# Five Meanings of Direct Instruction

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# Introduction

Direct instruction refers to instruction led by the teacher, as in "the teacher provided direct instruction in solving these problems." But if one enters "direct instruction" into an ERIC (Educational Resources Information Center) search, one finds that the term has appeared with a variety of meanings, some general and some specific, some positive and some negative.

This problem occurs because direct instruction, and terms such as direct teaching and explicit instruction, has both a general meaning and a specific meaning. The general meaning refers to any instruction that is led by the teacher regardless of quality. However, as will be discussed, the term direct instruction also has three specific uses: (a) the instructional procedures that were used by the most effective teachers, (b) the procedures that were used in experimental studies where students were taught cognitive strategies to use in reading or writing, or (c) the instructional procedures that are used in Distar classrooms.

These different meanings create a problem for the reader when authors do not specify the specific meanings they are using. And often, even authors are not aware that the term direct instruction has these different meanings.

The purpose of this article is to describe these different instructional meanings and specify the differences among them. But even these descriptions may not be sufficient to decipher articles when authors use the term direct instruction without specifying to what they are referring.

I suggest that there are five overlapping uses of the term direct instruction:

1. Academic instruction that is led by a teacher regardless of the quality of instruction.
2. The instructional procedures that were used by effective teachers in the teacher effects research.
3. Instructional procedures used by teachers when they taught cognitive strategies to students.
4. Instructional procedures used in the Distar (Direct Instruction Systems in Arithmetic and Reading) programs.
5. Instruction where direct instruction is portrayed in negative terms such as settings where the teacher lectures and the students sit passively.

# Key Principles

## The General Teacher-Led Meaning

The term direct instruction has been used for over a century to refer to any academic instruction that is led by the teacher. This term appeared in 1893 in Joseph Meyer Rice's book, *The Public School System of the United States*. Rice complained "in many of the grades the chil-

dren received direct instruction for no more than two or two and a half of the five hours spent in school, the pupils being engaged in busy-work more than half the time" (pp. 153-154).

Similarly, a description of a reading program noted that "A child spends part of each hour receiving direct instruction from a teacher in skills development and spends the remainder of the hour in reinforcement activities under the supervision of an aide" (Broward County Schools, 1974).

Currently, many state departments of education and school districts refer to direct instruction or synonyms such as direct teaching or explicit instruction. Unfortunately, these reports seldom specify the specific instructional procedures associated with the term. Reading these documents, we do not know whether direct instruction is being used to refer to any instruction by the teacher or to a set of specific instructional procedures. We are seldom told how direct instruction differs from discovery learning. We assume that in direct instruction a teacher models and demonstrates a skill, but when direct instruction is used in this general sense, we are seldom given any instructional specifics, and it is left to the reader to infer what the term means.

## The Teacher Effects Pattern

Direct instruction also refers to a specific pattern of instruction that emerged from studies which attempted to identify the instructional procedures used by the most effective teachers, those teachers whose students made the greatest gains in achievement. This research is also referred to as the teacher effectiveness, teacher effects, or process-product research.

Research in this process-product tradition begins with first locating 20 to 30 teachers all of whom are teaching the same grade. All the classrooms are then administered pretests in reading or mathematics or the subject of interest. Next, observers visit the teachers' classrooms and observe and record the frequency of different instructional behaviors. Such behaviors include the number and type of questions that are asked, the frequency of feedback provided by the teacher, the amount of time spent in presentation and in guided practice, and how the teacher prepares students for independent practice.

At the end of these observations, all the students take a posttest, and the pretest and posttest scores are statistically analyzed to determine which teacher's classrooms made the largest and smallest gains, after adjusting for differences in the initial abilities of the students. In effect, we now have two sets of teachers: those whose students made the largest and smallest academic gains during the time of study. We are now able to list and compare the instructional behaviors of those teachers whose classes made the largest gains with the instructional behaviors of those teachers whose classes made the smallest gains. Thus, in this final step, the two groups of teachers are compared

on the recorded behaviors such as frequency of questions, types of questions, and types of feedback to students.

These correlational studies were followed by experimental studies where one group of teachers received instruction in the most effective instructional procedures and a control group of teachers continued their regular teaching. Students taught by the teachers who received these experimental instructions made significantly greater gains in mathematics (Good & Grouws, 1979) and in reading (Anderson, Evertson, & Brophy, 1979).

My purpose in giving the above detail is to demonstrate that all of the instructional procedures in this effective teacher pattern are empirically based and came from the study of those teachers whose classes gained the most on standardized tests.

McDonald and Elias (1976) and Rosenshine and Stevens (1986) believed that the results in these studies fit a specific pattern, and they called this pattern "direct instruction." Rosenshine and Stevens concluded that across a number of studies, when effective teachers taught well-structured topics (e.g., arithmetic computation, map skills), the teachers used the following pattern:

- Begin a lesson with a short review of previous learning.
- Begin a lesson with a short statement of goals.
- Present new material in small steps, providing for student practice after each step.
- Give clear and detailed instructions and explanations.
- Provide a high level of active practice for all students.
- Ask a large number of questions, check for student understanding, and obtain responses from all students.
- Guide students during initial practice.
- Provide systematic feedback and corrections.
- Provide explicit instruction and practice for seatwork exercises and monitor students during seatwork.

Rosenshine and Stevens further grouped these instructional procedures under six teaching "functions," as shown in Table 1. Hunter's (1982) work, particularly her six step lesson plan, fits the teacher effectiveness model. Indeed, the term "guided practice" was one of Hunter's important contributions.

| Table 1: Results from the Effective Teacher Research | |
| --- | --- |
| Reduce the difficulty of the task during initial practice. | State lesson goals. |
| | Divide the task into smaller components. |

| Table 1: Results from the Effective Teacher Research | |
| --- | --- |
| Use scaffolds and guidance to support students during initial practice. | Teacher models use of the strategy or procedure. |
| | Teacher thinks aloud as strategies are selected and choices are made. |
| | Anticipate student errors. |
| | Check for student understanding. |
| | Obtain responses from all students. |
| | Gradually combine the components into a whole. |
| Provide supportive feedback. | Provide systematic corrections and feedback. |
| | Provide check lists. |
| | Provide models of the completed task. |
| | Provide students with fix-up strategies. |
| Provide for extensive student independent practice. | |

Tobias (1982) suggests we use the term "supported instruction" because the distinction between the more effective and the less effective teachers lies in the amount of "instructional support" that they provide for their students. Others have suggested that we use the term "direct teaching."

*Specific instructional programs.* There are a number of instructional programs that use forms of systematic and direct instruction and which have been successful with students from low-income families. Three such programs in reading are Open Court Reading, ECRI Reading, and Cooperative Integrated Reading and Comprehension (CIRC). The American Federation of Teachers (1998) has provided a description of each of these programs as well as the relevant supporting research.

Two successful direct instruction programs in mathematics are Saxon Math (Saxon Publishers, 2005) and Team Accelerated Instruction: Math (Promising Practices Network). The websites in the references provide documentation of the success of these programs.

The American Institute of Research (2005) assembled the research on school-wide programs in reading and mathematics and rated the Success for All school-wide program as "moderately strong" in overall positive effects and rated the Core Knowledge program as "moderate" in overall positive effects. The instructional procedures in both programs employ systematic and direct instruction.

## The Cognitive Strategies Meaning

Beginning around 1968, researchers used direct instruction as a summary term for the instructional procedures used to teach higher level cognitive tasks. For example, in summarizing the results of the 27 projects involving 20,000 students in the First-Grade Reading Studies (Dykstra, 1968), one of the coordinators of the project wrote that "direct instruction in comprehension is essential."

Since that time, the term direct instruction has been used in a number of studies where strategies for reading comprehension were taught (Berkowitz, 1986; Lonberger, 1988; Palincsar & Brown, 1983, 1989). Dermody (1988) referred to her work as "direct instruction of the specific comprehension strategies of predicting, clarifying, question-generating, and summarizing ..." (p. 57), and Grajia (1988) referred to her work as "direct instruction of a summarization strategy" (p. 89).

Other researchers who developed procedures to teach students to combine sentences (Hart, 1971), to develop "process skills" (Deane, 1972), test-taking strategies (Woodley, 1975), and to engage in reflective thinking (Readence & Bean, 1977) referred to the instructional procedures they used as direct instruction.

In most of these studies students who received "direct instruction" in cognitive strategies significantly outperformed students in the control group comprehension as assessed by experimenter-developed short answer tests, summarization tests, and/or recall tests. This literature has been reviewed by Pressley et al. (1990) and by Collins, Brown, and Newman (1990).

The predominant instructional procedures for teaching a cognitive strategy involved providing students with scaffolds, or temporary supports, on which they could rely during initial learning (Collins, Newman, & Brown, 1990). Some of those instructional procedures or scaffolds include:

1. Modeling of the use of strategy by the teacher.
2. Thinking aloud by the teacher as choices were made.
3. Providing cue cards of specific prompts to help students carry out the strategy.
4. Dividing the task into smaller components, teaching each component separately, and gradually combining the components into a whole process.
5. Anticipating student errors.
6. Encouraging student thinking aloud during strategy use.
7. Providing for reciprocal teaching by teacher and students.
8. Providing check lists.
9. Providing models of completed work.

The scaffolds were diminished as students learned the strategy and became independent. Table 2 contains these scaffolds organized into instructional functions. Thus there is an extensive body of research for teaching higher-level tasks and special instructional procedures that were developed to facilitate this instruction.

| Table 2: Results from the Cognitive Strategy Research | |
|---|---|
| Reduce the difficulty of the task during initial practice. | State lesson goals. |
| | Divide the task into smaller components. |
| Use scaffolds and guidance to support students during initial practice. | Teacher models use of the strategy or procedure. |
| | Teacher thinks aloud as strategies are selected and choices are made. |
| | Anticipate student errors. |
| | Check for student understanding. |
| | Obtain responses from all the students. |
| | Provide students with cue cards. |
| | Gradually combine the components into a whole. |
| Provide supportive feedback. | Provide systematic corrections and feedback. |
| | Provide check lists. |
| | Provide models of the completed task. |
| | Provide students with fix-up strategies. |
| Provide for extensive student independent practice. | |

This form of instruction might also be called scaffolded instruction because of the emphasis upon the use of scaffolds to help students develop new knowledge structures.

*Specific programs.* The Open Court Reading Program, the ECRI Reading Program, and the Success for All School-Wide Program (American Federation of Teachers, 1998) which were cited, above, in the Effective Teachers description as effective, evidence-based programs also incorporate cognitive strategies and the use of scaffolds in their instructional procedures.

Reciprocal teaching (Promising Practices Network) is a successful program where direct instruction is used to teach students specific cognitive strategies such as question asking and summarizing, and students then practice these strategies in groups.

## Distar Meaning

Another use of direct instruction is in reference to the Distar programs and to the specific instructional procedures that accompany those curriculum packages (W.C. Becker, 1977). Distar originally stood for Direct Instruction Systems in Arithmetic and Reading, although it is now only known by the acronym itself, DISTAR. Around 1977, the Distar developers began to use the term Direct Instruction to identify their program. The Distar instructional procedures overlap with many of the instructional procedures found in the teacher effects research and in the cognitive strategy research. However, it should be noted that the instructional procedures in Distar were developed independently.

The researchers in the Distar tradition use upper-case letters to refer to their work; they write Direct Instruction or DI. However, critics of the DI approach frequently use the lower case direct instruction and so the reader is not always sure whether direct instruction or Direct Instruction is being criticized.

The Distar procedures, developed by Englemann and his associates in the 1960's, are connected to the specific instructional materials that are part of the Distar package. The Distar procedures were never developed into general procedures for teachers as was the case with the teacher effects results.

Three Distar researchers (Gersten, Carnine, & Woodward, 1987) wrote that the Distar meaning of Direct Instruction has six critical features:

1. An explicit step-by-step strategy.
2. Development of mastery at each step in the process.
3. Teachers are given specific correction procedures to use when students make errors.
4. Gradual fading of teacher direction as students move toward independent work.
5. Use of adequate and systematic practice through a range of examples of the task.
6. Cumulative review of newly learned concepts.

For a review comparing the effectiveness of Distar and other programs for at-risk students see Kennedy (1978). Regardless of the success, instructional procedures in Distar programs such as asking for student choral responses after very short teacher presentations and providing scripts for a teacher to follow have been sharply criticized by many educators for being overly directed and rigid. Critics who disparage direct instruction are frequently referring to the Distar program.

*Specific programs*. The Distar reading program is one of the What Works programs selected by the American Federation of Teachers (1998). The American Institute of Research has assembled research involving Distar programs since 1980 and rated the results as "moderately strong."

## The Undesirable Teaching Meaning

Some writers believe that direct instruction represents undesirable teaching. Direct instruction has been described as "authoritarian," (McKeen et al., 1972), regimented (Borko & Wildman, 1986), "fact accumulation at the expense of thinking skill development" (Edwards, 1981) and focusing upon tests (Nicholls, 1989). Direct instruction has also been portrayed as a "passive" mode of teaching (Becher, 1980). Direct instruction has been described as the pouring of information from one container, the teacher's head, to another container, the student's head (Brown & Campione, 1990, p. 112).

All of these critics are proposing that teachers use forms of "student centered" or activity-based instruction in place of direct instruction.

## Sources of Confusion

We see, then, that the term direct instruction has a wide, general meaning, specific meanings, and an undesirable teaching meaning. Those who write about direct instruction may not be aware of these different meanings. Readers who only come across disparaging comments about direct instruction may not realize that there are sets of instructional procedures, labeled direct instruction, which have been used successfully and reliably to help students learn.

If an education newspaper says that use of direct instruction is increasing—without specifying any details as to the type and form of direct instruction—the reader cannot decipher which of the meanings applies. If a school district writes that they are using direct instruction, without providing more details, then the reader cannot decipher what is meant.

## Common Instructional Elements

There is a good deal of overlap in the three instructional meanings: Guided practice, active student participation, and fading of teacher-directed activities appear in all three meanings. Scaffolds, modeling by the teacher, and coaching of students also appear in all three.

Even though the teacher effectiveness meaning was derived from research on the teaching of "well-structured" tasks such as arithmetic computation and the cognitive strategy meaning was derived from research on the teaching of "less-structured" tasks such as reading comprehension, there are many common instructional elements in the two approaches. These common elements can be grouped into four categories:

1. Reducing the difficulty of the task during initial practice.

- Presenting new material in small sections.

2. Providing scaffolds and support.

- Modeling of the procedure by the teacher.

- Thinking aloud by the teacher.

- Guiding initial student practice providing students with cue cards.

3. Providing supportive feedback.

   - Providing systematic corrections and feedback.

   - Providing students with fix-up strategies.

   - Providing expert models of the completed task.

4. Providing for extensive student independent practice.

## Conclusion

The conclusions from the teacher effects research and from the cognitive strategy research have been available to the education community for many years. Simply enter the terms effective teaching, teacher effects, and cognitive strategies into a search engine and thousands of sites will be available. As a profession, we can be proud of these findings.

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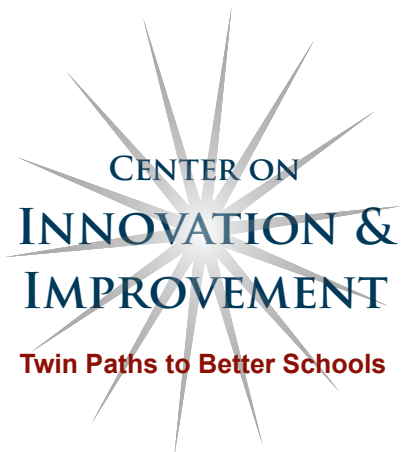
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