs are becoming overly preoccupied with criterion-referenced measurements, behavior modification, and whole congeries of related competency concepts. Meux (1967) and Green (1964) relate that the aims of education should be concerned with not only learner behaviors, but with changes in the learner's reasoning apparatus as well. Ebe (1970) is quite vocal in his contention that behavioral consequences alone do not comprise the real objectives of educational instruction, as do the conceptual activities that made possible such terminal behaviors. He reasons further that since conceptual activity is a nonobservable internal quality of the learner, then educational objectives stated in non-behavioral terms would be just as effective as behaviorally stated ones. Strader (1971) counters this position by stating that without specification afforded by behavioral terminology, the achievement of educational objectives could not be measured nor could the selection of relevant learning activities by the teacher occur with any degree of precision. Nash (1970) speaks for many who genuinely believe that the dimension of learned behavior that is most susceptible to quantification is of least importance.

Bloom's (1956) widely respected taxonomy of educational objectives within the cognitive domain divides types of examination questions into a number of categories relating to the recall or recognition of knowledge and to the development of conceptual abilities. None of us would claim
that the kind of learning demonstrated by the student when he can repeat facts, define criteria, and state generalizations represents a very important dimension of academic achievement. Such activities, while valid and sometimes necessary, comprise a low level of instructional objectives. Yet it is behaviors of this kind that one most often finds listed as instructional objectives, principally because of the ease of testing via written examination and of describing performance. A student’s abilities to evaluate an area of knowledge, to develop interests, attitudes and values, as outlined in Krathwohl’s (1964) second schema of objectives within the affective domain, are much more difficult to assess and describe behaviorally. They are for the most part, along with other complex objectives such as analysis and synthesis, assumed to have been somehow achieved by the student, without formally testing his abilities in reality. Yet as dimensions of learning, they are dramatically necessary for the student’s success in mastering an area of knowledge and in his personal life adjustment.

Eisener (1967) writes that one cannot specify in advance all the objectives of a teaching situation. It is inevitable that unpredicted opportunities will arise during a class session which, if pursued by the teacher, will result in behaviors not specifically spelled out in the lesson’s objectives. That is, if held to a list of lesson objectives, there will be no room for the spontaneity afforded by an on-the-spot teacher-learner interaction. In situations such as these, the need for precision afforded by behaviorally stated educational objectives should be superseded by the need for the teacher to innovate and try out new ideas. This type of experimentation may lead to new insights and eventual redefinition of the objectives previously prepared on an a priori basis.

Conclusion

For all the spark and current flowing through the discussion of whether behavioral objectives are necessary or even desirable, one must admit that there really exists no basic division of sentiment at all. Both the advocates and the critics are engaged in determining and communicating what teaching and learning should be about. And the arc of the pendulum of opinion is not as wide as it seems. One basic theme is whether or not the teacher’s instructional objectives can be meaningful in terms other than behavioral. Do there in fact exist other means for communicating instructional intent? for identifying subject matter to be learned? for arranging sequences of instruction? and for describing end states in the learner? — means other than ones that are behaviorally oriented.

The following impressions are conclusions of the writer:

- both formal and informal specification of behavioral objectives can be profitably used in reasonable proportions during the teaching process;
behavioral objectives written in a lesson plan do not mean that such behaviors are in and of themselves desirable for the students;

behavioral objectives should describe what a teacher plans to do but should seldom prescribe what the teacher ought to do;

the art of teaching is a purposeful activity the effectiveness of which is dependent upon a clear conception of goals;

the conceptual activities involved in a "learning for doing" experience are just as much in need of behavioral specification as are the readily observable operant activities deriving from a "learning by doing" experience;

and, at the moment, behavioral terms are the clearest verbal devices educators possess for communicating the intent of learning programs and classroom instruction.