
Caution! Constraints on Translating Research into Practice

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(This paper is one of a series on the topic
"Changing Classroom Practices: Roadblocks and Detours")

This paper is one of three from a problems-court session on roadblocks and detours to changing instructional practice. The aim of the problems court was to identify situational factors that can be modified and thereby set the stage for changes in classroom practice. In the first paper, Wayne Otto (this volume) draws on work by Fraatz (1987) to suggest that classroom practices will not change unless teachers come to see themselves as the locus of power in classrooms and schools. Such a change, according to Otto, would free teachers to pursue innovation and develop tolerance for the uncertainty and ambiguity that underlies reading instruction. Bernie Hayes (this volume), in the second paper, addresses the need to change teacher training. He suggests that many teachers have misconceptions (e.g., "materials teach reading") about reading instruction which influence the skills and knowledge they acquire for teaching reading. One way to overcome common misconceptions, according to Bernie, is to embed teacher training in problem-solving contexts so that teachers are taught how to solve instructional problems and make instructional decisions on their own.

The aim of this paper is to address a third situational factor that can be altered to pave the way for affecting change in classroom practice. This factor concerns those of us who act as intermediaries between researchers and teachers and who attempt to affect change by translating research and theory into implications for classroom practice.

Three constraints are presented to remind us of lessons once learned but perhaps forgotten about drawing implications from research for classroom practice.

Theory and Research/Problems and Solutions

The first constraint concerns the point that theories do not explain and predict reading behavior nor do research results yield answers to instructional problems (Good, 1983). A wealth of theories about the processes of decoding and comprehending written material are available to reading educators today. These theories, however, cannot and do not explain or predict anything; we do. Our understanding of a given theory enables us, the users of the theory, to explain and predict reading performance. Too often, however, theories are presented as inviolable truths that should dictate how teachers are supposed to think about reading. This leads teachers into the trap of believing that theories can provide answers to concrete problems. The truth of the matter, as noted by Otto, is that either teachers solve instructional problems related to reading or they do not get solved. Thus, those of us who act as intermediaries, need to be cautious about claiming that nothing is as practical as a theory because theories are not practical. They are hypothetical explanations about relationships among variables that provide tools for reflective thought about instructional problems and practices.

The same holds for how we present implications of research for practice. Often, in the publish or perish press of our profession, we may mislead teachers into believing that research results yield answers to instructional problems across all instructional contexts. We forget the admonitions we received as graduate students that research findings *suggest* or *indicate* but nothing more. Research findings provide alternatives or new directions for solving problems, but, as noted by Brophy (1986), scientific data cannot be translated directly into policy decisions or instructional implications because these depend upon goals or outcomes desired by teachers and policy makers and "setting goal priorities involves values not science" (p.1074).

For example, Mannes and Kintsch (1987) found that different types of advance organizers affect the type of representations readers developed for instructional texts. One type of organizer induced readers to construct a situation-model representation which did not include many of the details presented in the text. Another type of organizer induced a text-based representation that was a veridical representation of information from the text. On both immediate and delayed recall tests, students who formed the veridical representation achieved

higher scores than students who formed a situation-model representation. However, students who formed the situation-model representation achieved higher-scores on delayed problem-solving tests. These students were able to use the information they read whereas students in the other group could only remember it. These results suggest that different instructional techniques produce different learning outcomes. In this case, advance organizers that were inconsistent with the way ideas were organized in a text enhanced transfer and application of the ideas—a rather lofty instructional goal.

Teachers, however, must decide which goal, memory or problem-solving, is of most value for their students because instructional goals and instructional problems are not constant across students, teachers, subject areas, or schools (Good, 1983). Moreover, the insinuation that research findings can provide solutions to problems undermines teachers' confidence in themselves (e.g., researchers have the answers to educational problems) and diminishes their willingness to draw on personal experience and observations as a basis for decision making.

Modesty and Consideration of Consequence

The second constraint concerns the need for intermediaries to be more modest in their suggestions for classroom practice and more considerate of the consequences of their advice on students, teachers, and administrators (Cuban, 1988). At this point, little evidence exists to support the notion that any particular method or approach improves reading performance in general. As noted by Artley (1981), any reading program or instructional technique may help some students yet create or fail to respond to the difficulties of others. Moreover, we have little evidence that teaching any reading skill, strategy, or process does anything to improve reading comprehension in general (Pearson & Dole, 1987; Stahl & Miller, 1989), and it just could be that the most straight forward way to improve student comprehension is to enhance their background knowledge about school subjects. Nevertheless, reading education conferences, journals and methods texts are filled with "research based" practices (e.g., QAR's, SQ3R) for teaching reading that may have more to do with fads and tradition than research results. Use of the label "research-based" practices, implies that the techniques carry the "Good House Keeping Seal of Approval" (Clark, 1985, p.282) even though the available research findings actually yielded contradictory or marginal evidence about the effectiveness of the techniques. Thus, we need to be

more modest when we draw implications for practice, qualifying them by the objectives and content domain of the supportive research and by the age and ability level of the subjects who participated in the studies.

In addition, we need to recognize that our advice and recommendations may influence policy-makers and administrators in unintended ways. Even though Otto (this volume) suggests that teachers are not really badgered by legislation, administrative edicts and the demands of special programs, I think they are. These factors, from my perspective, do indeed exert powerful influences on teaching practices. A case in point is the way some states have reduced the results of the Beginning Teacher Research to lists of behaviors by which teachers at all grade levels and in all subject areas should be evaluated (Good, 1983). This has even spread to teacher training programs as a way to evaluate student teachers despite Good's (1983) and Brophy's (1986) efforts to present their findings as tools for thinking and talking about teaching. The translators and users of this research, not the researchers themselves, have turned a set of limited findings into some normative standard of instruction. Hence, when we translate research into suggestions for practice, we need to do so with tenuous language so that research findings are presented as options and guidelines, not edicts about what is or what is not effective practice.

Changing Teacher Training

The third and final constraint concerns the fact that we need to avoid blind application of research by training teachers and administrators to be more informed consumers. Translating theory and research findings into recommendations for practice is difficult and often ignored in teacher-training programs which are often characterized by method madness. Nevertheless, drawing implications for practice requires people who know how to make informed decisions and who can analyze classroom contexts and instructional goals (Good, 1983), and teachers and administrators need to be trained in these processes so that they learn how to use theory and research intelligently.

Some teacher educators claim that a way to bridge the gap between research and practice is to highlight similarities between teaching and research. The task, apparently, is to demonstrate that teachers and researchers are concerned with the same subject matter (reading) and use similar methods to study and learn about that subject. According to this view, both teachers and researchers operate from theories or conceptions of reading which they set out to confirm or disconfirm.

The analogy drawn is between teaching practices and scientific research methods. Activities such as diagnosis, prescription, instruction, and evaluation are equated with hypothesis formation, the design of experiments, data collection, and hypothesis testing.

Bolster (1983) and Jenkins, Liberman, and Curtis (1978), however, suggest that this analogy is misleading and argue that the analogy of teacher as researcher causes communication breakdowns to occur because researchers and practitioners differ radically in how they perceive and interpret information about teaching and learning. The source of these differences lies in the interests, goals, experience and background knowledge of practitioners and researchers. Bolster (1983) and Jenkins, et al. (1978) claim these differences have to be addressed if we want practitioners to translate theory and research into school practices. This will involve (a) changing teachers' knowledge base and (b) teaching them strategies for processing information about theory and research so that they learn how these information sources can be used as a basis for deciding upon instructional action. Thus, Hayes' (this volume) suggestions for embedding teacher training in problem-solving contexts is a fruitful avenue to pursue as a way to train teachers to use theory and research as tools to analyze, understand, and make sense out of instructional events. The goal of changing teacher education, however, will be no easier to accomplish than the goal of changing classroom practice as long as we operate under the situational constraints of colleges and universities in which teacher education is conducted in artificial settings and publishing is more important than instruction.

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