



## Direct Instruction: Effective for What and for Whom? \*

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*Direct instruction is more effective for some purposes and students than for others. The approach used should depend on the type of student and the teacher's objectives.*

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For a number of years, "process-product" researchers have studied the relationship between teacher behaviors (process) and student achievement (product) with the hope of determining what teacher behaviors will lead to increases in student achievement and attitude. At last, this research has borne fruit. Several reviewers of process-product research have recently concluded that effective teaching is characterized by a pattern of teaching behaviors that they have called "direct instruction." (See, for example: Gage, 1978; Good, 1979; Medley, 1979; Rosenshine, 1979.)

According to Barak Rosenshine (1979), direct instruction has the following characteristics: an academic focus; a teacher-centered focus; little student choice of activity; use of large groups rather than small groups for instruction; and use of factual questions and controlled practice in instruction. Thomas Good (1979) describes direct instruction as "active teaching":

A teacher sets and articulates the learning goals, actively assesses student progress, and frequently makes class presentations illustrating how to do assigned work.

In reading these reviews of process-product research, one may become convinced that direct instruction is the most effective way of teaching. But a closer and more exhaustive search of the research literature suggests that this conclusion may be simplistic. We need to ask the question, "For what educational outcomes is direct instruction most effective and for what kinds of students?"

### Direct Instruction: Effective for What?

Robert Horwitz has reviewed nearly 200 studies that compared educational outcomes of open class-

\* Work on this article was supported by the Wisconsin Research and Development Center for Individualized Schooling, which is supported in part by funds from the National Institute of Education (Grant No. OB-NIE-G-78-0217). The opinions expressed in this article do not necessarily reflect the position, policy, or endorsement of the National Institute of Education.

room teaching with traditional teaching. Although traditional teaching may not be completely synonymous with direct instruction, it is clearly more direct than open teaching. Furthermore, the following characteristics of open teaching are the converse of the characteristics of direct instruction:

. . . flexibility of space, student choice of activity, richness of learning materials, integration of curriculum materials, and more individual or small-group than large-group instruction (Horwitz, 1979, pp. 72-73).

I used the studies located by Horwitz to investigate the size of the effects of open vs. more direct or traditional approaches (see Peterson, 1979). In other words, I wanted to describe the practical importance of the effects of direct instruction. From Horwitz's review and my review, I concluded that with direct or traditional teaching, students tend to do slightly better on achievement tests, but they do slightly worse on tests of abstract thinking, such as creativity and problem solving. Conversely, with open teaching, students do somewhat worse on achievement tests, but they do somewhat better on creativity and problem solving. Furthermore, open approaches excel direct or traditional approaches in increasing students' attitudes toward school and toward the teacher and in improving students' independence and curiosity. In all these cases, the effects were small.

#### Direct Instruction: Effective for Whom?

Research also suggests that the effectiveness of direct instruction may depend on the type of student who is being taught. For example, Wright and DuCette (1976) found that students who had an internal locus of control—felt that they had personal control over their successes and failures—achieved more in open approaches than in direct approaches. Students who had an external locus of control—felt that their successes and failures were due to fate, luck, or other forces outside their control—achieved equally well in direct as in open approaches. Another study (Arlin, 1975) reported similar findings when attitude toward school and attitude toward teacher were the educational outcomes. Finally, Terence Janicki (1979) found that students with an internal locus of control did worse in a direct instructional approach than in a small-group approach in which they were allowed to work on math problems in small groups and had some choice of group activities. Conversely, students with an external locus of control did worse in the small-group approach and did better in a direct approach in which students were taught as a large group and then worked on seatwork individually.

We can see from these findings that the effectiveness of direct instruction depends on the students' sense of personal control. In direct instruction, learn-

ing is closely directed, monitored, and controlled by the teacher—the student actually has little control over instructional events. It's not surprising, therefore, that direct instruction would be beneficial for external students, who have a locus of control that matches the actual teaching situation, and detrimental for internal students, who may be frustrated in a situation where they have little control.

The effectiveness of direct instruction also seems to depend on students' ability. Two studies have re-

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*"A student with an internal locus of control may chafe under the restraints of direct instruction while a student with an external locus of control might relish the opportunity to leave the responsibility in the teacher's hands."*

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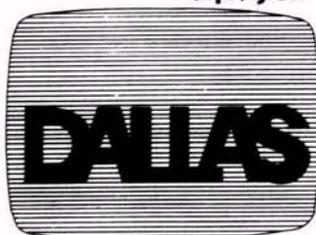
ported that high achieving, task-oriented students do worse in direct instruction than in less direct approaches (Ebmeier and Good, 1979; Solomon and Kendall, 1976). Similarly, in a recent study, we found that high ability students did better in a small-group approach than in a more direct approach in which students were taught as a large group and then worked on seatwork individually (Peterson and Janicki, in press). Low ability students did better in the large-group approach than in the small-group approach.

To determine why high ability students did better in the small-group approach, we examined the information we had gathered by observing students. We found that in the small-group approach, high ability students often explained to other students in their group. These explanations usually consisted of helping another student with a workbook problem or "teaching" the other student how to work a certain kind of problem. Apparently, these explanations benefited the giver of the explanation but did not necessarily help the receiver. Thus, high ability students learned much by explaining the material to other students in their group. Low ability students, on the other hand, probably needed the greater direction and help provided by the teacher in the large-group approach.

#### Educational Implications

One important implication of the research I have reviewed is that the choice of a teaching approach should depend on the educational objective a teacher wants to attain. Thus, if a teacher wants to teach inquiry skills to students, he or she should not use direct instruction. If, on the other hand, a teacher

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wants to teach basic skills in reading and math, direct instruction would be appropriate.

A second implication is that the choice of direct instruction vs. another approach should depend on the type of student who is being taught. A low ability student might need the greater structure of a direct approach, but a high ability student may benefit from the opportunity to work with other students in a less direct approach. A student with an internal locus of control may chafe under the restraints of direct instruction while a student with an external locus of control might relish the opportunity to leave the responsibility in the teacher's hands.

Thus, effective teaching involves the considered selection of a teaching approach to attain a desired educational outcome with a particular type of learner. In other words, effective teaching involves teacher decision making. One researcher has gone so far as to say that decision making is the basic teaching skill (Shavelson, 1973). In keeping with this new view of effective teaching, some researchers have moved from studying the "process" of teacher and student behaviors to studying the "process" of teacher thinking and decision making. (See, for example: Clark and Yinger, 1979; Peterson and Clark, 1978; Peterson, Marx, and Clark, 1978). In a few years, these researchers may have some new insights into what constitutes effective teaching.

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