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Evaluation

The Practice of Evaluation

GLENN F. NYRE and CLARE ROSE

As of the current issue, this column takes on a slightly different character—and we do not mean the additional author. Clare Rose will co-author the next two columns and then assume full responsibility during the year I will be serving as editor of the *Quarterly*. This issue also marks the beginning of a series of brief discussions of the most prominent and influential models in educational and social science evaluation practice.

Although far from a Herculean task, it does present some difficulties for members of a profession to select certain of their peers for inclusion and review in a column, and then, after awarding them this “honor,” diligently critique their models. The question which had to be resolved early on was “Do we choose friends who will be understanding when they read critical comments concerning their models, or do we choose the models of those evaluators with whom we are already on less than kindred terms and let them feel the sting of our film ribbon?” It may become obvious over the next few issues that we have done some of each.

Three evaluation models are discussed in this column: the goal attainment models of Metfessel and Michael (1967) and Glaser (1970), and the discrepancy model advanced by Provus (1973). The inherent similarities among these models almost requires their consideration together.

Goal Attainment Models

Fathered by Ralph Tyler in the 1930s, goal attainment or objectives-oriented models still provide guidance for many evaluations and occupy an important place in the literature. An example

of a goal-attainment model is the paradigm developed by Metfessel and Michael. The steps of their model are:

1. Involve members of the total community directly and indirectly as participants in the evaluation;
2. Develop broad goals and specific operational objectives, both cognitive and noncognitive;
3. Translate objectives into forms that are communicable and that can be implemented to facilitate learning;
4. Develop criterion measures and instruments to determine whether the program achieved the objectives;
5. Measure the program's progress toward attainment of the objectives and, finally, measure attainment of the objectives;
6. Analyze the data;
7. Interpret the data in light of established standards and values; and
8. Formulate recommendations for program improvement as well as for revisions in the goals and objectives.

The appendices to the article contain lists of criterion measures (for which Metfessel and Michael have become better known than for their paradigm) that can be used by the evaluator in the fourth step of the model. The measures are wide-ranging, with those for determining student behavior including self-inventories, standardized tests, rating scales, projective tests, anecdotal records and case histories. Measures are also provided for teacher and community behavior.

Somewhat similar to Metfessel and Michael's strategy is one offered by Robert Glaser. His scheme, which excludes summative evaluation, consists of six steps that comprise a continuing cycle of formative evaluation:

1. Specify the outcomes of learning in measurable terms;
2. Analyze the learners' entry behavior—the level of, knowledge, skill, or ability already in the students' repertoire relevant to each task specified in the objectives;
3. Provide students with various learning alternatives;
4. Monitor students' progress toward objectives;
5. Adjust the instructional program according to the level of students' performance as they progress toward attainment of the objectives; and
6. Evaluate the program for on-going feedback and program improvement.

Glaser's paradigm is most suited to the evaluation of instructional programs, although the strategy is generalizable to other program situations. Glaser has been particularly effective in specifying the conditions necessary for the evaluation of instruction, and his main contribution in this area is his emphasis on detailed diagnosis of student (participant) entry behaviors, an emphasis that is important in almost all program evaluations.

Despite their several advantages, there are more than a few criticisms of goal-attainment models. Scriven (1967) was the first to caution against indiscriminate goal-based evaluation without an accompanying evaluation of the quality of the goals themselves: ". . . it is obvious that if the goals aren't worth achieving then it is uninteresting how well they are achieved." Unfortunately, many evaluators do not heed Scriven's advice, and the goals established for a program often remain unscrutinized.

Another major problem with goal-based models is that in order to provide an effective base for determining program results, program objectives must be clear and specific. Rarely are evaluators afforded the luxury of explicit program goals. More often than not, if they exist at all, the objectives are vague, general, and too broad to provide a base for comparing results. Dressel (1976) offers a reasonable explanation for the prevalence of globally stated program objectives, simply stating that "it is far easier to generate agreement among different constituent groups if an objective is vague." Broad goals are seldom controversial. For example, few people would argue if the goal of a program were to enhance students' self-confidence or improve their ability to relate to people or other such incontrovertibly inspiring goals. Agreement concerning the behaviors or attitudes that students would have to demonstrate in order to show that they had indeed increased their self-confidence or their ability to relate to people would be far more difficult to obtain. In fact, whether or not objectives of this type can even be defined in specific measurable terms is itself a subject of great controversy.

A third, frequently heard criticism of goal-based evaluations is that focusing attention on the results of a program only in terms of its intended objectives narrows the evaluation, so that the different procedures used to achieve the results and their relationship to pro-

gram outcomes are ignored. Global judgments of merit, of course, can be made concerning the overall value of the program as far as its success in achieving the objectives is concerned, but no basis for program improvement—an equally important part of evaluation—can be provided by the data. In other words, the goal-attainment model is not decision oriented; only limited information can be provided for decision makers. In decision-oriented models, the purpose of evaluation is to provide information for decision makers for a multiplicity of decisions—decisions concerning whether or not a program is needed in the first place; decisions about whether to continue, expand, or terminate a program; decisions concerning program certification or licensing; and decisions about program improvement. The next model that is described qualifies as a decision-oriented model for program evaluation, an orientation that is evident in the definition of evaluation that provides the conceptual base for its development.

The Discrepancy Model

A very popular and widely used model is Malcolm Provus' Discrepancy Model, so named because the discrepancy between performance and standards is a key point in his definition of evaluation. Provus defines evaluation as:

. . . the process of 1) defining program standards; 2) determining whether a discrepancy exists between some aspect of program performance and the standards governing that aspect of the program; and 3) using discrepancy information either to change performance or to change program standards.

Depending upon the information yielded as a result of the evaluation, there are four possible decisions to be made. The program can be terminated; it can be modified; it can continue or be repeated as is; or the standards can be changed.

The Discrepancy Model involves five stages, each of which involves a comparison between reality, or performance, and standards. Discrepancies are determined by examining the three content categories (input, process, and output) at each stage and comparing the program performance information with these defined standards at each stage.

The design of the program is compared with design criteria; pro-

gram operations are compared against the input and process sections of the program design; the degree to which interim objectives are achieved is compared with the relationship between process and product; the achievement of terminal objectives is compared with their specification in the program design and finally, the cost of the program is compared against the cost of other programs with similar goals.

The first stage focuses on the *design* and refers to the nature of the program—its objectives, students, staff and other resources required for the program, and the actual activities designed to promote attainment of the objectives. The program design that emerges becomes the standard against which the program is compared in the next stage.

The second stage, *installation*, involves determining whether an implemented program is congruent with its implementation plan. *Process* is the third stage, in which the evaluator serves in a formative role, comparing performance with standards and focusing on the extent to which the interim or enabling objectives have been achieved. The fourth stage, *product*, is concerned with comparing actual attainments against the standards (objectives) derived during Stage 1 and noting the discrepancies. The fifth and final stage is concerned with the question of *cost*. A cost-benefit analysis is made of the completed program and compared to other programs similar in nature.

Because the primary function and orientation of the Discrepancy Model is to provide information for decision makers, Popham (1975) classifies it in his four-part model medley as a “decision-facilitation” model. But, as Popham acknowledges, there is overlap between the categories, and the Discrepancy Model is vulnerable to the same criticisms leveled at the goal-attainment models.

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