Conducting Research on Practice

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This article explores two forms of research on practice: formal research and practical inquiry. Formal research is undertaken by researchers and practitioners to contribute to an established and general knowledge base. Practical inquiry is undertaken by practitioners to improve their practice. It is suggested that practical inquiry is more likely than formal research to lead to immediate classroom change; that these two forms of research are fundamentally different; and that both are useful to practice, but in different ways.

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The purpose of this article is to explore issues related to the nature of research on practice, its uses by researchers and practitioners, and its benefits to educational practice. Since most of the research on educational practice has been conducted with elementary and secondary school teachers, the primary focus will be on teaching practice.[1] I will first describe how conceptions of teaching have shifted from a view of teachers as the recipients and consumers of research to the current view of the teacher as producer or mediator of knowledge. The newer conception of teaching has affected research on teaching in terms of what is examined, how the research is conducted, and who conducts the research. This leads into a discussion of two forms of research on practice: practical inquiry undertaken by practitioners in improving their practice, and formal research undertaken by researchers or practitioners designed to contribute to an established and general knowledge base. New understandings of the teacher change process show us why practical inquiry is more likely than formal research to lead to immediate classroom change. I conclude by suggesting that these two forms of research are fundamentally different, that practical inquiry may be foundational to formal research, and that both forms of research are useful to practice, but in different ways.

Recent Research on Educational Practice

Research on the practice of teaching is undergoing significant change: change that reflects considerations of power and voice, the nature of knowledge, and research methods. In the 1970s, researchers on teaching sought to uncover generic teaching behaviors that were related to student learning as measured on standardized tests (for summaries of this work, see Brophy & Good, 1986; Gage, 1985). While there were many concerns about the assumptions inherent in the process-product research paradigm (see, e.g., Doyle, 1977; Fenstermacher, 1979), the strongest criticism of this research followed an awareness of how it was being used (and abused) by policymakers, staff developers, teacher educators, and school and school district administrators (McCloskey, Provenzo, Cohn, & Kottkamp, 1991; McNeil, 1986; Richardson-Koehler, 1988). The scholarly community soon realized that research on teaching should not be conducted in the absence of considerations of two questions: Who owns the knowledge on teaching practice, and who benefits from the research (see Apple, 1993; Ladwig, 1991)? Elementary and secondary classroom teachers were notably missing in answers to both questions.

Research on the practice of teaching has recently shifted from a focus on effective behaviors toward the hermeneutic purpose of understanding how teachers make sense of teaching and learning. Two forms of this research are discussed here: one conducted by individuals who are labeled researchers by themselves and others; and the other by teachers. The questions of power and control have now shifted somewhat to considerations of who creates, constructs, or reconstructs knowledge about teaching practice, whether such knowledge can move beyond the local to the more general, and the degree to which local or general knowledge may be used in the improvement of practice.

Studies conducted by researchers on teaching examine the nature of teachers' knowledge, beliefs, perceptions, and other such constructs in relation to learning to teach, teachers' classroom actions, and changes in practice. The research methods involve the use of participant observation within the context of classrooms and schools—the settings that constitute teachers' realities. These studies are often conducted in collaboration with practitioners, a practice that is thought to enhance the validity of the hermeneutic studies of teachers conducted by outside researchers (Connelly & Clandinin, 1990; Elliott, 1988; Goldenberg & Gallimore, 1991).

At the same time, there has been a strong movement toward teacher research that gives voice to practitioners, allows them to communicate their wealth of knowledge to other practitioners, and helps them improve their practice (see Cochran-Smith & Lytle, 1990; Hollingsworth & Sockett, 1994). One could perhaps suggest that it is a teacher who knows best what it means to be a teacher. It is often argued that teacher research is fundamentally different from research conducted by outside researchers (e.g., Cochran-Smith & Lytle, 1993), if only because research conducted by teachers may be more useful to teachers for the improvement of practice. In fact, there are some discussions of teacher research that border on suggesting that teacher research, at least in the form of stories, is the only valid form of teaching research (Carter, 1993). This controversy is ex-

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plored in a series of four articles and responses concerning the use of formal research on teachers' thinking in the improvement of teacher practice (Clark, 1988; Clark & Lampert, 1986; Floden & Klinzing, 1990; Lampert & Clark, 1990).

A View of Teaching and Teacher Change

The areas of interest in current formal research on teaching practice are teachers' thinking, knowledge, and beliefs, as well as classroom actions that are considered to be momentary solutions to enduring dilemmas (e.g., Carter, 1990, Kagan, 1990; Pajares, 1992). This research has led to the conclusion that teachers are driven by a type of thinking that differs from linear prescriptions and propositions derived from formal research and theory. Researchers in the new tradition, for example, have found that experienced teachers—even expert teachers—do not plan in the linear manner prescribed in many teacher education programs. In summarizing the descriptive literature on teacher planning, Borko and Niles (1987) suggest that teachers seldom start with objectives. Instead, they focus primarily on content and activities, and objectives are embedded within the activities.

Teachers' knowledge and beliefs are viewed as practical (Elbaz, 1983), personal (Clandinin, 1986; Lampert, 1985), situated (Leinhardt, 1988), craftlike (Grimmett & Mackinnon, 1992), embodied (Johnson, 1987), and relational (Hollingsworth, Dybdahl, & Minarik, 1993). It has also been suggested that such knowledge is structured in images (Calderhead, 1988), narratives or stories (Connelly & Clandinin, 1990; Gudmundsdottir, 1991), and cases or events (Doyle, 1990). This knowledge is seen as often tacit and always experiential (Kagan, 1990). Teachers' subject matter knowledge has been explored in relation to the ways in which it is combined with knowledge about student learning and the specific context to drive its curricular representation in the classroom (e.g., Grossman, 1990; Munby & Russell, 1992; Shulman, 1987; Wilson & Wineburg, 1988).

The conception of teaching underlying these projects rejects the dominant norm among many educators and policymakers that the teacher is a recipient and consumer of research and practice. Rather, the teacher is seen as one who mediates ideas, and constructs meaning and knowledge and acts upon them. The ideas may come from many different sources such as staff development, other teachers, research and practice articles, and reflection on experience. New understandings are developed on the basis of these ideas as they interact with existing understandings.

The view of change in practice has also been enhanced by recent research. The conception of change in teaching practice that has dominated the educational literature until quite recently focuses on teaching activities, practices, and curricula that are suggested or mandated by those who are external to the setting in which the teaching is taking place: administrators, school district officials, policymakers, and/or staff developers. This image of change has led to the conclusions that change hurts (Fullan, 1991) and that teachers are recalcitrant and don't change easily (e.g., Duffy & Roehler, 1986). However, as pointed out by Morimoto (1973):

> When change is advocated or demanded by another person, we feel threatened, defensive, and perhaps rushed. We are then without the freedom and the time to understand and to affirm the new learning as something desirable, and as something of our own choosing. Pressure to change, without an opportunity for exploration and choice, seldom results in experiences of joy and excitement in learning. (p. 255)

The newer conception of teacher change implies a different process—one that is not mandated by others but is undertaken voluntarily. Research that has led to this conception concentrates on teachers' practical reasoning and everyday work life, and suggests that teachers actually change all the time. These changes, while often minor adjustments in program, can also be quite dramatic (Richardson, in press). The norms of the workplace and the systemics of the context also affect teachers' considerations of change in practice (Placier & Hamilton, in press). When a teacher tries new activities, he or she assesses them on the basis of whether they "work," that is, whether they fit within the teacher's set of beliefs about teaching and learning, engage the students, and allow the teacher the degree of classroom control he or she feels necessary. If the activity does not work, it is quickly dropped or radically altered.

The decision as to whether a new activity works, however, is often not conscious, is highly personal, and may be based on experiences and understandings that are not relevant to the particular setting in which instruction is taking place. Teachers make decisions on the basis of a personal sense of what works, but without examining the beliefs underlying a sense of "working," teachers may perpetuate practices based on questionable assumptions and beliefs. In response to this new understanding of change, a normative conception of teacher as inquirer has evolved that provides a vision of a teacher who questions his or her assumptions and is consciously thoughtful about goals, practices, students, and contexts.

The research that led to these conceptions of teaching and teacher change provides an understanding of how practitioners make sense of their settings and actions; however, it does not respond to the type and immediacy of knowledge needs that a teacher confronts in everyday classroom work. While the hermeneutic research on practice often attempts to bring two knowledge needs together—that is, the daily and immediate knowledge needs and the more general conceptual questions related to the nature of teaching practice—it may be difficult, if not impossible, to create a formal knowledge base that responds to immediate classroom needs. Formal research provides us with new and useful ways of thinking about teaching, and may eventually enter into teachers' practical reasoning and affect their practices (Fenstermacher & Richardson, 1993). What, however, will help teachers with immediate knowledge needs that do not necessarily call for generalized propositions?

This and other questions have provided rationale for the renewed interest in teacher researcher notions. These are research processes that are either taken over by practitioners or actively and equally involve them. I will now turn to a discussion of teacher research and will suggest that a form of teacher research, practical inquiry, has the potential to respond to teachers' immediate knowledge needs.

Teacher Research

Teacher research or teacher researcher, as it is sometimes referred to, is a somewhat confusing concept. Cochran-Smith and Lytle's (1990, 1993) works provide thorough descriptions of the notion and also highlight the tensions and contradictions in the field. There are several motivations captured in the teacher researcher notion, each

representing some combination of political and improvement-of-practice concerns. One is that teacher inquiry will help to improve teaching; that teachers are as good as, if not better than, researchers in producing more valid and relevant research for their own classrooms. On the other hand, many researchers feel, as did Judd (quoted in Grinder, 1981), that teacher research could reduce the antagonism between researchers and practitioners and motivate teachers to accept and use all forms of research in their teaching. Still other scholars (e.g., Schön, 1991) feel that teacher research, or at least the equal involvement of teachers in research, would increase the validity of hermeneutic research. This last rationale responds to what Giddens (1976) terms the double hermeneutic in social science research and is related, here, to research on practice. The first hermeneutic is the conception of reality constructed by the teacher, and the second is the reconstruction of that meaning into new frames of reference by the researcher. Active collaboration, it is felt, leads to a shared or mutual reconstruction that is agreed upon by both practitioner and researcher, as is exemplified in the work of Connelly and Clandinin (1990) and Cochran-Smith and Lytle (1990).

These multiple motivations have led to a number of meanings of the teacher researcher concept. Several meanings may be present in the same article as an author both argues, politically, for teachers' voice and describes various forms of teacher research. One approach to teacher research, for example, is the notion that *teaching is research*. This argument suggests that the work of teaching is like the work of the researcher. The teacher experiments with a treatment or an activity, collects data, and makes decisions on the basis of data and judgments as to whether the activity "works" (Neilson, 1990). A second approach relates to various conceptions of *teacher as reflective practitioner* (Dewey, 1933; Louden, 1991; Russell & Munby, 1992; Schön, 1983; Van Manen, 1977). Schön's (1983) notion of reflection-in-action and its potential to improve practice has often been referred to as teacher research. A third conception of teacher research relates to *action research*. In this form of teacher research, teachers as a group may become more systematic in thinking about their work, collect and analyze data related to perceived problems in their classrooms and schools, and, thereby, understand and improve their practice (Carr & Kemmis, 1986; Elliott, 1976–77; Noffke, 1992). A fourth notion of teacher researcher is qualitatively different from the preceding three. It is *teacher as formal educational researcher.* There is an expectation that this form of research will contribute to the knowledge base for use by others within the community through publication, workshops, or educational materials. While few would suggest that this is the only form of teacher research, many do advocate the publication of teacher research (e.g., Cochran-Smith & Lytle, 1993; Duckworth, 1986).

The first three notions of teacher research described above may be thought of as "practical inquiry" whereas the fourth category is "formal research." While formal research is quite well understood in terms of accepted methodologies and considerations of quality, practical inquiry is not. An important project for the coming years for those involved in research on teaching will be to better understand how teachers make inferences in practical reasoning, the nature of practical inquiry as a form of research, and how practitioners can be helped to improve their practical inquiry. The next section will continue this exploration by providing an initial, though tentative, analysis of the differences between practical inquiry and formal research.

Practical Inquiry and Formal Research

Practical inquiry is conducted by practitioners to help them understand their contexts, practices, and, in the case of teachers, their students. The outcome of the inquiry may be a change in practice, or it may be an enhanced understanding. This type of research is not conducted for purposes of generalization, expanding the larger community's knowledge base, or publication. The term inquiry has been defined by Clift, Veal, Johnson, and Holland (1990) as "a deliberate attempt to collect data systematically that can offer insight into professional practice" (p. 54).

There is no formal research methodology associated with practical inquiry, although recent acceptance of qualitative research has accompanied an increased interest in and advocacy of practical inquiry. The telling of narrative and story, dialogical conversations about practice, and writing of journals have been advocated for this type of inquiry. Connelly and Clandinin (1988), for example, suggest these forms of inquiry in a book for teachers on how to inquire into their own personal practical knowledge. Another example of practical inquiry is the maintenance of extensive records on observations of student progress by teachers who use literature to teach reading (Short, 1992). Reflection on the moral basis for action also constitutes an element of practical inquiry. Practical inquiry, then, is not conducted for purposes of developing general laws related to educational practice, and is not meant to provide *the* answer to a problem. Instead, the results are suggestive of new ways of looking at the context and problem and/or possibilities for changes in practice.

Formal research is what we usually think of in educational research. It is designed to contribute to a general knowledge about and understanding of educational processes, players, outcomes, and contexts and the relationship between or among them. This type of research is generally written about in research and research methodology chapters and books and is broken down by methodological types: experimental, correlational, survey, case study, qualitative, and evaluation.

The major distinction between these two forms of research is that practical inquiry is conducted in one's everyday work life for purposes of improvement, and formal research is meant to contribute to a larger community's knowledge base. As suggested by Nespor and Barylske (1991), those who conduct formal research "participate in a bigger network, one that is constituted by the circulation of more stable, movable, and combinable representations than that of other persons" (p. 809). There is a community understanding of appropriate rhetorical forms of representation, as well as adequate research designs and methodology in formal research, whereas the individual or group of practitioners involved in practical inquiry need only respond to a personal sense of validity and further questioning. Both forms, however, may be conducted by the practitioner, and at times, practical inquiry may be turned into formal research.

I would speculate, at this point, that formal research methodology, because of its need to narrow and focus for purposes of generalizability, is too confining for practical inquiry. Further, any formalization of the process of practical

inquiry turns it into formal research, thus potentially causing it to lose its value in informing day-to-day classroom actions. However, there are intellectual virtues, such as regard for evidence, that are important in both forms of research. I developed these understandings during my involvement in a project in which I was both a teacher-practitioner (in this case, staff developer), and the co-principal investigator of a formal research project designed to study the process.[2] My experience with the knowledge needs in these two roles provides some instantiation of the differences between practical inquiry and formal research.

An Example of Practical Inquiry and Formal Research

Patricia Anders and I, along with several colleagues, examined the beliefs of a number of upper elementary teachers of reading comprehension, the relationship of these beliefs to their classroom practices (Richardson, Anders, Tidwell, & Lloyd, 1991), and the nature of change in teaching (Richardson, in press). As an element of this study, we implemented a staff development program that focused on the teachers' beliefs and practical reasoning, and current research on reading comprehension. Anders and I were the primary staff developers and, as teacher- practitioners in this role, were faced with a need to conduct practical inquiry.

The staff development process was new for us and the teachers. We did not walk into this process with a set of neat prescriptions for practice, but worked from the teachers' own understandings and rationale for their practices, a process described as practical arguments by Fenstermacher (1986). We were faced with expectations for developing sound approaches to the staff development process as well as producing research on the process that would be useful to others in the research on teaching and teacher education communities.

As staff developers, we engaged in practical inquiry. We struggled with the nature and form of the new process. At the same time, we attempted to collect and analyze data that would inform others. We were conducting practical inquiry and formal research simultaneously, and became aware of the differences. A great deal of data were collected and used in both research processes. These data included videotapes of the staff development sessions; extensive belief interviews of teachers, staff developers, and principals; and videotapes and written observations of the teachers in their classrooms.

Engaging in practical inquiry involved us in viewing videotapes of staff development sessions following a session. We were concerned with individual teacher responses and interactions: Did we interpret responses validly? How could we have missed what teacher A was trying to say? There is some underlying anger, here; how should we deal with it in the next session? Are we talking too much? Too little? In this inquiry, we were not looking for propositional, law-like statements. We wanted to understand *that* context and *those* participants so that we could meet our goals. These knowledge needs relate to those described by Habermas (1973) in his second category of "knowledge constitutive interests": interests that are practical and serve the purpose of meaningful communication and dialogue.

At the same time, and at a very different level of analysis, we were engaged in formal research. We were looking for themes in the processes and responses, clues for generalizations that we would begin to look for in videotapes of other sessions, for ways of examining concepts that had been identified in the literature, and new concepts that seemed to emerge from our interaction with the data. We were concerned, in this type of investigation, with methodological procedures accepted by our research community, such as triangulation and reliability, generalizability and validity.

Practical inquiry provided us with immediate information that would help with the next class, with an individual teacher, and in understanding and describing the process to ourselves and the participants. The process of formal research did not provide immediate feedback to us as staff developers. It did, however, help us later on to understand the process in terms of both what it meant to "work" and "not work," as well as how we might conceptually approach the process next time around.

The results of practical inquiry, then, informed our practice in quite different ways than did the formal research. It also, however, informed our formal research by helping to provide a sense of the important and worthwhile questions for formal research and for the goals of our program. One could suggest, then, that practical inquiry may be foundational to formal research that will be truly useful in improving practice.

Improving Practical Inquiry

In this article, I have suggested that a focus on teaching and hermeneutical inquiry has brought many researchers closer to practice and that this research has helped to describe what it means to think like a teacher and what is entailed in teacher change. However, many teachers still consider research on teaching to be irrelevant to their day-to-day practice, an attitude that makes it difficult for such research to help to improve practice. This may be because formal research cannot provide teachers with knowledge for their immediate needs within their unique contexts.

The formal research program, however, is helping us understand the ways in which teachers develop knowledge that they use in solving the immediate needs of the classroom. This understanding may lead to the development and acceptance of a different form of research, one that maps on to practitioners' methods of acquiring and constructing practical knowledge and their goals in improving classroom practice.

While we have developed procedures for generating and maintaining methodological and ethical standards for the conduct of formal research, the standards and means for developing and improving practical inquiry are not well understood. House, Mathison, and McTaggart (1989) explored a similar problem in evaluation studies. They suggested that we have three distinct situations with respect to the development of inferences:

> (a) the researcher draws inferences from an evaluation study and expects the practitioner to apply it; (b) the practitioner draws inferences from an evaluation study but modifies those inferences based on his or her particular domain of application; (c) the practitioner draws inferences based on his or her own experience and applies it in context. (p. 15)

They then suggest that the third type of inference has largely been ignored, but is the most crucial in terms of the improvement of practice: "We think that the third situation is more important than the first two as far as the *conduct and improvement of professional practice* are concerned and that the validity concerns for practitioner inferences have been

very much ignored" (p. 15). They strongly advocate research in this area.

I would agree. We know little about how to work with teachers in helping them improve their practical inquiry, although such work has begun (see, e.g., Clift, Houston, & Pugach, 1990; Connelly & Clandinin, 1988; Fenstermacher & Richardson, 1993; Grimmett & Erickson, 1988). This work focuses on helping teachers reflect on their own beliefs, personal practical knowledge, and practices. We also are beginning to develop a foundational knowledge related to practical knowledge that will help in this endeavor (for a summary, see Fenstermacher, 1994).

Berliner (1992) counsels that educational psychologists should not view themselves as psychologists who are interested in education. Such an approach, he feels would miss "a chance to profit from the knowledge of practitioners" (p. 145). I would go one step further and suggest that the practitioners are not just those in elementary and secondary schools, but they are all of us. Many of us, after all, are educational practitioners in addition to being researchers. We may teach in higher education or conduct staff development programs or workshops. Understandings of our own practice and of how we make inferences related to our practice can help us develop ways to improve the inferencing process through practical inquiry.

The practical inquiry that Anders and I engaged in as staff developers, for example, responded to immediate needs, was clinical, and called on relational knowing—that is, having knowledge about specific participants (including ourselves) in our staff development process. This inquiry was enhanced by a strong and extensive database such as videotapes of the staff development process. Although these data were initially collected for purposes of formal inquiry, they were invaluable in our practical inquiry. We also found that our practical inquiry was strengthened by the presence of a dialogue partner. The manner that we developed in approaching the staff development process also helped us focus on practical inquiry. Anders and I were aware that we, as staff developers, were learning as much if not more in this process than the teacher participants. Thus, we allowed ourselves to admit failure, to experiment with different processes, and talk about our practical inquiry with the teacher participants.

In addition to understanding our own knowledge needs and inquiry processes as practitioners, we can also conduct formal research on practical inquiry, as suggested by House, Mathison, and McTaggart (1989). This look into our own practice through practical inquiry and formal research, as well as into the practical inquiry of other practitioners, will provide information on ways of improving the process. These methods may then be appropriated by practitioners in other fields and/or grade levels to improve their practice through practical inquiry.

Notes

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[1]However, other educational practitioners who work in a teacher-learner relationship with students, such as staff developers and teacher educators, have benefited and will continue to benefit from research on teaching practice.

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SIGs Call for Papers—Additions

The following Special Interest Groups are being added to the list of SIGs that will accept proposals in response to the Call for Papers for the Annual Meeting (May 1994 *ER*):

Hispanic Research Issues, Barbara M. Flores, School of Education, California State University, San Bernardino, 5500 University Parkway, San Bernardino, CA 92407. 909-880-5622.

International Studies, Mary (Betsy) Brenner, Department of Education, University of California, Santa Barbara, CA 93106. 805-893-7118.

Mastery Learning, Glenn M. Hymel, Department of Psychology, Loyola University, New Orleans, LA 70118. 504-865-3257.

Peace Education, Adeth Deay, Box 6122, Allen Hall, West Virginia University, Morgantown, WV 26505-6122. 304-293-3441.

Research on Giftedness and Talent, Winifred Stariha, 3430 N. Bosworth, Chicago, IL 60657. 312-535-4029.

Teacher as Researcher, Susan Threatt, 5972 Ascot, Oakland, CA 94611. 510-530-1207.

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