

Jere Brophy: An Appreciation

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The first generations of researchers on classroom instruction were the pioneers who developed the term, categories, and concepts that were used to view and code what was happening during classroom lessons. The five pioneers in this first wave were Ned Flanders, Arno Bellack, B.O. Smith, Don Medley, and Harold Mitzel. Each of these pioneers used different sources and developed different terms and categories to code classroom events. Flanders developed his categories from Carl Rogers' client-centered therapy and placed an emphasis on a teacher's "use of student ideas." Bellack developed his "pedagogical moves" from Ludwig Wittgenstein's philosophical investigations, and B.O. Smith used "logical moves" to develop his categories. Medley and Mitzel did not use any theory, but simply selected the categories they thought were appropriate. The work of these pioneers received widespread publicity when the *Handbook of Research on Teaching* (edited by N.L. Gage) was published in 1963.

Flanders, Medley, and Mitzel also conducted studies where they correlated teacher and student use of these categories with the achievement gains of classrooms. Others conducted similar correlational studies using the categories developed by Bellack. Medley and Mitzel called the correlational studies "process-product" studies; others called them "process-outcome" studies or "teacher effectiveness" studies.

As a result of the conceptual work of these pioneers and the increasing number of studies correlating classroom events with student achievement, researchers began to develop their own category systems and some of them conducted their own correlational studies. Jere Brophy was the most productive scholar in this second generation of researchers on teaching.

This article will describe four of Brophy's major contributions:

1. The Brophy-Good Dyadic Observation Instrument (BGDOI)
2. Correlational and experimental studies
3. Reviews of research
4. Students

THE BROPHY-GOOD DYADIC OBSERVATION INSTRUMENT (BGDOI)

Brophy and Good developed a detailed observation system that Brophy and his colleagues used in six studies (Brophy, 1981). These six included two major studies: correlated events in the classroom with student achievement gains (Brophy & Everson, 1973; Everson, Anderson & Brophy, 1978) and an experimental study (Anderson, Everson, & Brophy, 1978). The results of Brophy and Everson's (1973) study of first grade instruction are among the most detailed and relevant of any teaching process study. One reason for these results is the use of the BGDOI to identify and record events in those classrooms.

The BGDOI is entirely classroom-based with none of the categories coming from theory. The Medley and Mitzel observation system is also classroom-based, but does not provide as much detail about instruction, questions, or responses to students, whereas the BGDOI is overwhelming with details and allows us to thoroughly investigate classroom instruction.

For example, the BGDOI coded types of questions, as others have done, but Brophy and Good coded four types of questions asking students to: explain a process, give a specific answer, choose between two answers, and opinion questions. Almost everyone else only coded questions as “high” and “low.” In the BGDOI, student answers were coded as correct, incorrect, or no response, while the BGDOI had a category for part-correct answers. Only BGDOI and BTES study coded the correctness of a student’s answer. These categories enabled users of this system to code success rates.

Previous systems placed all praise and criticism into single boxes, but Brophy and Good separated general praise from academic praise and general criticism from academic criticism, which enabled them to distinguish between praise and criticism for different activities.

Most observation instruments only used two or three categories to code a teacher’s response to a student’s answer, but the BGDOI coded a teacher’s response into 12 categories to study the effect of different teacher strategies. These 12 teacher responses were: *praise, affirmation of correct response, no feedback, negation of incorrect answers, criticism, process feedback, gives answer, asks another student, teacher accepts a call out from another student, teacher repeats the question, teacher rephrases the question, and teacher asks a new question.*

These categories include coding a teacher’s response to an incorrect answer as “negation” and not criticism. Another unique category is “process feedback,” where allows the teacher to help the student when the answer involves a process (such as telling time from a clock). The BGDCI also coded whether a teacher responded by asking another student and whether “call outs” occurred.

They coded the types of turns in reading groups, such as patterned turns, random, or calling on volunteers. There was no theory to develop these categories; the selection came solely from their classroom observations.

CORRELATIONAL AND EXPERIMENTAL STUDIES

Brophy and his colleagues used the BGDOI to conduct three major studies of classroom instruction: The Texas Teacher Effectiveness Study (first grade), The Junior High Study (English and Math) and the First Grade Reading Group Experimental Study. The use of the BGDOI enabled them to make an extremely detailed analysis of classroom instruction.

The Texas Teacher Effectiveness Study (Brophy & Evertson, 1973) analysis of the first grade study was the most detailed study of classroom instruction that has ever been done. They collected not one, but two years of observation that focused on results that occurred in both years. Thirty-one teachers were observed for 10 hours in the first year of this research and 28 teachers (including 19 holdovers from the first year) were observed for 30 hours in the second year. The results were summarized in Brophy and Evertson (1973) and are presented in two and a half well-written pages in Brophy and Good’s (1986) chapter in the 3rd edition of the *Handbook of Research on Teaching*.

In the First Grade Study, they found that the most effective teachers with low-SES students were encouraging, gentle, and rarely challenging or demanding even when their students did not know the answer. “Teachers who produced the most achievement also assumed personal responsibility for doing so. Their interviews revealed feelings of efficacy, a tendency to organize their classrooms and to plan activities proactively on a daily basis, and a ‘can do’ attitude about overcoming problems. Rather than give up and make excuses for failure these teachers would redouble their efforts, providing slower

students with extra attention and more individualized attention" (p. 341).

"What these teachers demanded, however, was not so much compliance as productive engagement in academic activities. Such activities were well-prepared and thus ran smoothly with few interruptions and only brief transitions in between" (p. 341).

Brophy and Evertson found that calling on students in order (patterned turns) had stronger correlations with achievement than calling on first grade students randomly or calling on volunteers. No one else has ever looked at turns in a reading group. Brophy also compared the frequency of teacher praise for student answers (which had positive correlations) versus praise for answers when the student initiates the question or the contact (which was negative).

Brophy was the first person in the modern era to code the success rate of students. He went beyond the earlier research by identifying the optimal success rate for high SES students and the optimal rate for low-SES students, as well as the optimal success rate when students are engaged in seatwork.

Brophy coined the phrase "teaching in small steps," which meant that the successful teachers only presented small amounts of new material and then reviewed that material before going on to new material. Teachers who taught in small steps had a higher success rate than did teachers who taught larger amounts of new material at once.

The successful teachers were proactive in classroom management; would warn rather than threaten, and held students accountable. "These teachers demanded... productive engagement in academic activities. Such activities were well-prepared and thus ran smoothly with few interruptions and only brief transitions in between" (Brophy & Good, 1986, p. 341).

Brophy had an unsurpassed ability to look at correlational results and reach conclusions about the data. Someone else looking the same pages of correlations would not have developed the rich interpretations he made. For example, "teaching in small steps" was not in the BGDOI system. Brophy derived the concept of teaching in small steps after looking at the data on success rates at the study's completion.

REVIEWS OF RESEARCH

Brophy was an excellent reviewer of research. Two of his major contributions are his review of the functions of praise in classrooms (1981) and the process-product studies from 1970 to 1983 (1986) (with Tom Good).

PRAISE

Brophy (1981) compiled a lengthy research-based analysis of many aspects of classroom praise. He did not simply present the correlations between a teacher's use of praise and student achievement gain, rather he provided information on the distribution of praise, analyzed the quality of praise, and suggested six different functions of praise.

He noted that the rate of praise was low and, in the studies that used BGDOI, only about 11 percent of students' correct answers were praised. Teachers were specific in only five percent of their praise statements following good work or good answers. Brophy wrote that teacher praise is "not systematically contingent upon desirable behavior, lacks specificity of the behavioral elements to be reinforced, and/or lacks credibility" (p. 8).

Given these conditions, Brophy noted that it is not surprising that praise itself only showed weak correlations with student achievement gains. He also noted that praise is weakly effective in low-SES classes, and either does not correlate at all with student achievement or correlates negatively in high-ability classes. Brophy noted that "structuring the classroom in order to elicit good student answers ... is far more important for producing achievement than praising those answers after they have been elicited" (Brophy, 1981; p. 6). He also noted that if praise is used indiscriminately in reference to behaviors that are not related to the quality of student responses, the praise becomes ambiguous and is not effective.

3RD HANDBOOK CHAPTER

Jere Brophy and Tom Good have provided an exceptional description of the classroom studies conducted by the second generation of research on teaching from 1970 to 1983. They cited and discussed 48 individual studies. They discussed programs of study: the Canterbury Studies, five studies by Ned Flanders, studies by Robert and Ruth Soar, studies by Jane Stallings, studies by Brophy and Evertson, studies by Good and Grouws, Beginning Teacher Evaluation Studies, and the Stanford Studies, as well as 20 additional correlational and experimental studies.

This Handbook chapter is the go-to chapter of the era of research on classroom instruction. It is comprehensive in its coverage of the research. Rather than citing individual studies, they grouped programs of study and provided an extremely comprehensive analysis of the research design and the results.

At the end of their chapter they group the results into 14 categories. Which included:

- Student engaged time
- Classroom management
- Success rate/Academic learning time
- Active teaching/direct instruction
- Structuring
- Difficulty level of questions
- Cognitive level of questions
- Handling seatwork
- Handling homework assignments

These are important topics and there is a need today for a comprehensive analysis of research on each of these topics.

STUDENTS

Brophy nurtured and fostered the development of many students. Three standout students were Carolyn Everston, Linda Anderson, and John Crawford—each of whom conducted classroom research independently.

Classroom-based study of classroom management was initiated and researched by Carolyn Evertson during the time she worked with Brophy at the Texas Research and Development Center. Her textbook on classroom management is now in its 10th Edition (2008).

SUMMARY

Jere and his colleagues accomplished tremendous advances in the study of classroom instruction. I hope that the future will bring more scholars of this caliber. ■

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