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*The direct instruction pattern is an effective teaching style for a particular population of children, although more testing is yet needed.*

# **IMPLEMENTING THE DIRECT INSTRUCTION PATTERN**

## **A Study with Primary Grade Low SES Children**

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**In recent years** the ever-present theme of meeting students' needs has pervaded the language of educators. One population of students whose needs have been studied are primary grade low socioeconomic status (SES) children in the Follow Through Model Programs (Abt Associates, 1977; House et al., 1977; Becker and Engelman, 1978), and in research on teacher effects (Soar, 1973; Stallings and Kaskowitz, 1974; Solomon and Kendall, 1976; Tikunoff et al., 1975; Anderson et al., 1979). More specifically, the Follow Through Model Programs tested a variety of approaches to teaching economically disadvantaged primary grade children, whereas the research on teacher effects studied the relationship between teacher behavior and pupil achievement. Coincidentally, the findings from both research perspectives suggest similar findings. That is to say, the Follow Through Model Programs data supports the academic effectiveness of the direct instruction model (Becker and Carnine, 1978; Abt Associates, 1977; Becker and

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Engelmann, 1978) and the teacher effects data suggest that the elements of teacher behaviors included in the direct instruction model, strongly affect student achievement (Soar, 1973; Stallings and Kaskowitz, 1974; Good and Grouws, 1975; Gall et al., 1975; Rosenshine, 1976; Rosenshine and Berliner, 1978).

However, it should be noted that the literature describing the direct instruction model as a specified system of teacher behaviors is incomplete. There has been little direction provided for the translation and implementation of the direct instruction pattern into a pragmatic teaching style. Therefore, the intent of this article is to describe the direct instruction pattern as a workable teaching style, clustering related teacher behaviors included in instructional organization and management, and describing the teacher as center of attention, responding to pupils, and organizing and presenting materials. Consequently, the purpose of this article is to provide a rationale for a pattern of direct instruction and describe and offer examples of how the direct instruction pattern may be used, and to suggest the use of an observation instrument to code and monitor direct instruction behaviors. Hopefully, teachers will be supported and encouraged to test the direct instruction pattern for academic performance of low SES primary grade youngsters.

### **RATIONALE FOR A PATTERN OF INSTRUCTION**

Researchers have reported isolated teacher characteristics rather than patterns of instruction that have affected student achievement (Rosenshine and Furst, 1971; Dunkin and Biddle, 1974). Indeed, it would be neat, clean, and efficient to identify a behavior that would make it possible to say to a prospective teacher, "If you are successfully trained to behave in this way, all of your pupils will surely achieve!" Process-product research in teacher effectiveness has proven this identification to

be an educational fantasy. In fact, an ambitious pioneer study by Soar (1976) suggested that the teaching process is so complex that no one single aspect can best support pupil achievement. Instead, what has emerged is that one of the major domains of teaching performance that appears to be critical to student achievement is how instruction is organized (McDonald, 1976). McDonald grouped teaching behaviors into what he termed "patterns of performance," or larger categories or combinations of behavior that he had originally identified. Some of these patterns included organization, activity, teacher-pupil interaction, and pupil behavior. Gage (1976), in a study employing an experimental design, tested the effects of eight variations or patterns differing in the amount and kind of structuring, soliciting, and reacting used by the teacher. The high and low levels of structuring, soliciting, and reacting were defined by combining teaching behaviors that earlier research had suggested were related to student achievement. The work of McDonald and Gage indicates that emphasis should be placed on identifying clusters of inter-related teaching behaviors that will affect student achievement.

#### EMERGENCE OF THE DIRECT INSTRUCTION PATTERN

Rosenshine (1976) formulated a pattern for direct instruction based on three studies on teaching low SES students in primary grades. These were studies by Stallings and Kaskowitz (1974), Soar (1974), and Brophy and Evertson (1976).

The settings for two of the studies by Stallings and Kaskowitz (1974) and Soar (1974), were the Follow Through and Planned Variation programs. The study by Stallings and Kaskowitz was based on three full days of observations made in 108 first-grade and 58 third-grade classrooms with low SES learners during 1972-1973. The programs observed represented six different models plus non-Follow Through classrooms used for purposes of comparisons. More than one-half of the sponsor classroom teachers used flexible teaching approaches,

one-fourth used structured teaching approaches, and one-fourth were in non-Follow Through control classes. Process measures were derived from an observation instrument, and the part correlations between process and outcome (adjusted for entry scores) were presented. Of these, the most highly correlated suggest that length of the school day and the average reading activity engagement time are related to high reading scores in both first and third grades. In classrooms where there was more content-related student-to-teacher verbal interaction, there were higher test scores. In classrooms where textbooks and programmed workbooks were used frequently, test scores were especially high. Furthermore, higher reading scores were obtained in classrooms using systematic instructional patterns coupled with positive reinforcement. In contrast, the following behaviors were found to be negatively correlated with achievement: child working alone, open-ended questions, and nonacademic comments by both learners and teachers. Moreover, similar results were found in mathematics classes, where teachers used systematic instructional patterns and positive reinforcement. Length of school day and engagement were related to high mathematics scores in first through third grades.

Soar made observations in 159 Follow Through classrooms in 1970. Four low-inference instruments and one high-inference rating instrument were used. The results were factor analyzed and then correlated with achievement scores in mathematics and reading. Factors in which direct instruction variables had high positive loadings usually had significant positive correlations with student achievement. In classes where significant correlations were not obtained (notably, the entering first-grade classrooms), Soar noted that mean classroom scores on structuring tended to be lower than those of classrooms in other contexts. Thus, structuring usually tended to be significantly and positively related to achievement.

Brophy and Evertson studied for two years primary grade teachers who had been identified as consistent in their affecting positive student achievement across four years. Brophy and

Evertson observed 31 teachers 4 times during the first year of the study, and 28 teachers were observed 14 times during the second year; 19 teachers were studied both years, of whom 13 taught in low SES classrooms both years. Information was collected on 163 high-inference and 208 low-inference classroom process variables, a total of 371 variables. Correlations were computed between scores on each of these measures and the average residual gain score of each teacher's pupils for the previous four years. The .10 level of significance was selected to report the findings. Selected results indicated that: (1) seatwork and teacher demonstrations were more functional than public questioning or focused discussions; (2) giving the student the answer when the student did not know or giving him a phonics clue in reading was more functional than giving feedback on how to solve something; and (3) when a student knew the answer, the best response was to ask another question rather than give detailed feedback or elaboration. Cruickshank (1976) compared the work of Stallings and McDonald in trying to identify the variables related to high reading achievement in primary grades. Among those variables cited by Cruickshank was direct instruction accomplished by monitoring, interacting, and providing individual feedback.

On the basis of this research, several teaching variables reflecting the organization and management of instruction have been identified as having a relationship to student achievement. More specifically, the studies of Soar (1973), Stallings and Kaskowitz (1974), and Brophy and Evertson (1976) involving the teaching of low SES students in primary grades provided Rosenshine with process variables that he incorporated into a treatment pattern referred to as *direct instruction*. Direct instruction demands a classroom management system that includes a great deal of time spent on academic activities. During this time, the teacher uses highly organized, planned for, and structured materials. The teacher acts as dominant leader, insisting upon on-task activities by students. Learning is approached in a direct, business-like manner and the questions posed by the teacher are narrow and

direct. Teachers set forth their own predetermined goals prior to the onset of the lesson. Within this task-oriented setting, teachers are warm and encouraging.

#### **DESCRIPTION OF DIRECT INSTRUCTION PATTERN**

It is clear that the significant variables reported by Rosenshine to be related to achievement of low SES primary age children can be characterized by clusters of teacher behaviors. These include instructional organization and management in which the teacher is the center of attention in response to pupils, and in organizing and presenting materials. Consequently, the following description of the direct instruction pattern is offered.

##### **Center of Attention**

*You* are the *dominant* leader and *central* authority. You are responsible for establishing and enforcing rules for group behavior. It is your responsibility to structure the time in that you give specific directions and instructions as to what to do, how to do it, and when to do it. You are concerned with the educational task and in order to monitor on-task involvement, you walk around the room and verbally keep students on-task while limiting their socialization with each other. Even though you are in charge, the atmosphere in the room is warm, convivial, democratic, and cooperative.

##### **Response to Pupil**

Your responses to pupils' written and oral work include the following observable acts: reinforcement of answers as right or wrong; asking another pupil to give an answer if one pupil fails to answer quickly; prompting by hints; and providing correct responses and reasons.

##### **Organizing and Presenting**

When you *plan*, *organize*, and *present* materials, the following may be observed: statement of objectives at the

beginning of a lesson; presentation of content-related information (data); asking questions that are mostly *narrow, direct*, and involving *recall* with *some* that are *higher order*; review of materials; frequent summary, during, and at conclusion of the lesson; and signals to indicate transition, important points, and movement to new topics.

## EXAMPLES OF DIRECT INSTRUCTION DESCRIPTORS

To further clarify and facilitate the use of the direct instruction pattern, the teacher may wish to examine examples of behaviors one may exhibit when implementing this teaching style. These examples have been organized under the categories: I. Center of Attention, II. Response to Pupils, and III. Organizing and Presenting Content.

### I. Center of Attention

#### A. Rules and Discipline

- (1) Teacher establishes. (Examples of teacher statements: "Raise your hand to answer," "No talking when I am talking," "Don't leave your seat unnecessarily.")
- (2) Teacher enforces. (Examples of teacher statements: "Mary, please sit down," "Remember the rule about raising hands," "Joe, please don't talk when I'm talking.")

#### B. Structuring Directions, Tasks, and Use of Time

Teacher tells students what task to do, how to do it, and when to do it. (Examples of teacher statements: "On page one, silently read the directions because we will begin to work on activities 1-3 in about 2 minutes," "Activity 3 involves tossing dice. Toss your dice and record your findings on the provided paper. Watch me, as I demonstrate.")

#### C. Monitoring On-Task Behavior (Seatwork)

Teacher actively maintains and reinforces student on-task involvement. (Examples of teacher statements: While teacher is walking up and down the rows scanning students' work, the teacher says, "Remember, we should be working on Activity 3 now.")

### II. Response to Pupil: Monitoring During Discussion

- A. Teacher immediately reinforces answer as right or wrong. (Examples of teachers statement: "Mary, that is correct," "No Joe, that is not the right answer.")



- B. Teacher uses hints to elicit correct responses. (Examples of teacher statements: "The answer starts with a *t*," "The answer rhymes with moo.")
- C. Teacher provides correct answers if necessary. (Examples of teacher statement: "The correct answer is impossible," "Well, to save time, the answer is 6.")

### *III. Organizing and Presenting Content*

#### A. Content Input

- (1) Teacher states objectives at the beginning of the lesson. (Examples of teacher statements: "Today we shall discuss rhyming words," "First of all, we shall say and write the words that rhyme with at." "You will understand that at least 3 letters of the alphabet may be used with at to make a new word.")
- (2) Teacher presents content-related information (data). (Examples of teacher statements: "The chance of getting a 7 on a roll of a single die is always 0 since there is no way to roll a 7. This is an impossible event." "The chance of getting either a 1, 2, 3, 4, 5, or 6 is a certain event.")
- (3) Teacher reviews/summarizes throughout lesson. (Examples of teacher statements: "The important objective to remember in regard to activities 1 through 4 is that when you toss one die, you are certain to get either a 1, 2, 3, 4, 5, or 6," "Yesterday we did experiments that demonstrated certain events.")

#### B. Questions

- (1) Teacher asks narrow, direct, recall, content-focused questions. (Examples of teacher statements: "What are the numbers on a die?" "What is the chance of getting a 7 on a roll of a single die?")
- (2) Teacher asks narrow, direct, recall, noncontent-focused questions. (Examples of teacher statements: "Is it raining," "What time is lunch today?")

#### C. Transition

Teacher signals transition and introduces new topic. (Examples of teacher statements: "Please clear your desks and get ready to study the number line," "Finish checking your answers, and close your booklets since we will be discussing numbers 1 to 10 next.")

**OBSERVATION INSTRUMENT FOR DIRECT INSTRUCTION**

Teachers may wish to use an observation instrument designed to code teacher behaviors in order to monitor their fidelity to the Direct Instruction pattern—or to see whether they are using direct teaching behaviors on a consistent basis. It may be noted that the form contains three general categories: teacher as center of attention, teacher responses to pupils, and teacher as organizing and presenting. Under the general categories are subcategories: rules and discipline; structuring directions, tasks, and use of time; monitoring during discussion, content input, questions, and transition. In addition, the subcategories subsume thirteen specific behaviors that are designed to satisfy specification suggested in the use of the critical incident methodology as reported by Barker (1963). In brief, the critical incident methodology uses a large behavior unit while simultaneously dealing with a number of behavior stream attributes. An incident is critical if it makes a significant contribution to the general aim of the activity. This instrument may be used to code episodes in a specified time interval (3 minutes) for a given lesson period of time (30 minutes). Essentially, the critical incident methodology records the presence of specific behaviors relevant to the general aim of the activity in a specified time interval for a specified lesson period. Remember, codings are keyed to teacher behaviors. Each time a critical incident occurs (example: teacher establishes rules and discipline), a tally is recorded in that specified time interval. Naturally, the frequency of tallies within a specified time interval as well as the total tally relative to the critical incident can provide teachers with valuable data. For example, it may be of interest to find out how much time and at what point in the sequence or development of a lesson a particular teacher behavior is demonstrated. Further, it could be valuable for teachers to determine how much time is spent in one kind of behavior relative to another. One question that might be answered is how much time does a teacher spend enforcing rules and discipline as compared to asking narrow, direct, recall, content-focused questions and so on?

		3 MINUTE TIME INTERVALS FOR A 30 MINUTE LESSON									
		0-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27	28-30
I. CENTER OF ATTENTION:											
A. Rules and Discipline											
1. Teacher establishes											
2. Teacher enforces											
B. Structuring Directions, Tasks and Use of Time											
Teacher tells student what task to do, how to do it, and when to do it.											
C. Monitoring On-Task Behavior (Seatwork)											
Teacher actively maintains and refocuses student on-task involvement.											
II. RESPONSE TO PUPIL - MONITORING DURING DISCUSSION:											
A. Teacher immediately reinforces answers as right or wrong.											
B. Teacher uses hints to elicit correct responses.											
C. Teacher provides correct answers if necessary.											
III. ORGANIZING AND PRESENTING:											
A. Content Input											
1. Teacher states objectives at beginning of lesson.											
2. Teacher presents content related information.											
3. Teacher reviews/summarizes throughout lesson.											
B. Questions											
1. Teacher asks narrow, direct, recall, content-focused questions.											
2. Teacher asks narrow, direct, recall noncontent focused questions.											
C. Transition											
Teacher signals transition and introduces new topic.											
CRITICAL INCIDENTS (TEACHER BEHAVIORS)											

Figure 1: Observation instrument for direct instruction.

The question of reliability of observation may be of concern, however, it is possible, through practice, to train people to be reliable in coding behaviors.

## CONCLUSION

One can correctly argue that there is no best teaching style that supports achievement in all students. The point being made here, however, is that the direct instruction pattern points to one tentative answer with regard to an effective teaching style for a particular population of children. The further testing of this instructional pattern seems to be in order. According to the Rand Report (Berman and McLaughlin, 1975: 24), educational change agents in government make some fundamental assumptions—one of which states that “the adoption by the schools of better treatments would lead to more effective educational practices.” Concerned educators, interested in working with young children, will profit from testing the direct instruction pattern with low SES primary grade students.

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