

Research Series No. 159

A DESCRIPTIVE STUDY OF THE EFFECTS AND  
CHARACTERISTICS OF DIRECT TEACHER  
EXPLANATION IN A CLINICAL SETTING

Beth Ann Herrmann, Gerald G. Duffy,  
and Laura R. Roehler

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### Abstract

Based on previous research conducted in classroom settings, this study was designed to explore whether explicit teacher explanation techniques could be effective with severely disabled readers in clinical settings. Three teacher-clinicians were trained to use explanation techniques during a five-week summer practicum. Using procedures and tools employed in an earlier study, lessons were rated for explicitness and students were interviewed to determine their awareness of the reading skills they had been taught. Results suggest that teacher explanation behavior is effective in clinical settings. In addition, however, qualitative analysis revealed unanticipated subtleties about how to conduct instructional interactions that may be important in improving verbal explanations in all settings.

A DESCRIPTIVE STUDY OF THE EFFECTS AND CHARACTERISTICS  
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Beth A. Herrmann, Gerald G. Duffy, and Laura R. Roehler<sup>1</sup>

Recent studies of teacher effectiveness emphasize the relationship between the explicitness of the teacher's explanatory talk during reading lessons and what students learn (Duffy, Roehler, Book, Meloth, & Vavrus, 1984; Duffy, Roehler, Book, Meloth, Vavrus, Putnam, & Wesselman, 1984; Roehler, Duffy, Book, Meloth, Vavrus, Putnam, & Wesselman, in press). However, these studies have all been conducted in regular classroom settings with standard basal textbooks. In this study, we explored the effects and characteristics of direct teacher explanation during instruction in a clinical setting.

Background

Classroom practice studies of recent years have stimulated research on explicit teaching and on the teacher's role in explaining reading processes to students (Duffy & Roehler, 1982; Roehler & Duffy, 1984; Rosenshine, 1983). As a result, Good (1983) attributes effectiveness to what he calls "active" teaching, in which teachers develop conceptual understanding early in a lesson. Pearson (1985) recommends a progression from teacher modeling to student application, characterizing it as a "gradual release of responsibility" model, and Roehler and Duffy (1984) recommend both the concept of active teaching and a progressive instructional format when they argue for explicitness in making

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<sup>1</sup>Beth Ann Herrmann was an assistant professor and director of the Reading Clinic at Hood College in Frederick, Maryland, at the time this study was conducted in summer 1984. She is now an assistant professor at the University of South Carolina. Gerald G. Duffy and Laura R. Roehler co-coordinate the Teacher Explanation Project at the Institute for Research on Teaching. Both are professors of teacher education at Michigan State University.

visible the invisible mental processes involved in reading. Results of these studies highlight the importance of teacher explicitness in providing reading instruction in classroom settings, especially for heightening student awareness of how the reading process works (Duffy, Roehler, Book, Meloth, Vavrus, Putnam, & Wesselman, 1984).

Roehler, Duffy, Book, and Wesselman (1983) suggest specific characteristics of explanation in regular classrooms. First, effective teachers are able to break away from the typical format of the basal textbook and its associated dependence upon turn taking. Second, effective teachers provide explanation regarding (a) a particular mental process used in reading, (b) why the mental process is useful in connected text, (c) the salient features of a particular task and how one uses these features to do the mental processing, (d) the sequence for approaching and performing the mental process, and (e) how to do the mental processing. Third, the more explicit the teacher is, the more aware students are of whatever skill is being learned and how to do it. Increased student awareness is attributed to the teacher's ability to implement these qualitative characteristics of explicit instruction.

While this approach to instruction may be appropriate for regular classroom situations, little is known about its application in clinical settings. The severity of the clinical student's disability as well as the less constrained environment of clinical teaching may well alter the effect and/or the qualitative characteristics of direct explanation of reading strategies.

#### Research Questions

This study is a descriptive exploration of the effects and characteristics of direct teacher explanation during instruction in a reading clinic. Three research questions were posed: (a) Can graduate teacher-clinicians

implement explicit instruction in a clinical setting? (b) Does explicit instruction increase the clinical students' awareness of the reading process? and (c) Can explicit instruction be applied without modification when teaching clinical students?

### Method

#### Subjects

The subjects of the study were three teachers (KS, EB, RS) enrolled in a five-week supervised clinical practicum at a small eastern college. The practicum emphasizes continuous diagnosis of disabled readers and the planning and implementation of 54 hours of corrective and remedial instruction on the basis of identified student needs. KS taught three first graders and two second graders, RS taught three third graders, and EB taught one fourth grader, two fifth graders, and two sixth graders.

#### Procedures

We developed individual case studies for the three teacher-clinicians, describing the extent to which each employed explicit instruction during reading skill lessons and the students' awareness of the skill they learned, why it was useful, and how to do it.

Training the teacher-clinicians. The graduate teacher-clinicians received six hours of training on how to make preactive decisions about explicit instruction when planning reading lessons, how to make interactive decisions about explicit instruction during reading lessons, and how to organize and sequence a lesson. As shown in Figure 1, four preactive decisions were emphasized.



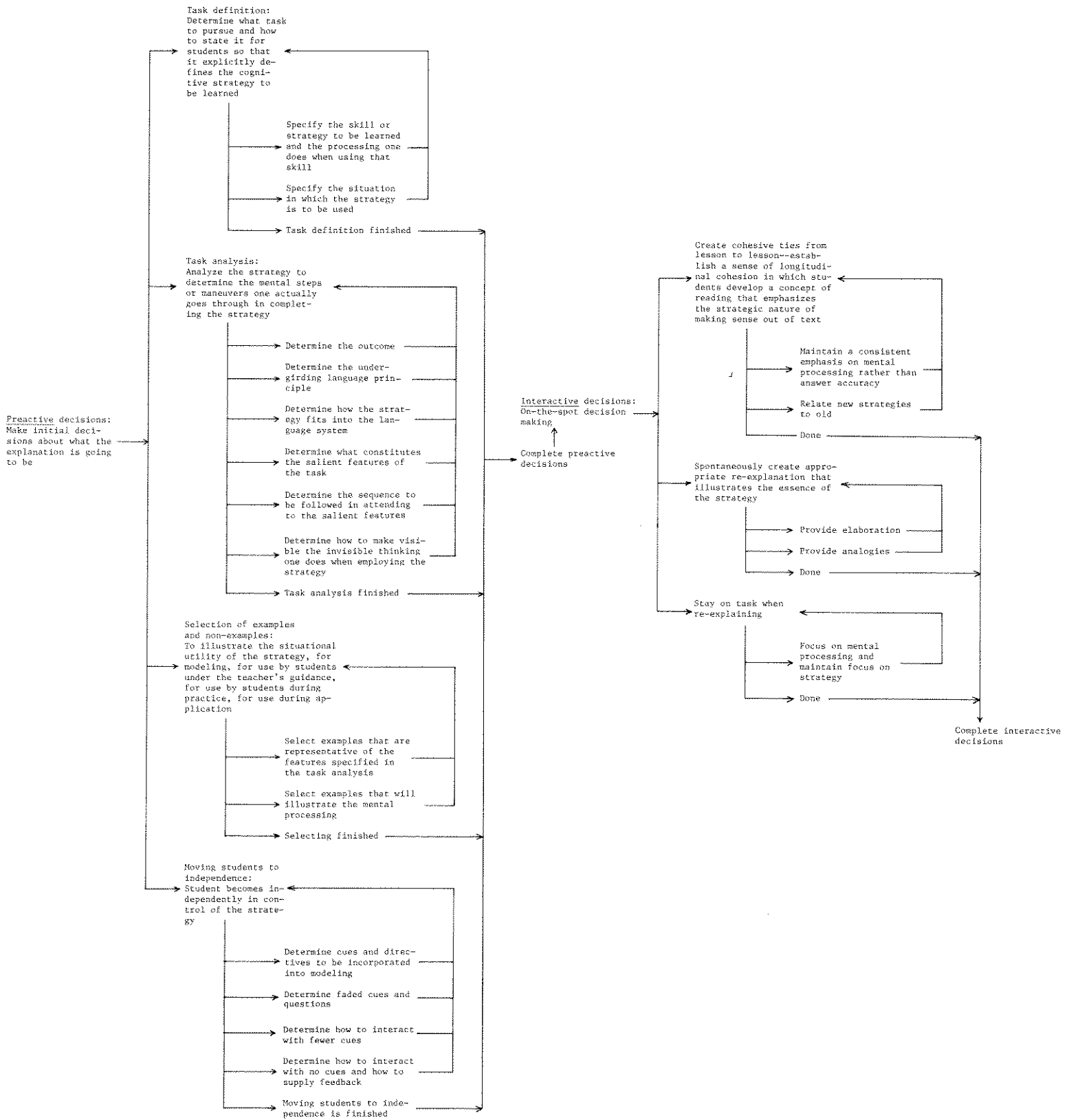


Figure 1. Teacher decisions during planning and implementing reading instruction.

1. *Task definition:* how to specify the skill or strategy to be learned, the processing one does when using it, and the situation in which the skill or strategy should be used.
2. *Task analysis:* determining the outcome, the undergirding language principle associated with the strategy, how the strategy fits into the language system, what the salient features of the task are, the sequence to be followed in attending to those features, and how to make visible the invisible thinking one does when employing a strategy.
3. *Selection of examples:* selecting examples that are representative of the salient features of the task and examples that illustrate the mental processing.
4. *Moving students toward independence:* determining cues and directives for modeling, faded cues and questions, how to interact with fewer cues, and how to interact with no cues and to supply feedback.

Interactive decisions focus on the use of three strategies:

1. Using opportunities to create cohesive ties from lesson to lesson, maintaining a consistent emphasis on the importance of monitoring one's own understanding of text, and getting new strategies and relating them to old ones.
2. Spontaneously creating appropriate re-explanation in response to student re-structuring of the teacher's explanation.
3. Staying on task when re-explaining, and focusing on the mental processing used for the strategy being taught.

Figure 2 shows the instructional sequence employed, highlighting particularly the nature of the teacher-student interaction.

Diagnosis	Teacher assesses that student needs to learn the skill.			
Planning	Teacher translates that skill into a strategic process (decides what problem it will solve).	Teacher decides when the student will need to use the strategy.	Teacher decides the mental processing (steps) in using the strategy.	Teacher decides on: -description of the strategy -usefulness of the strategy -how to do it.
	Teacher decides on: -opportunities to practice and apply the strategy -cues for when to call for the strategy.	Teacher decides how to sequence an explanation for using the strategy.		
Presentation	Teacher describes the strategy and how it is used.	Teacher models recognizing when the strategy would be useful--the cues that tell that the strategy is needed.	Teacher models the mental processing (or steps) to be followed when using the strategy and the checking of whether the results make sense.	
Interaction	Students interpret what they think the teacher's explanation really means.	Teacher provides examples of situations which call for use of the strategy.	On the basis of their interpretations, students verbalize 1) how they recognized that the strategy is needed and 2) their versions of using the mental processing modeled by the teacher.	Teacher monitors and assesses students' verbalization of how and when they use the strategy over a number of trials (examples).
	If students' verbalizations are correct, give supportive feedback for using the process correctly and move to guided application in connected text.	If students' verbalizations are incorrect, re-explanation and clarification of inaccuracies is provided.		
Application	Teacher provides connected text which calls for the use of the strategy and guides students' application of strategy in that text.	Teacher provides opportunities for independent reading and reminds students to apply the strategy when that kind of problem is encountered.		

Figure 2. Model of instructional sequence.

Data collection. Teacher-clinician data consist of video recordings of four lessons taught by each teacher-clinician, one per week beginning with the second week of the five-week clinic. A researcher also described each of these lessons using field notes and conducted a stimulated-recall interview with the teacher-clinician immediately after each videotaped lesson to review and analyze the explanation behavior. Each teacher-clinician was then expected to apply debriefing information from the stimulated-recall sessions when planning and teaching subsequent lessons.

Student awareness data consist of audiotape recordings of two interviews conducted with each of the 13 students (total interviews = 26). Immediately following one skill lesson taught at the beginning of the clinic and one at the end of the clinic, the research asked each student to respond to three questions: (1) What was taught? (2) Why is it important? or When would you use it? and (3) How do you do it?

Data analysis. The senior author determined the explicitness of each teacher-clinician's instruction by rating the transcripts from the 12 observed lessons on a three-part rating form (Roehler, Duffy, Book, Meloth, Vavrus, Putnam, & Wesselman, in press).

The first part focused on the information the teacher-clinician provided about the strategy being taught, with the explanation behavior rated 0, 1, 2, 3, or 4, depending on how explicitly the teacher-clinician informed the students (a) that the task to be learned was a strategy for solving a problem encountered in reading, (b) that the strategy would be useful when they read, (c) how to select a strategy when encountering a problem in text, and (d) how to perform the strategy to solve a particular problem when reading text.

The second part focused on the means the teacher-clinicians used to present the information, with their talk rated 0, 1, 2, 3, or 4, depending on (a) how explicit they were in introducing the lesson; (b) how explicit they were in modeling the mental steps to follow in identifying the problem, selecting the strategy, and applying the strategy; (c) how well they shifted the instructional interaction from teacher-clinician regulation of the strategy to student control of the strategy; (d) how well they elicited responses that required the students to verbalize how they arrived at their answers; and (e) how well they brought closure to the lesson.

The third part focused on intra- and inter-lesson cohesion, with the teacher-clinicians' talk rated 0, 1, 2, 3, or 4, depending on (a) how successful they were at bringing a sense of cohesion to the lesson and (b) how successfully they communicated a sense of cohesion with past and future lessons.

The highest possible explicitness-of-explanation score for each lesson was 44. The senior author determined student awareness by rating student interview transcripts on a rating form developed by Roehler et al. (1985). Student responses received a rating of 0, 1, 2, 3, or 4, depending on the students' statement of (a) what was taught, (b) why the skills or strategies would be useful or when they would be used, and (c) how they would do the skill or strategy.

The transcripts of observed lessons were also qualitatively analyzed to identify descriptive characteristics of the teacher-clinicians' explanations. Highly rated lessons were compared with lowly rated lessons, contrasting examples of explanatory talk were identified, and descriptive statements were generated regarding the critical differences between them.

## Results

Results are presented for each of the three research questions.

### 1. Can Graduate Teacher-Clinicians Implement Explicit Instruction In a Clinical Setting?

Two of the teacher-clinicians were able to apply the explicit instruction model and one was not. KS's instructional explicitness ratings are shown in Figure 3. She received consistently high ratings across all four observed

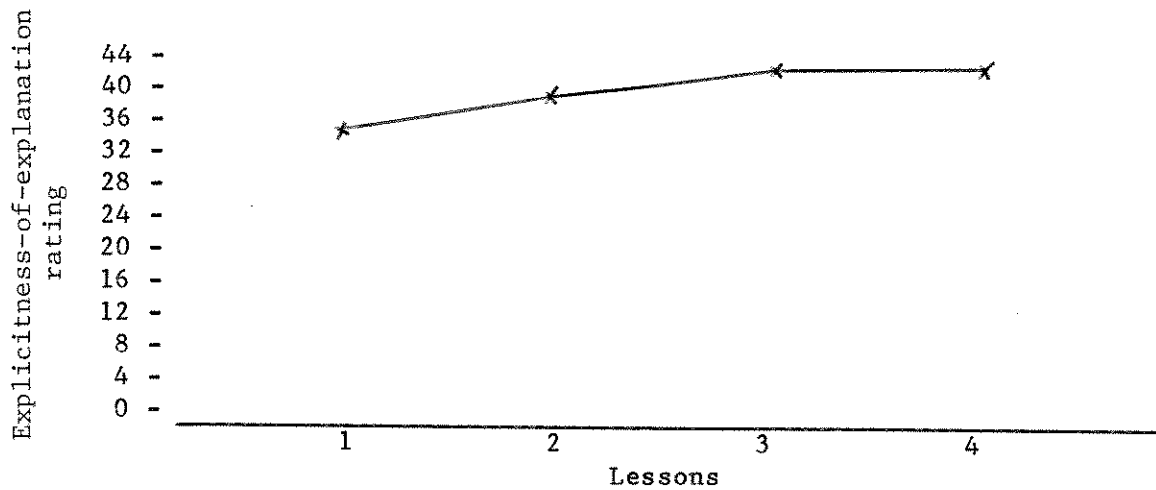


Figure 3. KS's instructional explicitness ratings.

lessons, indicating that she had little difficulty applying the explicit instruction model in her lessons. For example, note how KS sets purposes and models the strategy in the following lesson excerpt on figuring out words with -ed endings:

KS: Let's say that I'm reading along in the book and I come to this word with this confusing thing on the end of it (writes "jumped" on the board). Today I'm going to show you what to do when you come to this kind of a word that confuses you when you're reading. Watch what I do. First, I look for a word I know (circles "jump"). Then I say jump, and /d/ and put them back together. Jumped.

EB also received consistently high ratings (see Figure 4).

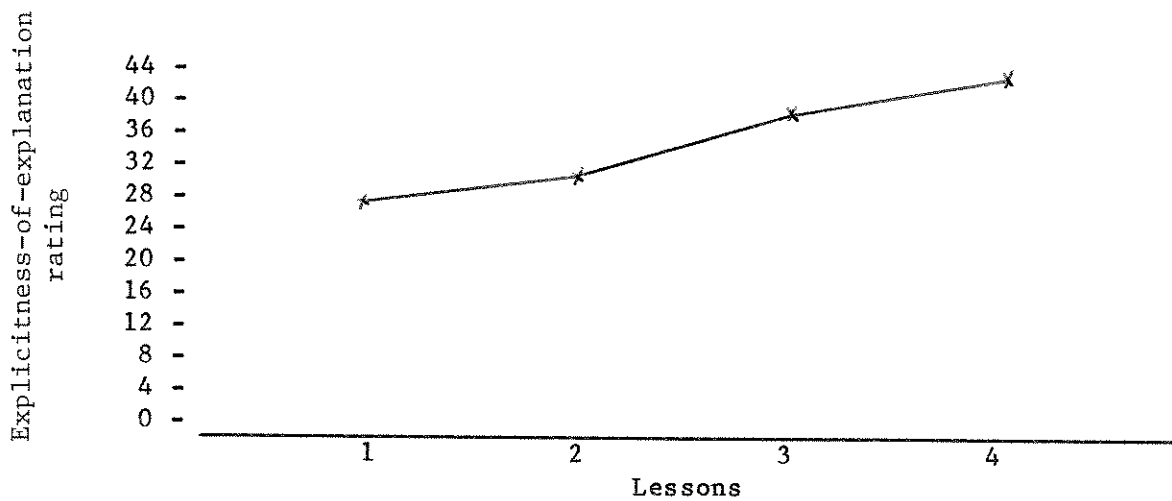


Figure 4. EB's instructional explicitness ratings.

RS's instructional explicitness ratings are shown in Figure 5. She received consistently low ratings, indicating a difficulty in applying the explanation model of instruction in her lessons. In contrast to KS and EB, RS did not provide cohesion, set purposes, or model the strategy when she introduced lessons. The following excerpt is illustrative.

RS: At the end of the lesson today, you will know a strategy for recognizing and stating examples of synonyms. Yesterday, we talked about antonyms. What did we say antonyms were?

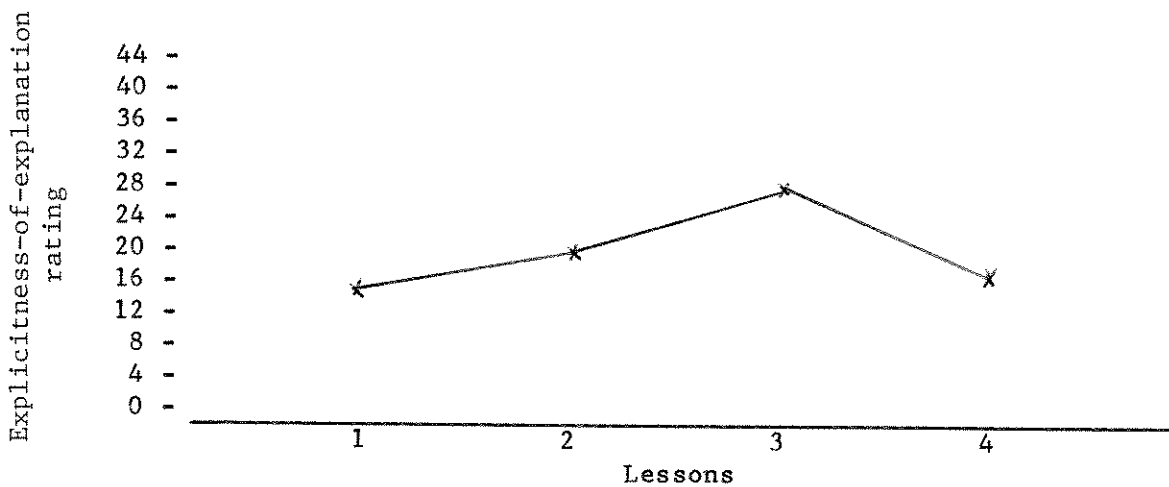


Figure 5. RS's instructional explicitness ratings.

## 2. Does Explicit Instruction Increase the Awareness of Clinical Students?

As shown in Table 1, KS and EB, who were judged to be more explicit in their instruction than RS, had students who were more aware of the skills they were taught and how to do them than RS's students. For instance, the students in KS's class received higher awareness ratings for the final interview than for the first interview, indicating that her students' awareness increased as the lessons proceeded. The following excerpt from one student's interviews illustrates the type of responses provided by KS's students.

First interview:

R: Can you tell me what your teacher was trying to teach you in that lesson?

F: To read better.

R: Can you tell me more?

F: No, just to read better when we read a book or something.

R: OK. Why is it important for you to learn this? When would you use it?

F: At school.

R: When would you use it at school?

F: When I go to reading.

R: OK. Can you tell me how to do what you learned in that lesson?

F: I don't know how to explain it. I just know how to do it.

Final interview:

R: What were you learning in that lesson?

F: We were learning how to use the context when we're reading.

R: Can you tell me more?

F: We learned to cover up the word we don't know and read to the end of the sentence. Then we tiptoe back to the word to figure it out.

R: How do you figure it out after you tiptoe back to the word?



F: First you cover up the first letter and say the rest of the word. Then you put the first letter back on and say the whole word.

Similarly, EB's students received higher awareness ratings for the final interview than for the first interview (see Table 1). The following excerpt from one student's interviews illustrates the type of responses provided by EB's students.

First interview:

R: What were you learning there in that lesson?

M: Context.

R: Can you tell me what context means?

M: No, I can't really remember right now.

R: OK. Why is it important for you to learn what you were taught? When might you use it?

M: To learn things. I'd use it in reading.

R: Fine. Now, can you show me how you do what you were taught?

M: First you survey, you look at the pictures and stuff. Then you read.

Final interview:

R: What were you learning there?

M: We were learning how to be in better control of our reading.

R: Why is that important to learn? When would you use it?

M: Well, it's important because if I'm reading by myself, like a library book or my social studies book, I can figure out by myself what to do when I don't understand what I'm reading.

R: Can you show me how you would do that?

M: Well, like if I am supposed to read this chapter for homework I would first survey it. I would look at the pictures, the title, and things like that. Then I would look for some hard words I might not know and study those first. After that I would decide where to stop and start reading. If I get into trouble then I use some fix-up strategies to help me. Then I can go on.

In contrast to the above illustrations, RS's students did not improve in awareness from the beginning to the end of the five-week clinic (see Table 1). The following excerpts from one student's interviews are typical of the responses provided by RS's students.

First interview:

R: What were you learning there?

G: How to read better.

R: Can you tell me more?

G: We were learning new reading skills.

R: OK. Why is it important for you to learn this? When would you use it?

G: So I can get a job when I am older. I would use it when I'm reading.

R: Can you show me what you learned?

G: We learned how to say the last consonant sound and then blend it with the rest of the word.

Second interview:

R: What were you learning there?

G: Some new ways to pronounce words.

R: Why is that important to learn? When would you use it?

G: Well, it helped a little but not a whole lot.

R: Can you show me what you learned to do?

G: Look at the word. Note the  $\emptyset$  at the end. Say the vowel sound. Say the word. That's all I remember.

### 3. Can the Explicit Instruction Model Be Applied Without Modification in a Clinical Setting?

Results show that two modifications in the explanation model need to be considered when explaining in a clinical setting. First, because clinic students have difficulty seeing the relationship between skills and their use,

they need to apply strategies immediately after learning them, rather than delaying until subsequent sessions. In this study, some students consistently restructured their teachers' explanations, and when they later read real text they modified steps of the strategies to match their own mental processing. The two teacher-clinicians who were most effective gave spontaneous interactive instructional assistance, which insured that the students achieved the appropriate outcome as they moved into application. For example, note KS's supportive feedback in the following lesson excerpt when H modified the steps of the strategy for figuring out words with -ed endings.

KS: OK, H, let's read this book and you show me how you use the strategy you just learned when you come to a word with -ed on it. Let me tell you the steps again. First, look for a word you know, then look for the part you don't know, separate the two parts, say the first part, say the second part, and, finally, say the whole word.

H: (Reads, then stops when she has trouble with "snowed.") I don't know this word so I'm going to skip it and keep reading. "It blank so hard I could hardly see." Now I'm going to cover the -ed and say the word I know, snow. Now I say /d/. Oh, snowed. "It snowed so hard I could hardly see."

KS: Good for you, H. I see you made the strategy easier to use. You read to the end of the sentence and then covered the -ed so you could say the word you knew. Then you said the -ed and put them together. That seems to be easier for you to do than all the steps I showed you, and you still are able to figure out hard words by yourself so you can keep reading.

Second, because of the severity of clinical students' disabilities, repeated modeling is essential, as opposed to a single model early in the lesson. In this study, KS and EB modeled both comprehension breakdown and the cognitive strategy to be taught everytime they introduced a lesson, modeled a second time following the discussion of the specific steps of the strategy, and modeled still again as needed during the interactive phase. The repeated modeling seemed to increase the students' ability to apply the strategy independently.

### Discussion

While no firm conclusions or generalizations can be made on the basis of three case studies of teacher-clinicians, the results tend to substantiate previous findings that there is a relationship between the explicitness of the teacher's instruction during reading lessons and what students learn and that this relationship exists regardless of whether the instruction is provided in a regular classroom using a basal reader or in a reading clinic using a variety of printed materials. However, the results of the study raise four additional questions for future research.

The first question has to do with the training and coaching of teachers and/or teacher-clinicians. While all three teacher-clinicians in this study received the same training and coaching, two were successful with explicit instruction and one was unable to break away from the typical format of a basal reader lesson and its associated emphasis on content and memorization. Why did this occur, and what can be done to improve the training and coaching of teachers and clinicians so that they provide explicit reading instruction?

Second, what is the relationship between student awareness of the reading process and student achievement? The results of this study indicate that clinic students who received explicit instruction increased their perception and knowledge of how reading skills work to solve particular problems encountered in real text and the mental processing employed when solving these problems. However, we do not yet know whether this increased awareness improved reading achievement. For instance, pretests and posttests using the Gates-MacGinitie Reading Test were administered to the students in this study, but as would be expected by the brevity of the five-week clinic session, no differences were noted.

Third, what implications do the modifications made by the two effective clinicians in this study have for classroom teachers who use explicit instruction? The less constrained environment of a clinical setting makes it possible to incorporate frequent modeling into daily lessons. However, this may not be possible within the constraints of the structured reading period in a regular classroom. Nevertheless, frequent modeling might well increase low-ability students' perception and knowledge of how reading skills work.

Fourth, what are the subtleties involved in determining how students restructure their teachers' explanations and how teachers and/or teacher-clinicians spontaneously create interactive instructional assistance to insure that students achieve the intended outcome in spite of this restructuring? This study highlights the complexity of the interactive phase. During this phase, the teacher-clinicians had to first determine how the students restructured their explanations and then spontaneously react to the restructuring by providing supportive feedback or re-explanation.

#### Conclusion

We set out to determine whether classroom findings about explicit instruction are applicable to clinical settings where student disability is more severe but environmental constraints are less intrusive. The results suggest that explicit instruction can be useful in clinical settings.

Perhaps of equal significance, however, is the insight this study provides about the subtleties of verbal explanation. Despite the training provided, two teacher-clinicians were successful in implementing the technique and one was not. When the instruction of the effective teachers was compared to that of the less effective teacher, unanticipated qualitative distinctions were identified, primarily the need for immediate application and the use of

repeated modeling. It is the continued identification of these subtleties of instructional interaction that will ultimately provide researchers with the sophistication and specificity to make a difference in their efforts to improve instructional practice.

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