

CHAPTER I.
STUDIES OF TEACHING BEHAVIOR

Work Prior to 1967

At one time, education probably fit the description that Elton Mayo gave for an unsuccessful science. To him, unsuccessful sciences

do not seem to equip students with a single social skill that is usable in ordinary human situations...no continuous and direct contact with the social facts is contrived for the student. He learns from books, spending endless hours in libraries; he reconsiders ancient formulae, uncontrolled by the steady development of experimental skill, the equivalent of the clinic or indeed of the laboratory (Mayo, 1945, p.23).

In the last few years, though, there have been attempts to identify teaching and learning behaviors which could be used as a basis for developing a successful science of education. Donald M. Medley and Harold E. Mitzel, in Measuring Classroom Behavior (1963) point out, however, that in the attempt to be scientific, the dominant feature of classroom observation techniques has been the tendency to describe in quantitative terms whatever happened in the classroom whether or not the behaviors had anything to do with teaching effectiveness or psychological theory (1963, p.274).

Bruce T. Biddle, in Methods and Concepts of Classroom Research (1967) states,

Although a wide variety of classroom phenomena has in fact been investigated, it is difficult for both

the reviewer and the investigator to understand the relationships between their findings and those of others (Biddle, 1967, p.354).

Biddle adds,

Although the concepts utilized appear to cover an enormous conceptual territory, in actuality only three basic teacher characteristics appear to be dealt with (Ibid. p. 346-347).

He lists these as teacher action, manners, and characteristic roles.

Biddle concludes:

The proliferation of similar but not identical lists for categorizing teacher performance suggests that the investigators themselves do not know what to make of findings that are presented for these lists (Ibid. p.348)

The Stanford Taxonomy

By 1967 there still was no adequate list of teaching behaviors or skills. It was at this time, though, that work began at the Stanford Center for Research and Development in Teaching which resulted in the prototype Taxonomy of Teaching Behaviors (Baral, Snow, Allen, 1968). This work was later expanded by the 1970-1972 Task Analysis System for Educational Personnel Development, a project of the University of Massachusetts School of Education. Since then, the Clinic for Improving University Teaching, also at the University of Massachusetts, has tried to integrate this work into a list of teaching skills.

The work at Stanford tried to adopt an item pool as ...a Universe of classroom behavior descriptors...from which signs or subsystems of categories can be extracted (Ibid. p.2-3)."

Gary Morrison (1972) summarized the developments of the Stanford work.

The item pool was not comprehensive, and it developed without an organizing structure which would have made it manageable.

The researchers attempted...to classify the item pool in terms of other existing category systems, such as those developed by B. Othanel Smith, M.O. Meux (1962), and M. Karl Openshaw, and Fredrick R. Cyphert (1966). They discovered, however, that none of the category systems used was broad enough to encompass the entire range of items in the Stanford taxonomy. Thus, even the attempts to organize the preliminary item pool were merely exploratory. Furthermore, the classification system could only loosely be called a taxonomy. The classes of behaviors and their labels were not determined with any degree of exactness.

The Stanford taxonomy terminated with a preliminary classification scheme which suggested a direction to be taken but stopped short of producing a functional or even a manageable system that might have proved useful to educational researchers (Morrison, 1972, p.10,11,12).

The University of Massachusetts Task Analysis Project

In his writing, Morrison, who was director of the Task Analysis Project, also described how the Task Analysis Project grew out of the work done at Stanford.

The University of Massachusetts project did not begin as a pioneering study. Rather, it was an extension, an outgrowth, and a maturation of the Stanford Taxonomy of Teaching Behaviors. From the beginning the conception of the project and its usefulness was broader than the earlier study. Task analysis was adopted as a means by which observable teaching behaviors could be systematically identified, generated, and recorded, computerized, and stored for easy retrieval for multiple educational purposes. It was hoped that the system would be flexible enough to be of use in the determination of specific performance criteria for school personnel, in the design of training programs, and in the evaluation of personnel performance, as well as in the definition of new staffing functions, roles, and patterns, and in the establishment of selection criteria for people in new staffing functions. The system was intended to incorporate all rating and observation instruments and current categorization structures to fit the needs of any individual supervisor or educational

researcher (Ibid. p.14).

Morrison further explains that:

Task analysis, as a means of collecting objective observable behaviors, was adopted...to avoid theoretical positions, predetermined models, and broad generalizations of behaviors.

In the context of the University of Massachusetts project, task analysis presupposes the collection of only observable behaviors...avoiding process words like interviewing and counseling for the use of explicit action verbs to describe behavior (Ibid. p.16-17).

The Task Analysis project expanded the item pool to a list of around 50,000 items and then reduced it through editing to around 7,000 items.

As a result...a system now exists for programming alternative organizational systems using a common data base of teaching behaviors to meet the needs of educational personnel at all levels...it provides a data bank of teaching behaviors which can serve as an empirical base for objective and flexible observation and supervision systems. It has become the behavioral universe to which facet theory and design can be applied in order to open up new areas of educational research in the dimensionalization of teaching behavior (Ibid. p.21-22).

This conclusion led Morrison to propose that a facet system be developed for the dimensionalization of teaching behavior. To illustrate his idea, Morrison presented a sample facet system. But, he said, "A fully functional facet system is still in the future (Ibid. p.107). His sample facet system was only intended to be exploratory. The categories listed were not parallel, mutually exclusive, or of the same dimension. In addition, the categories were not broken down into specifics that would be helpful to a teacher. For example, Activities were listed as:

- 5
- 1)Administration (school governance)
 - 2)Material resources (a-v, teaching machines, etc.)
 - 3)Language development (alphabet, reading, story)
 - 4)Math development
 - 5)Arts, crafts
 - 6)Recreation (play, sing, dance)
 - 7)Group time
 - 8)Snack, Lunch
 - 9)Rest
- (Ibid. appendix D)

As of yet, there is no usable facet system. Nevertheless, Morrison has effectively made the point that the Task Analysis item pool by itself is of no use without the behaviors being dimensionalized. A list of 7,000 behaviors can't help a teacher unless some relationships and meaning can be indicated for the behaviors.

In looking for meaning in research, Biddle asks what should be looked at: "...the intent of behavior, its objective characteristics, or its effects (Biddle, 1967, p.344-345)." As pointed out by Medely and Mitzel (1963), the tendency has been to look at objective characteristics. The Task Analysis project, for instance, looked only at behavioral characteristics. And, the result has been that meaningful relationships can't be drawn from the behaviors because neither intent nor effects were taken into account.

The Clinic to Improve University Teaching

The above developments led the Clinic to Improve University Teaching to pursue an approach of clustering behaviors around some skills originally listed and developed at Stanford and used in Micro-teaching (Allen, Ryan, 1969).

Currently, the clinic is working with a list of twenty-four skills. The skills are:

planned repetition
 elaboration
 asking questions
 setting the stage for a lesson
 meeting student needs
 optional instruction
 charisma
 verbal fluency
 maturity and stability of interpretation
 creativity
 recognizing attending behavior
 pacing
 expression
 tutoring
 academic counseling
 inspiration
 level of challenge
 lecturing
 student participation
 verbal and non-verbal reinforcement
 logical organization
 examples
 precise statements
 levels of importance
 (School of Education, University of Massachusetts,
 1972, index)

Obviously, many serious questions can be raised about this list. For example, is this a complete list of teaching skills? What is the relationship among these skills. What behaviors make up these skills? Are these all skills? Are charisma, maturity and stability of interpretation and creativity the same type of things as repetition, pacing, asking questions? Does lecturing overlap any of these other categories? Would tutoring include several of the skills like 1) examples, 2) precise statements, 3) levels of importance, 4) logical organization, 5) verbal and non-verbal reinforcement?

In other words, this list, too, presents only an exploratory stage. The categories of skills are not mutually exclusive. The list is not complete or even extensive. For example, there is no mention of evaluation.

Basically, this list lacks a framework which would tie the skills together and give them meaning. A paradigm, or a sequence might provide some way to determine gaps and see broader relationships.