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Qualitative Methods in Research on Teaching.

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Abstract

This paper reviews basic issues of theory and method in approaches to research on teaching that are alternately called ethnographic, qualitative, participant observational, case study, symbolic interaction, phenomenological, constructivist, and interpretive. The central questions of interpretive research concern issues of implicit and explicit choice and meaning from the points of view of actors in social life, regarding the actions they take in everyday life. Interpretive research is concerned with the concrete specifics of meaning and of action that take place both in immediate scenes of face-to-face interaction and in the wider society surrounding the immediate scene of action. The conduct of interpretive research on teaching involves intense and ideally long-term participant observation in an educational setting, followed by deliberate and long-term reflection on what was seen there. That reflection involves the observer's deliberate and critical scrutiny of his/her interpretive point of view and its sources in formal theory, culturally learned ways of seeing, and personal value commitments. The reflection also involves critical scrutiny, of a friendly sort, of the assumptions about meaning held by those studied, including assumptions about desirable ends and means of teaching and learning, and definitions and measures of effectiveness of teachers and students. The paper argues that such detailed scrutiny of the routines of everyday life in teaching, and such deliberate reflection on its ends and means, are a route to the improvement of practice, not only through the work of university-based interpretive researchers, but through the interpretive documentation and reflection that can and should be done by practicing teachers.

Key words: *Interpretive research, face-to-face interaction, ethnographic, effectiveness of teachers*

The Mainstream Perspective in Research on Teaching

The history of mainstream positivist research on teaching for the past20 years has been one of analytic bootstrapping with very partial theoretical models of the teaching process, on the assumptions that what was generic across classrooms would emerge across studies and that the subtle variations across classrooms were trivial and could be washed out of the analysis as error variance.

This approach to studying teacher effectiveness can be seen as a borrowing by American educational researchers of an applied natural science model for research and development exemplified by agricultural experimentation.

Research and development using a positivist natural science approach is possible in agriculture because of the uniformity of the phenomena that are considered. While the chemical

composition of the soil may vary from one field to the next and weather conditions may vary from year to year, the fundamental variables that are considered--chemicals, genetic structures of plants, the biochemistry of plant metabolism and growth—are constant enough in form and bounded enough in scope that it is possible to conduct research and development by the operations of repeated measurement, prediction, and controlled experimental intervention. This is research by means of the design and testing of "treatments" whose effects can be monitored and whose working can be explained by references to a theoretical apparatus of covering laws. In the first Handbook of13search on Teaching it was just such theory and research design that was called for in the introductory chapter by Gage (1963)--the positivist model of science borrowed from the natural sciences of psychology, with Hempel providing the fundamental rationale in philosophy of science (see the discussion in Smith, 1979).The first Handbook contained what since became the classic article on experimental design (Campbell &Stanley, 1966), according to which an agricultural kind of research and development could be conducted. Campbell extended these recommendations in later proposals for large-scale program development. These were interventions that could be studied as quasi-experiments (Cook & Campbell, 1979).

Twenty years later it seems that there is so much variation across class-rooms and so much variation in the implementation of "treatments" themselves that large-scale program evaluation by quasi-experimental methods is very problematic. As that became apparent in study after study Campbell himself(1978) and Cronbach (1975) called for the use of more naturalistic observational methods--case studies done by participant observers, or "documentation “studies, which would give a detailed view of the actual structure and process of program implementation. At the same time, Bronfenbrenner (1977) was calling for an "ecological" approach to the study of child development, considering the child in the context of family and community life. These approaches, while advocating the use of methods other than those of the experiment or the social survey (testing and measurement in education are considered here as one form of survey research), still did not consider going beyond the bounds of the fundamental natural science paradigm for educational research, with its underlying assumption of the uniformity of nature in social life.

A story similar to that for attempts at large-scale program evaluation can be seen in recent research on teacher effectiveness, in which the classroom was the unit of analysis, rather than the program. This so-called "process-product" research (the term is that of Dunkin & Biddle, 1974) was developed during the late 1960s and early 1970s (see the review of major studies in Brophy & Good, in Wittrock, in press).

The last 15 years of this work can be seen as a search for an increasingly specific look at causal linkages between teacher effectiveness, as measured by end-of-the-year student gain scores tests, and particular teaching practices.

The teaching practices were monitored firsthand by observers on standardized achievement who noted the occurrence of various types of predetermined teacher behaviors and student behaviors (e.g., teacher questions, teacher praise, teacher

reprimand, student “on-task" behavior, student "off-task" behavior).In this approach, called systematic classroom observation, the types of behavior of interest for observation were chosen according to their theoretical significance. What was" systematic" was the use of predetermined categories themselves. This was to assure uniformity of observation (reliability) across times of observation in the same classroom and across different class rooms. The concern for reliability of measurement reflected the positivist assumptions behind the research.

As the work has progressed, coding categories for a while became more specific and differentiated. Then as certain variables (such as student on-task behavior) seemed to correlate highly with gains in student test scores across multiple studies, the observational systems focused more and more on theoretically salient types of student and teacher behavior, which were generalized functions.

Subsequent experimental "treatment" studies indicated that when teachers increased certain behaviors that were found in the co relational studies to be associated with increased student-achievement gains, those gains occurred in the experimental classrooms.(See the review in Brophy & Good, 1984.)Students in the classrooms receiving the experimental treatments in some cases achieved higher scores on standardized tests than did children in control group classrooms in which the frequency of the recommended teacher behaviors was much less.

This is hopeful news for educators. It suggests that an agricultural model for inquiry into educational productivity is an appropriate one. In the model, the teacher, as Mother Nature, provides the fertilizer, light, and water that enable the students, as plants, to grow tall and strong.

All this seems quite straight forward. Why then might any other form of research on teaching be necessary? Interpretive, participant-observational research is very labor intensive, while observation by use of predetermined coding categories is much less so. It would seem that there is no need for interpretive research or any other. The findings on teacher effectiveness seem to be all in.

That would be a premature conclusion, however. The case for interpretive research is pointed to by some interesting anomalies in the process-product work.

One such anomaly lies in the corpus of process-product data itself .Apparently, in co relational studies of the same teacher across school years, the stability of teacher effects on student achievement is not high (see the discussion in Brophy & Good, 1984).This could be due to a number of influences, for which there is no evidence in the correlational data sets, for example, teachers teaching somewhat differently with each new set of students,. stress in the teacher's life outside school, (e.g., birth of child, death in family, divorce, remarriage), stress or change in the school itself (e.g., introduction of new reading series, change of principal).The process-product data do not indicate why teacher influence seems to vary from year to year. Another anomaly is that in spite of evidence that indicates that certain teacher behaviors can influence students to learn more, and in spite of experience that shows that teachers can be trained to use those behaviors more frequently, teachers do not always persist in using

the recommended behaviors. Sometimes they do, but sometimes they do not. An example of this is Rowe's finding (1974) that waiting longer for student answers produces more reflective answers by students. Teachers can be told this and trained to pause for a longer "wait-time," yet after a few months they go back to using shorter wait-time in lesson dialogue with students. One wonders if wait-time might not have negative meaning to teachers in the concrete circumstances of conducting classroom discussion. Such a concrete, enacted meaning might over-ride whatever more abstract and decontextualized meaning that wait-time behavior might have as generally correlated positively with student learning. How do teachers make sense such that a behavior like wait-time seems sociolinguistically inappropriate? What are the intuitions about interaction against which doing wait-time behavior runs counter? How might these intuitions be changed--or is there another behavioral means that might provide less counterintuitive route to the same ends? Those are questions about the specifics of practice that derive from the perspectives of interpretive research.

These kinds of anomalies suggest that while the standard work has produced some insights about general characteristics of effective teaching, researchers may have learned about all that is possible by proceeding with that theoretical frame of reference and the methods that derive from it.

An Interpretive Perspective on Teacher Effectiveness

The use of predetermined coding categories by process-product researchers presupposes uniformity of relationships between the form of a behavior and its meaning, such that the observer can recognize the meaning of a behavior time after time. Imagine a student sitting at a desk, looking out the window. What does this mean? Is the student on-task or off-task? One must infer meaning from the observed behavior. What are the grounds for such inferences? When they must be made in split-second judgments by coders, what evidence does one have that such inferences about meaning are valid? The fundamental problem with the standard approach to observational research on teacher effectiveness, from an interpretive perspective, is that its evidence base is invalid. Surface appearances are taken as valid indicators of intended meaning. In consequence, what are claimed to be low-inference observational judgments are in fact highly inferential. Once the data are coded there is no way to retrieve the original behavioral evidence to test the validity of the inferences made about the behavior's meaning (see the discussion on this point by Mehan, 1979).No matter how strong the correlations appear to be in such datasets, a good possibility always exists that such correlations are spurious, if relationships between behavioral form and social meaning are as variable as interpretive researchers claim them to be. Moreover, if such variability is inherent in social life and thus omnipresent in classrooms, experiments that purport to manipulate teacher and student behaviors, so globally defined, are likely to be shot through with confounding relationships between putative "treatment" conditions, "control" conditions, and "outcomes" that invalidate the causal inferences made.

The standard research on teacher effectiveness could only proceed as it has done on the presupposition of uniformity of nature in social life that follows from adopting natural science models for social

scientific inquiry. Interpretive research makes very different assumptions. It looks for variability in relationships between behavioral form and intended meaning in classroom interaction. Moreover, interpretive research on teaching repeatedly discovers locally distinctive patterns of performed social identity --of en-acted statuses and their attendant role relationships, such that a phenomenon like time-on-task is locally meaningful in terms of the particular performed social identities of the actual students spending time of the academic tasks assigned to them. If Mary, a high achiever, is observed by the teacher to be off-task at a gi.ven moment this may mean something quite different from Sam, a problem student, being observed as off-task in the same moment. One of Sam's obligations as a problem student (who is perceived as often being off-task) may be to be constantly on-task (since this will be "good for him").Mary, on the other hand, who as a high achiever is perceived as (by definition) being on-task most of the time, does not have Sam's obligation to be constantly on-task. Indeed Mary has earned the right to take occasional breaks--time off-task. One is reminded of the differences in work rights and obligations between hourly wage employees, who punch a time clock, and salaried workers, who do not. Yet even the role distinction between Sam and Mary is not entirely absolute. Some mornings, if Sam is having an unusually good day (i.e., if he appears to be working diligently and constantly) he may have earned, for that morning, the right to take a break, like Mary, the salaried worker.

The contrast between the interpretive and the standard perspectives can be further illustrated by considering classroom social organization in terms of the metaphor of a chess game. Standard research on teacher effectiveness presupposes a standard board (curriculum and aims), a standard set of chess pieces (statuses of teacher and student), and a standard set of rules of procedure that govern the relations among the pieces (roles of teacher and student) that are appropriate, that is, possible within the game. Interpretive researchers presume that the board itself, the number and shapes of its squares"--places to be in the curriculum--will vary from one classroom to the next, although on the one hand, with the publication of textbooks for reading and arithmetic with teacher's manuals and accompanying worksheets for students, and on the other hand, with accountability systems for management by objectives and continual achievement testing, there seems to be more pressure for uniformity of curriculum and aims than there was a generation ago. Even if one grants a superficial uniformity of the board itself, when one comes to the direct observation of actual playing of the game--observation that is unmediated by predetermined coding categories one finds that the types of pieces vary from game to game. In one game there are many pawns, few knights, and no bishops. In another game there are no pawns, many knights, and many bishops. Since each type of piece is allowed to move differently on the board, the system of possible movements--the system of social relations- -changes from game to game. Moreover, some interpretive researchers would argue that the differences among games, as they are actually played, are even more profound than the differences that would obtain if it were only a matter of having a different board or different pieces from one game to the next. If within a given game, neither the board nor the pieces are

themselves entirely fixed--if the definitions of aims, curriculum, and the social identities and roles of teachers and students are constantly emergent in negotiation within the action of teaching and learning itself--then the school classroom is in-deed a fundamentally different kind of social universe than the stable, fixed and unidimensional one presupposed by positivist research on teaching.

From an interpretive point of view, teacher effectiveness is a matter of the nature of the social organization of classroom life--what interpretive researchers have called the enacted curriculum--whose construction is largely, but not exclusively, the responsibility of the teacher as instructional leader. This is a matter of local meaning and local politics; of teaching as rhetoric (persuasion), and of student assent as the grounds of legitimacy for such persuasion and leadership by the teacher. As Doyle (1979) puts it in a felicitous phrase, students in classrooms are not the "passive recipients of instructional treatments."(p. 203) In sum, issues of local politics at the classroom level seem to be at the heart of educational decision making by teachers and by students. Moreover, one can use the notions of politics and persuasion to consider an essential activity of schools as institutions, that of social sorting.

Conclusions

There are three very serious problems with standard process-product research on relationships between classroom interaction and student achievement. The first problem is that the work proceeds from an inadequate notion of interaction--one-way causal influence as a behavioral phenomenon, rather than reciprocal exchange of phenomenologically meaningful action. The second problem is that the standard work gives an extremely reduced view of classroom process. Its use of predetermined coding categories as a means of primary data collection gives no clear detailed evidence about the specific classroom processes that are claimed to lead to desired outcomes. The third problem is that the product studied is also very narrowly defined--usually as end-of-the-year achievement test scores. With the standard approach to the study of teacher effectiveness having provided so reduced and one-dimensional view of classroom processes, classroom products, and classroom interaction itself, it is not unreasonable to claim that the final word has not been spoken on this issue in research on teaching.

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