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ABSTRACT
            A study was conducted to examine the implementation
of reciprocal teaching with fourth- and fifth-grade students as they
read their social studies and science textbooks. A distinctive
feature of the study was that reciprocal teaching procedures were
used in a whole-class, rather than a small-group instructional
setting. Three teachers and 67 students participated in the study.
Observations revealed that as reciprocal teaching instruction
proceeded, more responsibility for initiating and sustaining
discussion was transferred from the teachers to the students. After
20 days most of the reciprocal teaching procedures were implemented
flexibly and in an appropriate manner. A variety of assessment
measures were administered at intervals throughout the study to
evaluate the effects of the procedure on students' comprehension. (A
table of data and three figures are included; 14 references and
appendixes contain scoring keys for strategy measures are attached.)
(NKA)

Technical Report No. 586

IMPLEMENTING RECIPROCAL TEACHING WITH FOURTH- AND FIFTH-GRADE STUDENTS IN CONTENT AREA READING

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1992-93 Editorial Advisory Board

Abstract

A study was conducted to examine the implementation of reciprocal teaching with fourth- and fifth-grade students as they read their social studies and science textbooks. A distinctive feature of the study was that reciprocal teaching procedures were used in a whole-class, rather than a small-group instructional setting. Following a description of reciprocal teaching and a review of some of the research that supports the techniques it employs, we describe the methods used to help three teachers (in a school known for its emphasis on direct instruction) implement reciprocal teaching. Next, we describe the assessments used to evaluate the effects and the results of the implementation. After discussing the results, we comment on the complexities of teacher change.

IMPLEMENTING RECIPROCAL TEACHING WITH FOURTH- AND FIFTH-GRADE STUDENTS IN CONTENT AREA READING

Reciprocal teaching is an interactive procedure that employs organized discussion to enhance reading comprehension (Palincsar & Brown, 1984). Over the past decade, its effectiveness has been demonstrated in a variety of educational settings (Brown & Palincsar, 1985; Lysynchuck, Pressley, & Vye, 1990; Palincsar, 1986a; Palincsar & Brown, 1988; Palincsar, Ransom, & Derber, 1990).

Specifically, reciprocal teaching refers to an instructional activity that takes the form of a dialogue between teachers and students about segments of text. This approach is intended to improve students' reading comprehension by teaching them strategies that are typically used by expert readers. Research has established, however, that slow-learning children and new readers seldom employ these strategies (Brown & Palincsar, 1987). The ultimate goal of reciprocal teaching is to influence how students interact with the text. It aims not to remediate an immediate educational deficiency but rather to enhance students' problem-solving abilities (Brown & Palincsar, 1987; Palincsar, 1986b).

Reciprocal Teaching: Description

In reciprocal teaching, the teacher begins by modeling four instructional strategies that her students will learn to use:

1. *Question-Generating*--the teacher asks questions that relate to a segment of the text.

2. *Summarizing*--the teacher summarizes the most important information from a segment of the text the students and teachers have just read.

3. *Clarifying*--the teacher clarifies or asks for clarification of any portion of the text that might have been confusing to the students.

4. *Predicting*--the teacher predicts the information that is likely to be in the next segment of text.

These four strategies have been selected because they both facilitate understanding and have the potential to promote comprehension monitoring (Palincsar, Brown, & Martin, 1987). They are not steps to be mastered, rather they provide the framework for the discussion where instruction occurs. In reciprocal teaching classrooms, students gradually assume the role of the teacher and engage in dialogue with the other students, as well as the teacher, as they construct meaning from the text. Student discussion increases as the teacher talk decreases.

When students make predictions, they hypothesize what the author will discuss next. To do this successfully, they must activate the relevant background knowledge they already possess. Predicting gives the students a purpose for reading--either to prove or disprove their hypotheses. Additionally, it gives students the opportunity to link the new knowledge they will encounter in the text with the knowledge they already possess. The predicting strategy also encourages the use of text structure. Students learn that headings, subheadings, and questions embedded in the text are useful means of anticipating what might occur next.

Question-generating gives students the opportunity to identify the kind of information that provides the substance of a good question, to form the question, and then to engage in self-testing. Students become

much more involved in the reading activity and in the text when they are posing and answering questions themselves and not merely responding to teacher or text questions.

Summarizing is a means for integrating the information presented in the text. As the students proceed through the passage, the teacher guides them in integrating the content across paragraphs and sections of the passage.

Clarifying is particularly important to students who have a history of comprehension difficulty. Such students can make a habit of not understanding what they read. These students very likely believe that the purpose of reading a passage is to say the words correctly; they may not be particularly uncomfortable with the fact that the words and, indeed, the passage are not making much sense. When students are asked to clarify, their attention is called to the fact that there may be many reasons why the text is difficult to understand (e.g., unfamiliar vocabulary, unclear referent words, new concepts). They learn to be alert to the effects of such impediments on comprehension and to take the necessary steps to restore meaning (e.g., reread, ask for help).

Reciprocal teaching strategies are taught to students through a series of dialogues between the teacher and the students, with the dialogues centered on sections of text that students have first read silently. The teacher begins by asking a student to think of a question that could be asked about the information in the passage. After the student responds, other students again join in by refining the question or asking additional questions. Next, a student summarizes the passage that has just been read. After the first student responds, other students refine, shorten, or elaborate on the summary. Throughout the process, students are encouraged to seek clarification of words or concepts they do not understand. The teachers may lead students to discover word meanings or prompt them to apply previously learned strategies for gaining clarification (e.g., using context for identifying the meaning of an unfamiliar word). Students are encouraged to speak up when something does not make sense to them. Finally, they are asked to think ahead and predict what information will follow in the next section of text.

The instructional principles underlying the use of these four strategies include the following: (a) the teacher models the desired comprehension activities to make the processes explicit; (b) the modeling is contextualized, as both the teacher and the students are reading the text; (c) the students are made aware of the value of strategy use; (d) the responsibility for the strategy application is gradually transferred from the expert (the teacher) to the novices (the students); and (e) continuous evaluative and encouraging feedback is provided to the students by the teacher.

Teacher modeling of the use of the strategies in appropriate contexts is an important instructional principle in this approach. Modeling is intended to make explicit and concrete the way in which students can use strategies to monitor their learning (Palincsar & Brown, 1988). An important feature of reciprocal teaching is that the students and teacher share or model how they are constructing meaning from text. As an expert, the teacher acts as a guide in shaping the learning efforts of novices and in providing support for their learning until it is no longer needed.

During the initial phase of reciprocal teaching, the teacher acts as the discussion leader. As instruction progresses, the teacher's role changes from that of mediator/facilitator to that of reflector and coach. Through this interactive process, students gradually acquire proficiency in strategy use and over time teacher involvement fades as the teacher relinquishes control of the discussion to the students.

Supporting Research

Cognitive psychologists have identified a number of activities used by expert readers. The success of reciprocal teaching has been attributed to its use of some of the identified activities. These include hypothesizing, rephrasing, seeking of relationships between ideas, and monitoring of breakdowns in

understanding (Bereiter & Bird, 1985). The four reciprocal teaching strategies engage the reader before reading; during reading, to continue the interaction; and after reading, to allow for consolidation of ideas and concepts. The effectiveness of the strategies is apparently directly linked to the ongoing discussion as the students engage in each of the activities.

The success of reciprocal teaching can also be attributed to the fact that it is embedded in a social context in which students are comfortable and in which they have had more experience both in and out of school. Vygotsky (1978) asserts that the patterns of reasoning employed by individuals are a reflection of the patterns of social dialogue previously encouraged in group situations. A child with maturity, he reasons, appreciates shared dialogue and the utterances of more experienced persons. From this shared social dialogue develops inner speech that directs cognitive activity and in turn, is internalized as verbal thought. So, as the group talks the child borrows: he or she evaluates and passes judgment on the vocabulary, syntax, and usages of others; synthesizes unique creations and usages; and structures his or her own thinking into ways that resemble the group's interactions (Moffett & Wagner, 1976).

The discussions of a text that come about from the application of the four reciprocal teaching strategies are examples of instructive shared dialogue. The discussions challenge students to organize, clarify, define, qualify, and analyze their thoughts and ideas. Such discussion has significant value in promoting reading comprehension. One researcher (Bruton, 1977, cited in Perez & Strickland, 1987), suggests that discussion of a reading selection promotes reading comprehension by reinforcing memory and that, furthermore, it teaches students to think about what they read in new and productive ways. Students trained to use the strategies of reciprocal teaching are able to do just that--think and talk about text in new and productive ways--and are able to engage in desirable, genuine exchanges of ideas and opinions.

Like Vygotsky, Bruner (1978) supports the concept of novices learning from experts. He asserts that one of the most crucial ways culture aids intellectual development is through the dialogue between the more experienced members of that culture and the less experienced members. Thus, reciprocal teaching, through its collaborative, interactive structure provides the less experienced with a critical opportunity for learning from the more experienced and the subsequent development of thinking skill.

How three experienced teachers learned to use the techniques of reciprocal teaching with content area reading in a whole-class setting and the results of their efforts are described in the next section of this paper.

Method

The school in which this study was conducted includes approximately 473 students in kindergarten through fifth grade. Sixty-one percent of the students are white, 35.9% are African-American, 2.7% are Asian, and 0.4% are Hispanic. Thirty-three percent of these students come from low-income families, and the student mobility rate is about 40% in any given year. The average intermediate-grade class size is 23. The three classrooms were heterogeneously mixed by ability. Three teachers (one fourth, one fourth/fifth, and one fifth grade) and 67 students participated in the study. Two of the teachers had 10 or more years of teaching experience and the third had 3 years of experience.

Procedure

The three intermediate-grade teachers implemented reciprocal teaching strategies in a whole-class setting. How they learned to use these strategies is described below.

Teachers learn about reciprocal teaching. The teachers attended two half-day inservice sessions that included an explanation of the rationale and development of reciprocal teaching. In these sessions,

results of research investigating reciprocal teaching were discussed, and a videotape of reciprocal teaching instruction was shown. In addition, the teachers and the project staff practiced reciprocal teaching dialogues. Teachers' questions about the implementation of reciprocal teaching in their curriculum were addressed (e.g., What material should I use? When should I use it?).

While this inservice represented the formal introduction to reciprocal teaching, the project staff was available to come to the teachers' classrooms, especially at the beginning of the program. As the teachers began to implement the procedures, classrooms were observed by the consultant. Feedback and coaching were provided to assure fidelity to the reciprocal teaching procedures.

Because teachers were learning reciprocal teaching concurrently with their students, it was important to provide a variety of options to support them as they learned to implement the procedure. The project staff provided several options for assistance. For example, the consultant might observe and discuss the teacher's lessons, provide demonstration lessons in which the teacher could observe him or her working with students, or present and discuss other reciprocal teaching lessons on videotapes. The observation chart in Appendix B was used as a guide to lead the discussions about the lessons. Both the teachers and consultant completed the observation guide and used it to discuss the reciprocal teaching lessons.

Several inservice meetings were held throughout the school year. The purpose of these meetings was to discuss and solve any difficulties the teachers were encountering while implementing reciprocal teaching. Teachers requested suggestions, for example, for how to modify a task so that their students could successfully participate in the discussion.

Conducting classroom reciprocal teaching instruction. When reciprocal teaching instruction first begins, the teacher talks to the students about the four comprehension strategies. The teacher explains why the students are learning the strategies, in what situations the strategies will be helpful, and how the students are to go about learning the strategies. The purpose of these introductory activities is to expose students to the strategies.

These explanations of purpose, which are reviewed regularly, are followed by instruction in the use of the four strategies. It is at this point that teacher modeling becomes crucial. During the initial days of reciprocal teaching, the teacher leads the dialogue and models how to employ the four strategies during reading. Students are encouraged to comment on their teacher's summaries, add their own predictions, ask for clarifications, and respond to teacher questions. The purpose of this instruction is to help students learn procedures that will help them use the strategies.

An example of instruction in one of the strategies follows. Students learn to create summaries by appropriately employing one or more of the following procedures:

1. Deleting irrelevant information.

2. Deleting redundant information.

3. Creating a superordinate label for a list of items.

4. Locating the topic sentence.

5. Creating a topic sentence.

The goal of such procedures is for students to understand and be able to employ each of the strategies before they engage in discussion with the teacher and with each other.

The teachers in this study introduced each of the four strategies to their students in two 20-minute sessions. The introductory activities took 8 days, and the strategy training, about 20 consecutive school days.

Observations revealed that as reciprocal teaching instruction continued, more responsibility for initiating and sustaining the discussion was transferred from the teachers to the students. The teachers began monitoring the students as they employed the strategies. The teachers praised the students' attempts and provided further modeling and help as their judgment indicated. The students monitored and evaluated their own performance, provided feedback to other students, assumed greater control and responsibility for the experience, and applied the strategies across a number of different texts.

After 20 days, most of the reciprocal teaching procedures were implemented flexibly and in a manner appropriate to the purpose for which they were being used. The discussions of reciprocal teaching strategies took place, on average, two times each week. This was done to maintain the ability of students and teachers to engage in the dialogue.

Assessments

A variety of assessment measures were administered at intervals throughout the study to evaluate the effects of the procedure on students' comprehension.

An assessment of general comprehension ability required students to read an expository passage at their reading level and to write responses to textually explicit, textually implicit, and transfer/application comprehension items. Responses to comprehension questions that accompanied expository passages were the principal dependent measures. This measure required the students to incorporate all the strategies and apply them effectively to answer comprehension questions.

A criterion-referenced test assessed the four strategies: summarizing, questioning, predicting, and clarifying. In this test, students read a brief passage, and then were asked to write a brief summary, generate questions aimed at the main idea(s) of the passage, indicate any need for clarification, and predict what would occur next. The students also wrote responses to 8 textually explicit, textually implicit, and transfer/application comprehension items. This second measure, a criterion-referenced test, provided a more diagnostic picture of the students' ability to use the comprehension strategies.

All of the assessments were scored by two raters. A 96% interrater reliability was established. See Appendix A for an example of the scoring key for the criterion-referenced test.

Results

The descriptive statistics based on the results for the expository passage pretests (administered in September), interim tests (administered after 20 days of instruction), and posttests (administered in early May) are shown in Table 1. The data reported here are the percentage correct on the comprehension questions on the passage assessments.

[Insert Table 1 about here.]

These data were analyzed by performing three separate analyses of variance (within subjects). The first analysis compared the results on the pretest, interim, and posttest passage assessments for Teacher A. The results indicated a significant difference between student performance on the pretest and posttest ($F_{2,36} = 5.5; p < .01$). The second analysis compared the results on the pretest, interim, and posttest passage assessment for Teacher B. The results indicated a significant difference between student performance on the pretest and posttest ($F_{2,38,} = 6.5; p < .01$). The third analysis compared the results

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on the pretest, interim, and posttest passage assessment for Teacher C. The results indicated a significant difference between student performance on the pretest and posttest (F 2,46= 6.2.; p <.01).

The results of the criterion-referenced assessments are shown in Figures 1a-1c. The scores reported in Figures 1a-c reflect the total number of points on this assessment that the students earned for each of the four strategic activities.

[Insert Figures 1a, b, c about here.]

For Teacher A (Figure 1a), the groups' scores are fairly comparable during pretesting, after training, and posttesting on three of the four strategies. Generating questions was the one area where these students demonstrated noticeable improvement. Classroom observations confirm that generating questions was an area where the teacher allocated a significant proportion of time during reciprocal teaching instruction. It is interesting to note that the comprehension scores on the criterion-referenced assessments did not improve significantly from pretest to posttest.

For Teacher B (Figure 1b), the scores indicate a peculiar pattern. On three of the four strategies (predicting, summarizing, and questioning) the pretest and posttest results are comparable, but are lower on the after-training strategy assessment. What is of particular interest is that the highest comprehension scores were obtained on the after-training strategy assessment. There are several possible explanations for these results. One is that the students' scores were lower on the strategy component of the assessment and higher on the comprehension questions because more attention was given to questioning. This finding is puzzling and may necessitate a closer examination into the validity of this measure.

For Teacher C (Figure 1c), the scores indicate improvement in predicting and questioning from pretest to posttest. This group demonstrated some overall growth in their comprehension ability as measured by the 8 comprehension items at the end of the strategy criterion-referenced assessments. It is also of interest to note the dramatic improvement on the comprehension component for this group on the criterion-referenced assessment administered immediately following the training but prior to actual reciprocal teaching instruction with their content area textbooks. One possible effect of the strategy training prior to reciprocal teaching instruction could be this significant and immediate improvement in the students' ability to answer comprehension questions, but not in their actual strategy use.

Discussion

Taken together, the results of this study show the effectiveness of using reciprocal teaching in content area reading in a whole-class setting. It supports previous research regarding the effectiveness of reciprocal teaching.

Four positive outcomes of this study were:

1. The teachers effectively used reciprocal teaching procedures in a whole-class setting.

2. The teachers were enthusiastic about the procedures and used them in other reading situations.

3. The teachers reported that the students generalized reciprocal teaching effects to other reading situations, particularly the stories in their basal reading program.

4. There were significant gains in student performance on the independent written
    transfer measures (passage assessments).

Several explanations can be offered for these positive outcomes. The first is that reciprocal teaching represents an instructional program that not only includes strategies, but also promotes some instructional concepts: teacher modeling, the gradual transfer of responsibility to the students, the provision of declarative, procedural, and conditional knowledge regarding the use of the strategies, and interactive instruction and discussion. Another explanation is a consistently high amount of student engagement with the texts.

It was not the intent of this investigation to study teacher change, but during this study, several teacher change issues emerged. One has to do with the ongoing support necessary for the implementation of instructional change.

The reciprocal teaching implementation framework was conceived to overcome potential implementation problems. The framework is one that incorporates the concepts of guided, cooperative learning (Brown & Palincsar, 1985). Teachers receive support and encouragement throughout the process as they become part of a working team to implement change. Consultants model teaching strategies, provide opportunities for practice, feedback, and discussion, and tailor learning experiences to meet the needs of individual teachers. Not surprisingly, this model for staff development parallels that of the actual reciprocal teaching model--both have as their goal the use of key strategies that will be used selectively and opportunistically and adapted to a variety of complex learning/teaching situations.

The teachers in this group were interested in learning to use the techniques of reciprocal teaching. They received support from inservice work and classroom visits. But, we observed some interesting variations and modifications of reciprocal teaching throughout the project. Given the direct instruction orientation of the three teachers, it is not surprising that they were very direct in their approach to the strategies. A key component of reciprocal teaching is a gradual relinquishing of control from the teacher to the students. Allowing the students to assume more responsibility for leading the discussion was difficult for these teachers. We observed that many of the discussions, even at the end of the project, were very teacher directed. The managerial problems associated with discussions embedded within a whole-class setting may have contributed to the teachers' reluctance to relinquish more control to the students.

In this and other projects we have found that one of the most difficult problems associated with curricular change and implementation is that of helping teachers change. We are convinced that change is brought about by individual teachers, not by institutions. We believe one of the most effective ways to ensure lasting and meaningful instructional improvement is to equip teachers with some strategies for effective teaching.

Yet, we add a caution. If change were as simple as the above paragraph makes it sound, if improved teaching and student performance were just a matter of transmitting knowledge and materials to those charged with instruction, then why have we not seen more application of research-based teaching strategies and more calls from teachers for instructional assistance? As much of the current school-based work on instruction and curriculum bears out, with change also come many obstacles to change. We believe research must address these obstacles if programs attempting to help children learn how to use effective strategies to comprehend text are to be effective.

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Table 1

Mean Scores (and Standard Deviations) on the Passage Tests

Teacher	Pre	Interim	Post
A ($n = 22$)	40.83 (22.04)	41.82 (20.09)	49.13 (20.09)
B ($n = 21$)	47.14 (17.79)	59.76 (14.55)	51.13 (18.45)
C ($n = 24$)	45.21 (19.53)	53.40 (23.85)	59.58 (18.75)
$N = 67$			

Figure 1a
Strategy Assessments Pretest, After Training, Posttest

Teacher A

Legend:
■ Pretest
▨ After trair
▨ Posttest

Number of Points (y-axis: 0, 20, 40, 60, 80, 100)

Categories (x-axis): Predicting, Summarizing, Questioning, Clarifying, Comprehension

15

16
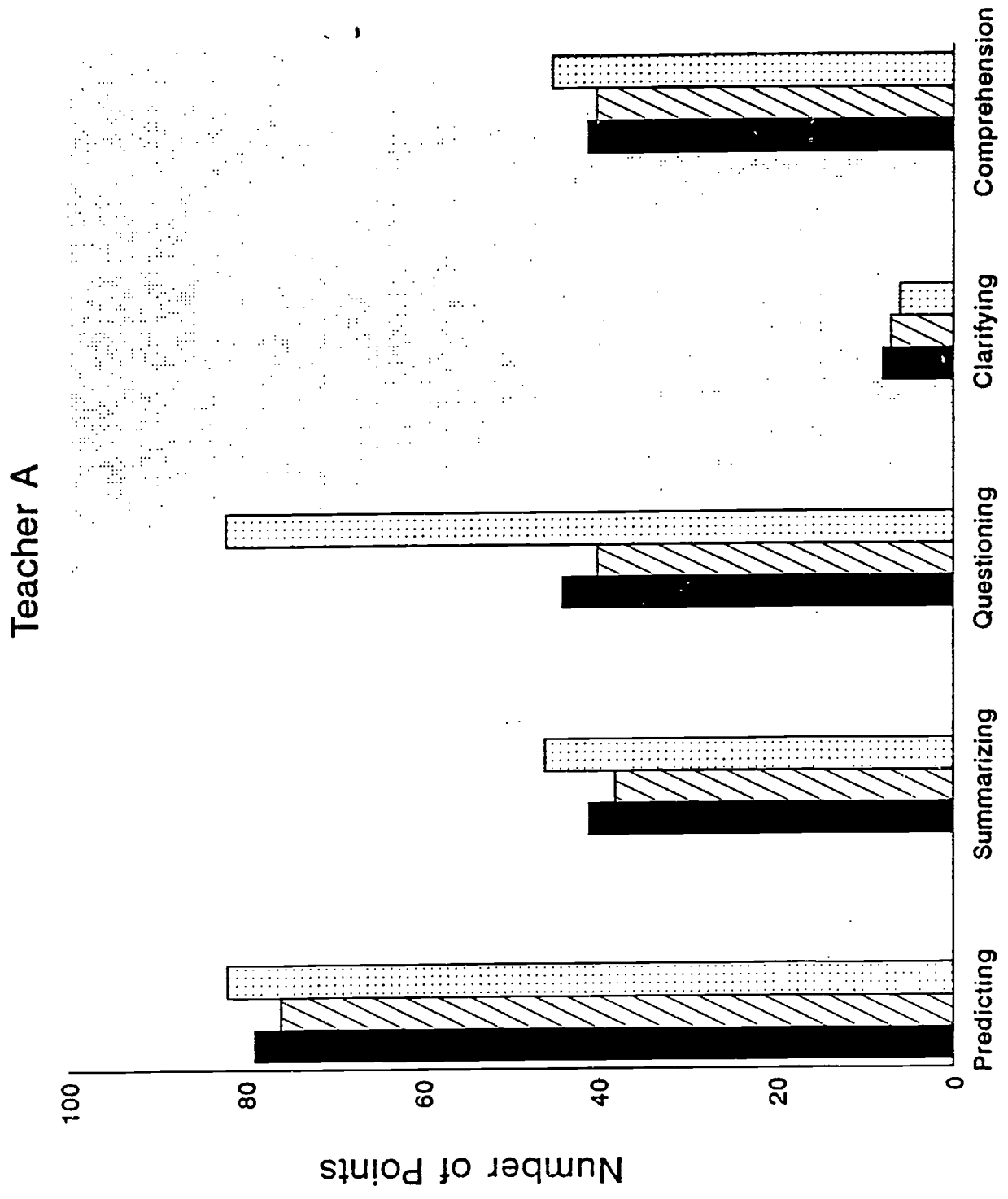
Figure 1b
Strategy Assessments Pretest, After Training, Posttest

Teacher B

■ Pretest
▨ After training
▢ Posttest
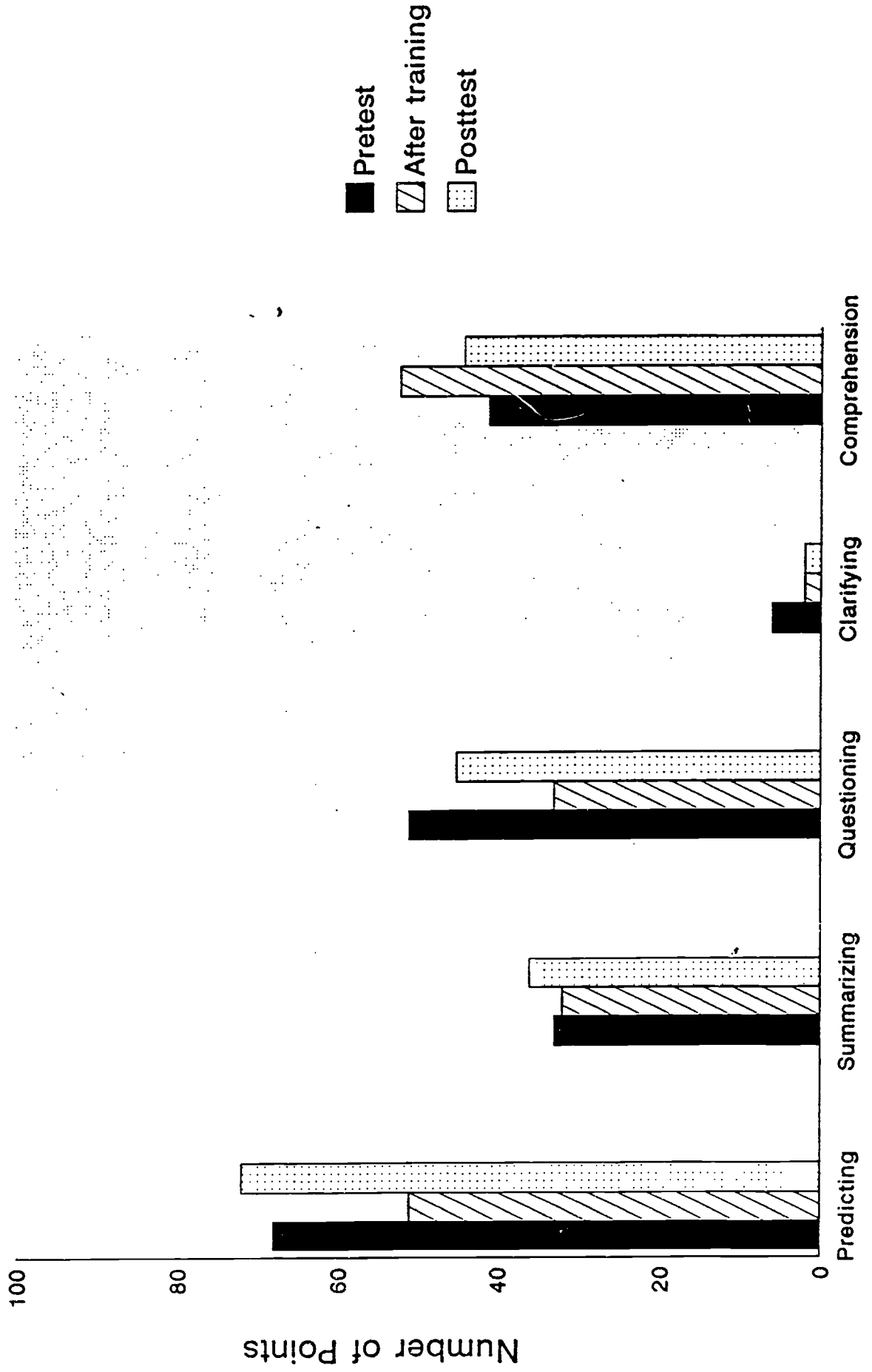
Figure 1c
Strategy Assessments Pretest, After Training, Posttest

Teacher C

Legend:
- ■ Pretest
- ▨ After training
- ▫ Posttest

Y-axis: Number of Points (0, 20, 40, 60, 80, 100)

X-axis categories: Predicting, Summarizing, Questioning, Clarifying, Comprehension

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2u
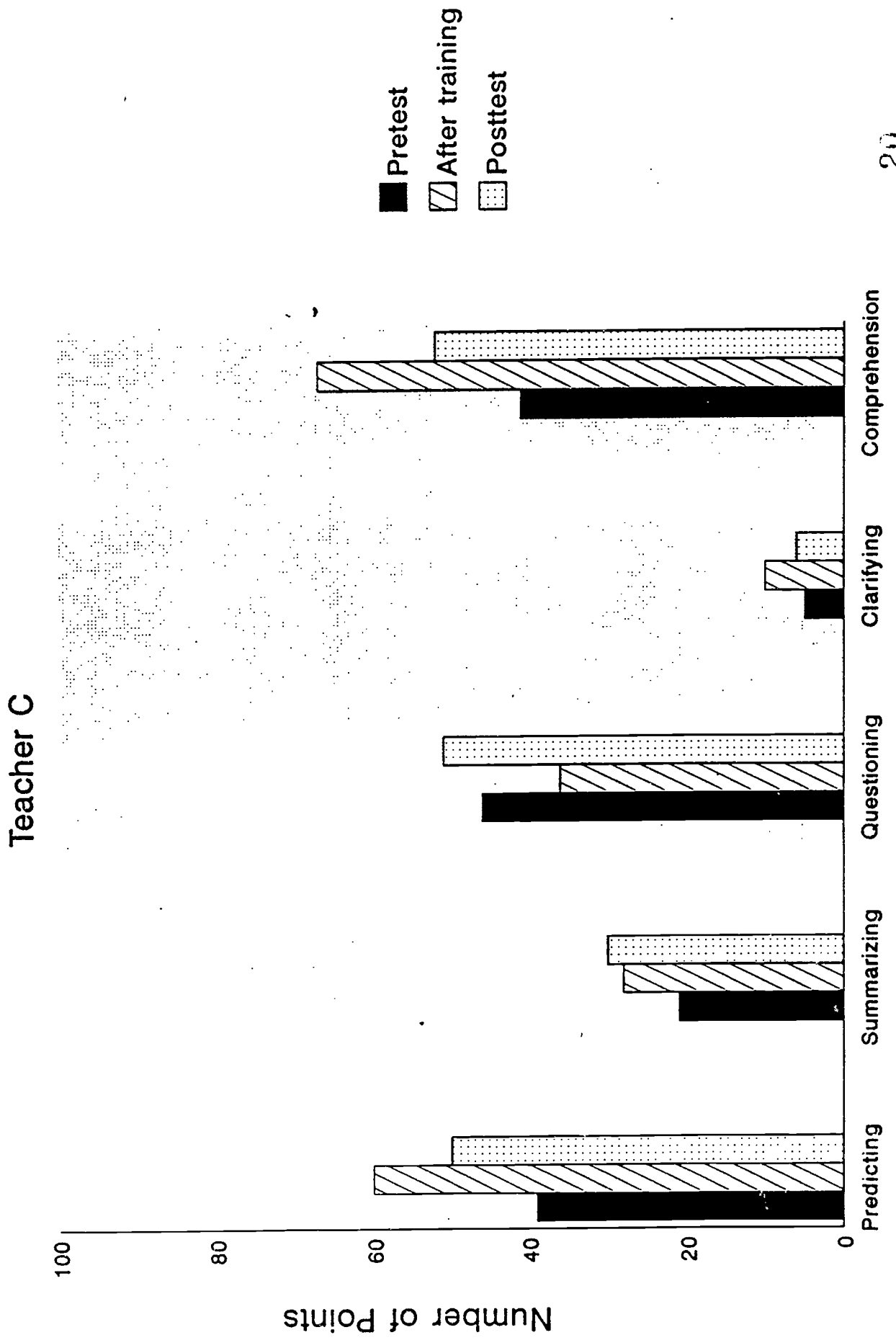
Appendix A

Scoring Key for Strategy Measures

HELICOPTERS AT WORK

PREDICTIONS

0 =   repetition of title
        unrelated prediction to the title for prediction 1
        repetition of an earlier prediction (blanks not filled in by student -- don't give it a 0)

.24 =   prediction that has **some** relation to topic or content, but may be vague or very general

1 =   prediction that is acceptable-- maybe better related, and either general or quite specific

*Second predictions should be more passage-relevant than the first

Examples

Predictions from Title (P1)

1 =   helicopters flying to pick up people to take them to the hospital

.24 =   take people in the air

0 =   helicopters

Second Prediction from text (P2)

1 =   what else policemen use helicopters for

.24 =   how they land

.0 =   flying

SUMMARY

1. Main idea sentence or phrase (S1)

0 =   unrelated response

.5 =   identification of a topic

1 =   statement of the topic **and** comment

2. Summary (S2)

0 =   no response, incorrect, or simple restatement of title; undecipherable

1 =   one of the main points or one correct important idea; the general topic alone should not be counted as an idea

2 = more than one of the main points **or** more than one correct important idea

3 = synthesis of main points

-.5 = **Deduct** for marked lack of clarity, a summary difficult to interpret, yet still interpretable, or simply very badly formed (if a student just lists topics-- give it a 1 and deduct -.5)

Examples

Main idea sentence or phrase (S1)

1 = how policemen and carpenters use helicopters

1 = how helicopters help people

.5 = helicopters

.5 = work, helicopters

0 = what their jobs

Summaries (S2)

3 = The helicopter can get the job done. It can be the most important machine. Police can use helicopters.

2 = How they fly, what they do, how they help

1 = How helicopters are useful

0 = When the police tell people about broken helicopters

QUESTIONS

0 = Nonsense, irrelevant, or not text-based; incorrect or inaccurate; formulated in statement form (blanks not filled in by student --- don't give a 0)

1 = a vague question about the general topic

2 = a detail question based on text information

3 = a main idea question based on text information (main idea of passage, section or an important concept)

-.5 **Deduct** for lack of clarity, obvious misunderstanding, or a question that is badly formed

Examples

3 = Why do police use helicopters?

3 = Why do builders use helicopters?

2 = How does a helicopter start off?

1 = Are police mostly involved in this?

1 =   Do they stay in one place?

.5 =   What do they do?

.5 =   Do they land?

0 =   Why does a helicopter fly?

CLARIFICATION

0 =   An idea that is nonsensical, not text-based, or otherwise clearly inappropriate for the passage (blanks not filled in by student -- don't give it a 0)

1 =   Yes, something other than the * item
The word "summary" = 1 (anything text-related)

2 =   Yes, the * item in the passage (marked item in question # 7)

List word - hover

Appendix B

STRATEGIES

	1	2	3	4	5
	strategies are generally used in Q,S,C,P sequence, but they are used flexibly & when appropriate	strategies are used in Q,S,C,P sequence w/o need to alter	strategies are rigidly used in Q,S,C,P sequence without flexibility when appropriate	strategies are generally used in a different sequence without a rationale for sequence	some strategies are routinely omitted or routinely used, even when inappropriate

MODELING

	1	2	3	4	5
	teacher takes turn as "Teacher", models as needed & "thinks out loud"	teacher doesn't take turn as "Teacher" does model as needed & "think out loud"	teacher does take turn as "Teacher"; models as needed but doesn't "think out loud"	teacher doesn't take turn as "Teacher"; does model as needed, but doesn't "think out loud"	no modeling or not as needed; teacher doesn't "think out loud" ever

SCAFFOLDING

	1	2	3	4	5
	support is given to the extent each student needs it & is withdrawn as it is no longer required	some support is given but not to the degree it is needed by each student	support is given, but is not withdrawn as appropriate	no support needed	no support given; another student takes over

DISCUSSION

	1	2	3	4	5
	students use strategies to structure dialogue, but other discussion takes place frequently	occasional discussion takes place	1-2 instances of limited discussion	students recite 4 strategies without any discussion	teacher cuts off discussion when it occurs

FEEDBACK

	1	2	3	4	5
	teacher always provides specific corrective feedback to the "teacher"	teacher frequently provides specific corrective feedback to the "teacher"	teacher always provides feedback to the "teacher" most of which is non-specific	teacher sometimes provides non-specific feedback to the "teacher"	no feedback given to the "teacher"

NOTES

TEACHER _____
DATE _____
TAPE/LIVE _____ (DATE/ CLASS TYPE/ GROUP SIZE _____
INSTRUCTIONAL MATERIALS _____

QUESTIONING

	1	2	3	4	5
	"teacher" asks questions; help is given when needed; others have the opportunity to also ask questions; students discuss the answers	"teacher" asks questions; help is given when needed; others don't have the opportunity to also ask questions; some discussion of answers	"teacher" asks questions; help is given when needed; others don't have the opportunity to ask questions; some discussion of answers	"teacher" asks questions; help is given when needed; others don't have the opportunity to ask questions; no discussion	"teacher" asks if question if able to do w/o help; others ask if teacher is unable

SUMMARY

	1	2	3	4	5
	"teacher" gives a sum, help is gn. as needed; students have the opportunity to add to & discuss the summary	"teacher" gives a summary; help is gn. as needed; no opportunity to add to or discuss	"teacher" gives a summary; no help is given; no opportunity to add to or discuss	"teacher" gives a summary; no possible; help is gn. someone else summarizes if "teacher" can't	no summary given

CLARIFYING

	1	2	3	4	5
	"teacher" clarifies as needed; trying to use text clues if possible; students also help	"teacher" clarifies as needed; not attempting to use text clues but teacher encourages text use; stud. help	"teacher" clarifies as needed, not using text clues & teacher does not encourage use of text; students help	"teacher" clarifies as needed, not using text clues & teacher does not encourage use of text; no student help	regular teacher tells the meaning

PREDICTION

	1	2	3	4	5
	students are asked to make a prediction, give reasons for it, & predictions are discussed periodically	students are asked to make a prediction & give reasons for it; no reference or superficial reference to earlier pred	students are asked to make a prediction but no reason & predictions are discussed periodically	students are asked to make a prediction but no reason; no reference or superficial reference to earlier predictions	no predictions

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