MAKING SENSE OF SCHOOL:
AN ECOLOGICAL EXAMINATION OF STUDENTS' DEFINITIONS OF READING TASKS

by

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(ABSTRACT)

What students do as they work to complete academic tasks will determine what they learn from those tasks. Teachers often receive unexpected responses on completed tasks, indicating that the students did, perhaps, unexpected things as they completed those tasks. The purpose of this study was to describe how students, given similar instruction, responded differently to academic reading tasks in the elementary school classroom.

This study describes what students did as they worked through classroom reading tasks—the ways they defined the tasks, the goals they set, and the strategies and resources they used to complete the tasks. It also describes the factors within the classroom which may have influenced what those students did—the dimensions of the task as set by the teacher and the text, as well as the social and environmental demands impacting on the student.
The principal research question was: what are the dimensions of the task environment and the features of task definitions that contribute to students' successful or unsuccessful completion of assigned tasks in elementary classrooms?

Data was collected from one fifth-grade classroom. Four focal students, differing in their success as school readers, were selected for in-depth study. Participant observation, interviews, and protocol analysis were the primary data collection techniques used in this study.

Analysis of the data indicated that though students were asked to complete some comprehension and rote memory tasks, most reading tasks which required a written response were procedural. Those tasks which were ambiguous or procedurally complex were the most problematic for the students.

This study suggests that though students sometimes did not attend, occasionally chose not to respond, and at times lacked content knowledge crucial to task completion, these were not the main reasons for their failure to respond to tasks as the teacher expected. Most often they provided unexpected responses to reading tasks because the tasks were ambiguous and they did not understand what the task was asking them to do.
for
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My committee members—Margaret Eisenhart, Pat Kelly, Rosary Lalik, Janet Sawyers, and Terry Wildman—all have been my teachers. They taught me in classrooms, in offices, in snatched conversations in the halls. They encouraged me and their confidence in me gave me confidence in myself. My awareness of their critical stance as readers made my writing clearer and my thinking more precise. What is good in this document represents their influence. What is missing represents my own limitations.

Jerry Niles, my director, knew when to give advice, when to ask questions, and when to just listen. He listened harder than anyone I have ever known. I don't know how to thank him for that. I wrote to his listening.
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This is only one of many stories of an elementary school classroom. It describes the classroom through the eyes of the students—what they saw and understood as they worked to make sense of school.

It was a typical classroom, but it was only one. The children in this study represented the range of abilities that were found in that classroom, but only a few were studied in depth. The study was conducted over a narrow space of time and, therefore, describes only a moment in the school year.

There are as many other stories as there were moments that went unstudied and as there were children in that classroom. There are also moments experienced by the teacher that might have provided very different stories.

Other stories can and should be told. But this one is about four children as they struggled to define and achieve their own success in school.
Mrs. Williams, a fifth grade teacher, leaned back in her chair and looked at the stack of corrected reading papers in front of her. She sighed audibly and said,

Well, the thing that I can't get is that I went over this with them. I even pointed out some of the examples. . . . And I told 'em that those [pointing to the book] were the three main topics. I told 'em when we started and . . . I know I told 'em another couple times. . . . And then I said, "Now what do you think you would put down under this first one?" . . . And I told 'em that and I thought they understood. I figured they wouldn't have that much trouble with it.

But they did. A number of the children in her class were unable to do the reading assignment accurately. Mrs. Williams went on to say, "And . . . they couldn't do it. I don't know what's wrong." She talked about other assignments she had given, assignments which several of the children were unable to complete correctly:

I don't know what it is. But it's a serious problem. It's not just here. It's everywhere. Everybody talks about it. I don't understand what's wrong.

Mrs. Williams is not alone in her concern (Winne, 1985b). Though teachers may give the same instructions, explanations, and assignments to all of the children in a group, only some complete the assignment correctly, accurately and as the teacher expected it to be done; others turn in work that is incorrect or incomplete. What
makes the difference? Why is it that some students do what the teacher expects and others seemingly do not?

Teachers may explain discrepancies in completed work, as Mrs. Williams often did, with comments such as, "he wasn't listening when we went over the assignment," or "she just didn't read her instructions." Yet even though they exhort their students to listen, to work with care, and to read all the directions, there continue to be discrepancies in students' performances on completed work.

When teachers see discrepancies in student performance on classroom tasks, they may excuse the errors on the basis of careless work habits or they may assume that the child who made the errors did not understand the concepts presented in the lesson. Whatever explanations teachers provide for discrepant performances, however, the work is graded and that grade contributes to the evaluation of the student as successful or unsuccessful in school. Doyle (1977b, 1983) points out that academic work is embedded in an accountability structure which emphasizes the exchange of performance for grades and students who do not complete assignments accurately are held accountable.

There is no simple explanation of the phenomenon that gave rise to Mrs. Williams' concern (Winne, 1985b). An examination of the completed work produced by her students
does not explain what happened as those students worked through the assignment (Winne, 1982). The final product does not indicate if the students who incorrectly completed the assignment were not listening to the teacher's instructions, did not read the directions, were careless in their reading of the question to be answered, did not understand the concept presented or, perhaps, the question being asked, or chose not to respond. The correct response to a question does not indicate what the student did to generate such a response or even that the student understood or learned the concept the teacher had presented.

There is a great deal we do not know about how students learn in school (Doyle, 1982; Winne, 1985a; Winne & Marx, 1982). To help us understand what students do as they learn in classrooms, we need to understand what happens as teachers assign and students complete school tasks. We need to describe the covert cognitive processes that operate during teaching and learning (Doyle, 1977b), as well as other significant features of the task environment such as goals and resources that impact on the strategies students use. One way to do this is to carefully examine how teachers assign tasks and how students understand and complete those instructional tasks in classrooms.
Focus of the Study

The purpose of this study is to describe how four focal students, given similar instruction, responded differently to academic tasks. In order to understand such occurrences it is necessary to describe what the students did as they worked through classroom tasks and to examine the factors within the classroom that may have influenced what they did. The ways in which students define a task, the goals they set, and the strategies and resources that they use to complete the task constitute what students do. The classroom influences examined in this study are the dimensions of the task as set by the teacher and the text as well as the social and environmental demands which impacted on what the students thought they were to do. Understanding both what students think and what influences their thinking as they work through tasks makes it possible to determine to some extent what leads them to differential responses to academic tasks.

Students, in this study, are viewed as active processors and mediators of their own learning; academic tasks are seen as the focus of the cognitive processes of the student; and the classroom environment is viewed as impacting the task structure and the learners' cognitive processes as they work through tasks. This study uses a
model of classroom learning that may be helpful in describing and understanding what occurs as students work through classroom tasks. The study focuses on reading tasks because of their prominence in the elementary school curriculum and because of the discipline knowledge of the researcher in reading. The model used for this study is illustrated in Figure 1.

In this model, the task is set by the teacher within the framework of her instructional plans. The teacher may provide either explicit or implicit goals for the task and may suggest or expect that particular strategies and resources be used for task completion. The goals, strategies, and resources she wants students to use may become more clearly defined by the teacher as the students progress through the task or in the final evaluation of the completed task (Winne, 1985b).

Each task is structured by a goal, the materials or resources available, and the operations suggested by the task (Doyle and Carter, 1984). These elements focus the information processing activities of the students working to complete the tasks (Doyle, 1979a, 1979b, 1983).

The goal of a task can be either the product that will be produced by the completion of the task (Doyle and Carter, 1984) or the purpose for doing an activity (Doyle, 1979c). The "product goal" will be specified by the form
Figure 1. Model of classroom learning.
the answer is expected to take or by the materials or
resources available. For instance, a fill-in-the-blank
question has a different product goal from an essay
question. The "purpose goal" for any task may be either
explicit or implicit. It may be suggested by the teacher
explicitly, as for example, "Complete these workbook pages
and you will learn to use different parts of a book," or
implicitly through the manner in which she structures the
activity. She may, for example, accept only one,
predetermined answer to a question, repeating the question
until she receives that response. In such a case, the
purpose goal for the children may become that of
determining what answer might be considered as "correct"
by the teacher.

The strategies or operations expected of the students
will vary depending on the way in which each of the goals
is presented. The product goal of a fill-in-the-blank
question, for instance, will identify to some extent the
types of strategies to be used to complete such a task. A
purpose goal of comprehension for the same task, however,
in which a student is required to "construct rather than
reproduce" an answer (Doyle and Carter, 1984), will call
for the student to utilize different strategies. The two
goals working in tandem help the student see the extent of
the task, the range of strategies that might be used, and evaluate when that task has been completed satisfactorily.

The materials or resources made available to the student are closely linked to both the product and purpose goals set for the task as well as to the strategies it is anticipated that the student will use. For a fill-in-the-blank worksheet, for example, the resources appear to be limited—the workbook itself, the pencil and paper materials the students use to write on, the teacher to answer questions, other students to answer questions, and responses the teacher might provide to other students' questions. In fact, the sources of information available to students within the complex environment of the classroom are virtually unlimited (Doyle, 1977b). The resources a teacher might suggest may influence what the students do as they work to complete the task.

On the learner side of the model (see Figure 1) students bring their own goals for reading and learning and their own conceptions of themselves as readers to reading tasks (Borko & Eisenhart, 1986). As a result of these conceptions some children refuse to participate in or are denied access to school reading tasks (e.g. McDermott, 1974; Willis, 1977) and some students develop coping strategies based on their conceptions which may affect their task definitions.
Student learners who do participate in academic reading tasks define such tasks in terms of the goals and strategies that make sense to them within the framework of the task as presented by the teacher and instructional materials. The range of student task definitions, then, is created by an interaction between the task as presented by the teacher or materials, the influences of the students' conceptions of themselves as learners, and their prior knowledge. Prior knowledge consists of previous experiences with similar tasks and declarative and procedural knowledge which may relate to the task.

Prior experiences with similar tasks may focus students' definitions of problems to be solved by influencing their views of the goals and strategies which are considered appropriate. For example, children who have been taught to locate answers to comprehension questions in the basal reader and copy the wording exactly as it appears in the text, may define future comprehension questions in a similar manner and assume that the answer expected of them will be located verbatim in the text.

Students may also have a limited prior knowledge of an instructional content area which may influence the goals and strategies they select to complete a related task. Children who are asked, for example, to read a passage about a special project to plant certain kinds of
trees in downtown Brooklyn—trees resistant to smog, able to cope with poor soil conditions, and requiring very little growing space—may have difficulty understanding the story if they have never lived in or experienced city life. They may read the words, but when asked to respond to questions about the passage they may define such questions, designed to monitor their comprehension, as memory tasks. They may recite from their memory of the text a verbatim response because the information contained in the passage had little relevance to them. In such a case, the limits of their prior knowledge influenced their sense of which goals and strategies were appropriate to the task.

In other cases, children may have prior knowledge of a content area, but that knowledge may not be activated either explicitly by the instruction or implicitly by the task. The schematic representation helpful for understanding the task may lie dormant. Bransford and Johnson's (1972) washing clothes passage is an example of this. Most fluent readers could understand the passage if the appropriate schema were activated by the title "Washing Clothes." When the title is missing, however, many readers find the passage incomprehensible and consequently set for themselves purposes and strategies
different from those set by readers who are given a context that activates the appropriate schema.

The same is true for schema activation of procedural knowledge. If children are being asked to read expository passages for information and most of their prior reading experiences have been with narrative texts they may find it difficult to understand the nature of the task. One child may set very different purposes from another child for whom a schema of non-narrative text is well-developed, even though both children received identical task instructions and are comparable readers, in terms of skill.

Once students have defined the task and worked through it to completion, their work is evaluated by the classroom teacher. That evaluation, if shared with the student, may produce a change in the student's understanding of the content of the lesson or the structure of the task. But whether or not they receive a response from the teacher, students will have learned from what they have done to complete the task. The ways in which students define reading tasks and work through such tasks to completion reflects the learning that occurred for them (Doyle, 1979a, 1981).

The model presented here evolved from a theoretical perspective of classroom learning which describes the
learning process as one in which students actively search for solutions to academic tasks set within the elementary classroom.

Theoretical Framework

Teachers assign tasks which are designed to influence the learning processes of their students (Marx, 1983). Marx (1983) views these classroom tasks as problems which must be solved by the students. He refers to tasks which pose novel or unsolved problems for the students as creative problems and those tasks which students have solved before as routine problems. Both types of tasks pose problems for students (Marx, 1983). The view of the classroom as an environment in which students must define and solve problems provides the basic framework for this study.

Newell and Simon (1972) describe a problem-solving model of learning which portrays problem solving as one aspect of human information processing. Within such a model, performance on problem-solving tasks is seen as influenced by the characteristics of the information processing system, the elements present in the task environment, and the ways in which problem solvers represent tasks to themselves (Marx, 1983; Newell & Simon, 1972; Simon, 1979). To understand how the problem-solving
framework applies to the classroom learning situation, it is necessary to understand how these components of problem solving—the information processing system, the task environment, and the problem space—work together to allow a student to learn from instructional tasks.

**Information Processing**

Models of the information processing system are "hypothetical descriptions of what information is, and of the ways that information is perceived, transformed, and used" (Winne, 1985b, p. 797). In spite of the hypothetical nature of the models and the relatively recent emergence of the view of the learner as an information processor (Simon, 1979), most current models account for four sites or systems within the general framework of information processing (Winne, 1985b). These four sites are the sensory system, the memory systems, the central processing system, and the response system. A brief description of each of these systems will help make clear the boundaries of the learner functioning as a problem solver within this system.

The sensory system is what Winne (1985b) describes as the "gateway through which information from the environment enters the cognitive system" (Winne, 1985b, p. 798). The sensory register, described by Marx (1983) as "precognitive" (p. 148), is a receptor for
environmental stimuli. It is non-selective and information which impacts the sensory system is retained only briefly (Bransford, 1979).

There are two memory systems: short-term and long-term memory (e.g. Bransford, 1979; Gagné, 1985; Winne, 1985b). Long-term memory is the repository of all information that has been learned by an individual (e.g. Bransford, 1979; Gagné, 1985; Simon, 1978, 1979; Winne, 1985a). Information stored in long-term memory is permanent and the amount able to be retained is very large, perhaps infinite (Bransford, 1979; Gagné, 1985; Winne, 1985a). Winne (1985a) describes the information in long-term memory as being structured in increasingly more complex organizations of concepts, propositions, and schema. Concepts he explains, are the simplest conceptual frameworks; propositions are composed of two or more interrelated concepts; and schema, the most complex organizational structures, provide a framework within which concepts, propositions, and related instances or experiences can be accessed (Winne, 1985a).

Short-term memory, often referred to as "working memory" (e.g., Bransford, 1979; Gagné, 1985; Winne 1985a), is the memory system site where information is stored to be processed. Short-term memory is, as its name implies, short-lived. It is available only 10 to 30 seconds without
rehearsal, and if information is not processed within that
time, it is lost (Bransford, 1979). Short-term memory
will accommodate information from the sensory register or
information from long-term memory (Winne, 1985a).

The central processing system is the site where
cognitive processes actually manipulate information and
the response system is the "gateway" out of cognition—a
way for the internal cognitive processes to be manifest as
performance (Winne, 1985a).

Within this model of information processing, then,
information is presented to the learner as environmental
stimuli and, if attended to, moves from the sensory
register to the short-term or working memory. In short-
term memory information must be actively processed in some
way in order to be retained. Information which is
integrated into existing knowledge structures in the form
of concepts, propositions, or schema are then stored in
long-term memory for later activation and retrieval.

This model represents "an adaptive [information
processing] system, capable of molding its behavior,
within wide limits, to the requirements of the task and
capable of modifying its behavior substantially over time
by learning" (Simon, 1978, p.272). The boundaries placed
on behavior by such a system are very general. Among the
kinds of parameters limiting processing are principles
such as the ones described above: that unattended information can be lost from the sensory register; that short-term memory has a limited capacity; that interrupted short-term memory rehearsal can result in information loss; and that information in short-term memory might be inadequately coded in long-term memory, making retrieval difficult.

The characteristics of the human information processing system are relatively broad and, though the system has limitations, the performance of students solving problems in classrooms is not dependent on just the aspects of that system. How students solve problems in school is dependent on the relationship between the information processing system, the task environment, and the problem space of the learner (Simon, 1978).

Task Environment

The task environment is a representation of the task as described by the task-maker (Newell & Simon, 1972; Simon, 1978). In classroom learning environments the task maker is most often the teacher, but the task-maker can be any other source of an instructional task (e.g., textbooks, workbooks, worksheets). The task environment is "the structure of facts, concepts, and their relationships that make up the problem" (Frederiksen, 1984; p. 367). It can be thought of as how an omniscient
observer might describe the elements of the problem to be solved (Simon, 1978). The task environment contains all the information available to the solver that can be used to guide the solution process (Kahney, 1986) and it "determines the possible structures of the problem space" (Simon, 1978, p.273).

The Problem Space

The problem solver represents the task in terms of what Newell and Simon (1972) refer to as a "problem space" (p. 809). "The problem space is the problem solver's mental representation of the task environment" (Frederiksen, 1984, p. 367). The problem solver in the classroom is the student and the problem space is the student's way of viewing the task environment, of "representing [that] task environment in memory" (Simon, 1978, p.275). "The way a person represents a problem has powerful determining effects on the ease with which a problem can be solved" (Kahney, 1986, p. 41). How a student in the elementary classroom defines a task will determine the strategies which that student uses to solve the problem and, ultimately, the product the student will produce.

According to Simon and Hayes (1976), defining the problem in the problem space is a necessary first step toward generating a solution. The way the student or
problem solver represents the task in the problem space will depend on two features: 1) the structure of the task environment as it exists for the student (Kahney, 1986), and 2) the problem solver's understanding of the possible goals of the problem based on previous experience with similar problems (Greeno, 1978).

Kahney (1986) describes problem solving as goal-directed: "Whenever you have a goal which is blocked for any reason, you have a problem. Whatever you do in order to achieve your goal is problem solving" (Kahney, 1986, p.15). Few problems have clearly defined and stated goals. Most "well-structured" (Frederiksen, 1984, p. 363) problems are limited primarily to problems generated in the laboratory or to a few carefully constructed puzzles and mathematical problems (Frederiksen, 1984; Kahney, 1986). Well-structured problems are those clearly formulated problems for which both an algorithmic solution and a product goal are known (Frederiksen, 1984). Most real-life problems, however, are either "structured problems requiring productive thinking" (Frederiksen, 1984, p. 367) for which some crucial information or step in the procedure is missing and must be generated by the problem solver or are "ill-structured" (Frederiksen, 1984, p. 366), problems for which there are multiple unknowns (Frederiksen, 1984; Kahney, 1986; Simon, 1978). Truly ill-
defined problems, such as most social and political problems, are the most difficult to solve. Most academic tasks within the elementary classroom consist of either well-structured, algorithmic problems or problems requiring productive thinking.

The way in which a problem is represented within a problem space depends on the clarity of the goal as stated by the task environment and on the past experience of the problem solver in solving similar type problems (Greene, 1978). "When confronted with a problem, people bring to bear that part of their total store of knowledge that is (or that they think is) relevant to the problem at hand" (Kahney, 1986, p. 40). The student problem solver who has had many successful experiences solving mathematics story problems, for instance, will be much more adept at defining a novel story problem. A student who has had few and relatively unsuccessful attempts at solving story problems might, then, have considerable difficulty representing a new story problem within his or her problem space.

The information processing system, then, governs the mechanisms of learning, such as attention and the storing and retrieval of information in long-term memory. The task environment governs what is to be learned, the dimensions of the tasks as they are presented to the
learners. The problem space governs the learners' interpretations of what they are being asked to do, their definitions of the tasks. Each of these elements are interconnected and contribute to the ways that students solve problems and, consequently, to the responses that those students produce.

This problem-solving framework for understanding the ways in which students learn in classrooms suggests at least three theoretical perspectives on children's learning. The first perspective is that of the learner as the mediator of his or her own learning. The second is that of the task as the central activity in the environment of the learning classroom. And the third is that of the environmental structure of the classroom as having a clear impact on the learning that occurs.

**The Learner as Cognitive-Mediator**

The perspective of the learner as a processor of information and a mediator of his or her own learning emerges from theories of cognitive processing. Within the framework of the information processing models, the learner/knower/problem solver creates a mental representation of the problem or task and, based on that information, generates possible paths to a solution (e.g. Frederiksen, 1984; Gagné, 1985; Kahney, 1986).
Marx (1983) describes two models of how information processing occurs. One model, called "bottom-up" processing (p. 145), suggests that the information processor uses principally environmental stimuli as the framework for cognition. The other, the "top-down" processing model (p. 146), suggests that the framework for cognitive processing is created entirely by the processor's prior information. Marx (1983) and others (e.g., Rummelhart, 1980; Spiro, 1980) suggest that, in fact, it is neither one nor the other, but both types of processing which drive knowledge acquisition; information processing is interactive. They assert that processors use environmental stimuli to influence existing knowledge and use existing knowledge to provide "a cognitive framework for the perceiver to extract important information from [the environment]" (Marx, 1983, p.146). This interpretation is consistent with the problem-solving framework which suggests that the task environment as well as the students' representation of the problem space influence their ability to solve the problem.

Interactive processing has two features: the environment influences the individual, but the individual also constructs and modifies the information that is presented by the environment. From this view of the individual as an active processor of information and as a
mediator of his or her perceptions has emerged the "cognitive-mediational paradigm" (Winne, 1985a, 1985b; Winne and Marx, 1982), also called the "mediating process model" (Doyle, 1978) of learning. This model characterizes learning in classrooms as a "series of interactions between events in the instructional environment and a student's cognitive processes" (Winne, 1985b, p.797). Within this model the classroom "teaching events create the conditions under which students do the cognitive work that produces learning" (Winne, 1985a, p.673).

The cognitive mediational paradigm, then, explains, in light of the learning classroom, the interdependency of the task environment and the problem space. In addition, the cognitive mediational model of learning also suggests reasons for failure in school. Winne (1985a) says that there are four ways a student in a classroom, given an instructional task, may fail to respond appropriately: 1) the student may not attend to the question or task; 2) the student may attend but may not know what kind of an answer is required; 3) the student may attend, but lack the appropriate curricular information to answer; or 4) the student may choose not to engage in the task.

The second possibility, that the student may attend, but not know what kind of an answer is required,
represents the student's inability to appropriately define the problem space. Marx (1983) explains that a major undertaking for students is to determine the goals of instructional tasks. By identifying the problem space, by defining the task that they are being asked to complete, learners place limits on the possible cognitive strategies to be used to achieve the goal which represents completion (Anderson, 1980; Frederiksen, 1984; Newell & Simon, 1972). According to Marx (1983), failure to accurately define the problem space is a common difficulty for learners. He says, "the task environment created by the teacher and the problem space defined by the learner are frequently not the same. . . . A central issue regarding classroom learning is how students perceive common classroom tasks and how these perceptions influence cognitive operations used on these tasks" (Marx, 1983, p.154).

Research on the cognitive mediational model. Winne and Marx (1982) based a line of research on the cognitive mediational model stating that such a model of learning requires researchers "to explore how students perceive learning tasks and what they do cognitively to bring about learning based on these perceptions" (p. 494). Winne and Marx (1982) speculated that there is a link between teachers' intentions to direct the cognitive processing of their students, teacher behaviors that communicate those
intentions, students' perceptions and use of cognitive processes by which they learn from teaching, and students' behaviors which inform teachers of their progress.

Winne and Marx (1979) first attempted to train college students to notice or to notice and respond to the structural characteristics of lectures. The training, in fact, failed as the students' scores on post-training quizzes declined. Winne (1982) explained this failure in two ways: 1) there was a fundamental difference between the students' goals to record the content of the lecture and the teacher's intent that the students learn that content as it was being presented, and 2) the training presented a perceptual schema which interfered with an already well-established schemata thus overtaxing and conflicting with the students' habitual procedures.

Winne (1982) was able to improve the results of the first study with a more tightly controlled format for a subsequent study of learning from textual materials. From these studies Winne and Marx (1979) suggested that during instruction students must solve three problems: 1) students need to develop or activate a perceptual schema for the content of a lesson, 2) students need to accurately perceive the intentions of the teachers' actions or instructions, and 3) students need to engage in mental operations necessary to ensure learning.
As a result, Winne and Marx (1982) designed a study in which they explored the first two of these problems: they examined teachers' intentions for students' cognitive processing and examined how students did respond cognitively to the teachers' instructional activities. Using a stimulated recall, structured interview technique, they interviewed 113 students and five teachers in five upper-elementary classrooms. The interviews followed video-taped lessons covering a wide range of curricular areas. Teachers viewed the tape of the lesson and stopped the tape to identify when they had intended students to think in a particular way in response to their teaching. From the teacher interviews, key instructional segments were selected to show to students. Students were interviewed in groups of 3 or 4, with one student participating as the primary interviewee and the other students providing corroborating or disconfirming evidence.

From these data, Winne and Marx (1982) concluded that students do mediate instructional events with their cognitive processing even though there was a lack of correspondence in many cases between the instructional stimuli identified by the teachers and the cognitive processing that was cued for the students.
In a later study, Winne (1983) found that elementary students could be trained to perceive and execute intentions for cognitive processing that were cued by specific instructional stimuli. The training worked to a degree but the difficulty of the material, the evidence which suggested that the students stopped using the training strategies over time, and the small sample size indicated that such research needs further exploration. The results did add substance to the claim that learning from instruction is riddled with interactions (Winne, 1985b). The finding that student achievement was positively related to student aptitude was, according to Winne (1983), predictable and substantiated Marx's (1983) claim that students' perceptions are associated with affective reactions that influence the degree to which students view themselves as efficacious learners.

Out of the cognitive mediational paradigm Peterson, Swing, Braverman, and Buss (1982) studied elementary mathematics instruction and learning. They noted that student thought processes "clearly mediate between student differences and teaching behaviors to produce differential achievement levels and attitudes" (p. 535). They believed that aptitudes, both ability and attitudes, need to be taken into account when attempting to understand student cognitive processing. In their study, they controlled for
mathematics ability as well as attitude toward mathematics and locus of control. The study had a single teacher who taught two lessons on probability to six classes over the summer months. There were 72 upper-grade students randomly assigned to one of the six classes. All of the lessons were video-taped. The students participated in structured interviews after each lesson during which they were shown five segments representing "critical incidents" (Peterson et al., 1982, p.484) from the lesson and then asked to report what they had been thinking, what they understood, what the teacher had done to help them understand, and what they themselves had done to help themselves understand. At the end of the two-lesson unit all students completed an achievement test designed to assess their learning of probability.

A key finding (Peterson et al., 1982) was that students' self-reporting correlated much more strongly with achievement than observers' check-lists of student behavior during the lesson. Observers saw students appearing to attend when the same students later reported that they were not attending or did not understand what was said. The students' achievement scores substantiated those reports. Also, students who reported using specific cognitive strategies (e.g., repeating or reviewing
information) performed better than students who reported using general cognitive strategies (e.g., thinking or listening).

Taking the impetus from the cognitive mediational paradigm, the present study focuses on the ways in which students perceive classroom tasks and how those perceptions influence their cognitive responses to those tasks.

Classroom Tasks as the Focus for Cognition

The second perspective taken in this study is that classroom tasks are the focus for student cognitive processes in the learning classroom. Doyle (1979a) states that "what students learn in classrooms is a function of the operations they use to accomplish academic tasks" (p. 141). Doyle (1979b) goes on to explain that the formal tasks students are asked to perform define the classroom by guiding students' information processing.

Doyle (1983) views the curriculum as a collection of academic tasks. These tasks are embedded within the activity structure of the classroom (Doyle, 1979c; Doyle and Carter, 1984). Activities, focused on the theme or content of a lesson, are described by Doyle (1979c) as "bounded segments of classroom time" (p. 45), ways of organizing groups of students to complete work. Doyle (1979c) cites as examples of activities such things as
seatwork, small-group discussions, lectures, recitation, and reading. Key dimensions of classroom activities include the grouping of students, the number and type of students, the duration of instruction, and the physical space used (Doyle and Carter, 1984). Activities have both a focal content or concern and a pattern or program of action (Doyle, 1984). Doyle (1979c) describes activities as "distinctive patterns of overt behaviors of teachers and students in classrooms" (p. 45).

Tasks are embedded within these instructional activities and "designate the situational structures that organize and direct thought and action" (Doyle & Carter, 1984, p. 130). As opposed to activities, tasks direct students' attention to particular aspects of the content of the lesson and specify the cognitive dimensions of the activity. Doyle and Carter (1984), for instance, distinguish between tasks which require students to construct rather than reproduce answers. Winne (1985a) defines a task as "something the student must do. . . . Tasks begin with a set of conditions and a goal. Some conditions are determined by the instructional environment, and some are determined by a student" (p. 800).

Tasks, then, contain plans for behavior and thus they create what Newell and Simon (1972) have referred to as
the "task environment" (p. 823). "Academic tasks . . .
provide a central classroom structure that governs student
information processing" (Doyle and Carter, 1984, p. 131)
and these tasks organize cognition by defining a goal and
providing instructions for processing information within
the setting of the classroom (Doyle, 1979c; Doyle and
Carter, 1984). A classroom task consists of three
components: 1) a goal or product to be produced; 2) a set
of resources available; and 3) a set of operations or
strategies that can be applied to the resources to reach
the goal or generate the product (Doyle, 1979c; Doyle and
Carter, 1984).

Doyle (1983) has identified four types of academic
tasks: memory tasks, procedural or routine tasks,
comprehension tasks, and opinion tasks. Comprehension or
understanding tasks are those in which students are asked
to recognize paraphrased information, apply procedures to
a new problem, or draw inferences from information. They
require the student to establish a high-level semantic
structure or schema that can be instantiated in different
ways in response to particular circumstances (Doyle,
1983). Opinion tasks are those that ask students to state
a preference. Memory tasks are those which require
verbatim recall of information, generally containing the
same examples or language that occurred in the
instruction. Memory tasks require that semantic integration be resisted so that the surface features can be preserved in memory and that a mnemonic strategy be used to generate rich associations. Procedural or routine tasks ask students to apply formulas or algorithms in order to generate responses.

The nature of any particular task is determined by the type of cognitive operations required for completion. Cognitive operations required for tasks may be apparent in the presentation of the task to the students, in the instructions or directions provided by the text, in the product defined by the form of the response, or in the response that the teacher ultimately provides to the completed task (Winne, 1985b).

Because the academic task is the essential component in the learning process for both teachers and students (Doyle, 1982, 1983), "whether work is understood and accomplished by students is of major importance for achievement" (Doyle, 1982, p.531). How a student completes a task, then, determines what that student is thought to have learned (Doyle, 1979a, 1981).

Research on academic tasks. The bulk of Doyle's work on tasks (1977a, 1984) focuses on teacher cognition and how teachers' manage the academic work that needs to be completed by students. Doyle's early work (1977a) with
beginning teachers was based on the premise that the "environmental demands [of the classroom] moderate performance and establish limits on the range of response options" (p. 51) available to teachers. Doyle (1977a) observed student teachers in naturalistic settings over a three-year period. He found that, for the student teachers he observed, classrooms were multidimensional, had many events occurring simultaneously, and were unpredictable. He found that all the student teachers developed strategies which attempted to reduce the complexity of the classroom. This finding led Doyle (1977c) to note that "the way teachers behave in classrooms may reflect the cumulative effects of a continuous process of adapting to the environmental demands unique to classrooms" (p. 188) and, later, that "the behaviors of students [are] associated with the structure of individual classroom activities" (Doyle, 1979c, p. 55).

In an attempt to understand how teachers cognitively adapt to the environment, Doyle (1984) conducted an extensive study of seven junior high school English teachers. Data for this study consisted of detailed narrative observations of two class periods for each teacher. Doyle's premise for this study was that solving the problem of order is a central element in the task of
teaching and that order in classrooms rests principally on the system of activities a teacher establishes and operates (Doyle, 1979c). The results of Doyle's (1984) study of classroom activities suggested that the structure of classroom time periods affected the activities presented by teachers; that activities linked together by common themes could be viewed as functionally related (and so were labeled as "lessons" [p. 272]); and the effectiveness of teacher management was dependent, in part, on the active orchestration of classroom events by the teacher.

In an attempt to understand how students cognitively adapt to the classroom environment, Doyle (1983) examined academic tasks in which students participated. He based his examination on the premise that "the system of overlapping task structures . . . reduce to some degree, but certainly do not eliminate, the problematic nature of the classroom setting" (Doyle, 1979b, p. 193). To determine how the task structures reduced the complexity of the classroom, Doyle and Carter (1984) studied academic tasks in one junior high school and two high school English classes. The study, an intensive case analysis of the task structure of the classrooms over a three-month period, involved over 33 observations for each class. The
data included observational field notes, samples of student work, and copies of assignments sheets, handouts, and tests.

From these data Doyle and Carter (1984) were able to identify major and minor assignments made to the students. The distinction between major and minor was made on the basis of the weight of the grade and the time allocated to completing the assignment. The results indicated that the major assignments resulted in tasks that were unstable. Initially, the structure of such tasks was made intentionally ambiguous by the teacher, but as the work on the assignments progressed a greater degree of explicitness and specificity occurred. By the time the assignments were completed, "the tasks that were accomplished were substantially different from the tasks that were announced" (Doyle & Carter, 1984, p. 145). Minor assignments, on the other hand, were clearly defined and had, for the most part, reliable algorithms for generating products; they were routine tasks. Doyle and Carter (1984) note that the students influenced the task demands of the higher-level assignments in direct and indirect ways. The teacher who was pushed to choose between the elements of the task and the maintenance of order, then, chose order and reduced the demands of the task (Doyle & Carter, 1984).
Doyle (1983) sees the learner as a cognitive mediator who focuses classroom learning on academic tasks. Doyle's work describes, in part, the complexity and interactive nature of the classroom learning environment. A major focus of the present study is to understand student mediating responses to academic tasks within that complex and highly interactive environment.

The Environment as It Affects Task Completion

Classroom environments are amazingly complex and academic tasks set within those environments contribute to, and are affected by, that complexity (Doyle, 1977a, 1977b, 1979b). Research on learning processes which is performed outside the actual classroom disregards the complexity which the social context adds to the learning process (Hosenthal, 1983, 1984). Doyle (1983) states that research on learning must take place within the classroom because "academic work is transformed fundamentally when it is placed in the complex social system of a classroom" (p.185).

Hosenthal (1984) describes a way of understanding reading comprehension which emphasizes the complexity of the classroom learning situation. He suggests that there are five factors which impact on reading comprehension. These factors are: the task, the student (in this case the reader), the resources available (in the case of
reading comprehension, the text), the situation organizer (in the classroom, the teacher), and the setting (Mosenthal, 1984). These factors can be imagined as separate points on a three-dimensional pyramid. The base of the pyramid forms a square and the four corners represent the teacher, text, student, and classroom setting. The four sides of the pyramid rising up from the base meet at the tip which represents the task. The intersecting planes of the pyramid suggest the complexity of those elements of the classroom. Mosenthal (1984) notes that for many research events, the situation organizer is the researcher and the setting is the laboratory situation. These research designs often control for the text, the reader, and the task, clearly important variables, but fail to take into account that the normal learning environment is the classroom and the traditional learning organizer is the classroom teacher (Mosenthal, 1984). Mosenthal (1984) suggests that these variables need to be considered if classroom learning is to be understood.

Doyle (1977a, 1977b) recommends the use of an ecological perspective in order to understand the impact that the environment has on the learner and the teacher interacting within the framework of the classroom. The classroom ecology is, according to Doyle and Ponder
(1975), a "network of interconnected processes and events which impinge upon behavior in the teaching environment" (p. 183). The ecological model, Doyle (1977a) asserts, "postulates that the environmental demands moderate performance and establish limits on the range of response options" (Doyle, 1977a, p. 51). By response options Doyle means cognitive as well as behavioral options. He asserts that such a model extends the mediating process or cognitive mediational approach to learning because it takes the learner, the task, and the situation all into account (Doyle, 1977b). Such a perspective would account for all the elements in Mosenthal's (1984) imaginary pyramid representing the complexity of the classroom.

The classroom places special demands on learners. According to Doyle (1979c), student behavior, including cognition, can be viewed "as an adaptive response to the demands of the classroom environment" (p. 43). The ecological paradigm describes those "repetitive demands work makes on people and the ways in which they come to adjust . . . to those demands" (Lortie, cited in Doyle, 1977b, p. 176). Within an ecological paradigm such environmental demands are identified and speculation is made about the mediational strategies necessary to meet those demands successfully (Doyle, 1977b).
Four aspects of the environment place special demands on students as they work to process information in the classroom. They are: 1) the task structure, 2) the accountability structure, 3) the interpersonal relationships established within the social system of the classroom, and 4) the elements of ambiguity and risk involved in learning in classrooms.

The ways that an academic task is structured will influence student cognition. Doyle (1979b) notes that "the task structure . . . determines which aspects of the classroom environment affect a student" (p. 197). Tasks are controlled by teachers who orchestrate the activities, elaborate the assignments, and evaluate the completed work. How a teacher controls these elements of a task may influence what students attend to as important in completing that task.

The task may also interact with and be influenced by the classroom environment. For example, as Doyle and Carter (1984) have shown, the tasks embedded within an activity may change from the time that an assignment is made to the time that it is completed. Such changes are the result of the students' active attempts to reduce the complexity of the learning situation (Doyle & Carter, 1984).
Another feature of the classroom environment that places unique demands on the student as learner is the accountability structure of schools. Teachers affect student learning indirectly by the system of grades and rewards that they establish in their classrooms. The formal task structure of a classroom can be viewed as an exchange of student performance for grades (Doyle, 1977b). Teacher judgements about student performance on tasks are frequent and public (Doyle, 1983). The accountability structure highlights two dimensions of classroom learning: 1) the answers a teacher actually accepts and rewards define the real tasks in the classroom, and 2) the strictness with which the teacher evaluates responses affects task accomplishment (Doyle, 1983).

Relationships between the students and the teacher and between students place special demands on student cognition. Classrooms are social environments. Within the context of the classroom, the interpersonal systems are an essential aspect of that environment (Brofenbrenner, 1979). These systems impact dramatically on the learning and the learning environment. A study of classroom learning must take such systems into account (Doyle, 1979c).
Among demands which may be placed on the learner are the elements of ambiguity and risk inherent in some classroom activities. Doyle (1983) suggests that ambiguity and risk can influence the cognitive processing students use. Ambiguity is the extent to which a precise answer can be defined or a precise formula is available for generating an answer (Doyle 1983; Doyle & Carter, 1984). Doyle (1983) views ambiguity as a feature of academic work; it is inherent in the structure of the task. Mehan (1974) sees ambiguity a little differently, as a feature of the environment in which a task is set. Whether inherent in the task structure or as an aspect of the environment, task ambiguity can affect the ways in which students work through tasks.

Risk is based on the stringency of the evaluative criteria a teacher uses and the likelihood that such criteria could be met (Doyle, 1983; Doyle & Carter, 1984). Risk is closely tied to the accountability system and ambiguity is closely tied to the task structure in the classroom. Both may be influenced by the interpersonal systems in place in the classroom. Doyle (1983) notes that "there is some evidence that students invent strategies for managing the ambiguity and risk associated with classroom tasks" (p.184). Mosenthal (1984) agrees, noting that how pupils integrate textual information in
reading depends in part on how they perceive the risks and ambiguities of different tasks.

Doyle (1983) posits that the dimensions of ambiguity and risk are closely associated with certain types of academic tasks in classroom settings. He notes that ambiguity and risk have differing relationships with the four different types of tasks: memory, comprehension, procedural, and opinion tasks. Opinion and comprehension tasks do not have clearly defined goals and are, as a result, highly ambiguous. Memory and procedural tasks, which have more clearly defined goals, are less ambiguous. Comprehension tasks and memory or procedural tasks which deal with considerable content, complexity or are strictly evaluated are high in the dimension of risk. Opinion tasks and memory or procedural tasks that deal with simple, uncomplicated content are low in risk (Doyle, 1983).

The ambiguity and risk for most tasks resides not only in the cognitive demands of the task, but also in the students' perceptions of the ways in which the tasks are presented, the accountability structure within the classroom, and the interactional patterns between the teacher and students, and among the students themselves.

The ecological model permits researchers to examine not only the tasks students are asked to complete and the
cognitive processes that they use to complete them, but also the effects that the classroom environment has on both the tasks and student cognition. Complexity is an inherent feature of the classroom environment and the ecological perspective focuses on the richness and complexity of the classroom settings (Doyle, 1977b). Doyle (1979c) identifies three basic dimensions of the ecological model: 1) it is vigorously naturalistic, 2) there is a direct focus on environment-behavior relationships, and 3) the organizing question is fundamentally diagnostic. The question being asked is "Why do teachers and students behave as they do in classrooms?" (Doyle, 1979b, p. 189)

Research on classroom ecology. Much research has focused on the ecology of the classroom (Hamilton, 1983). The impetus for this research, however, has been principally on the interactions between and among the participants in the classroom environment. Erickson (1982) explains that it has been the tendency of ecological classroom research to focus on the "hidden curriculum" (p. 150) of social relations rather than on the cognitive aspects of what he called the "manifest curriculum" (p. 150). Weinstein (1983) suggests that much ecological research has focused on "social cognition" (p. 288), which is social learning influenced by a number of
aspects of the classroom environment. Hamilton (1983) refers to this focus of ecological research as one that identifies principally the socialization function of the schools.

Since ecological research has focused on how schools socialize students into the society of the classroom (Hamilton, 1983), most ecological researchers have examined the ways in which students understand and navigate the social aspects of the classroom. Some research from the ecological paradigm has examined the task environment and the effect of the task environment on student interactions. Bossert (1979) looked at how the activity structure of a classroom might influence the social relationships of students. His study of the structure of classroom task activities suggests that student interactions and relationships are dependent on the activity structure in any particular classroom (Bossert, 1979).

Mehan (1974) provides an example of an ecological study that focuses on both the impact of the task and the responses of the students. Mehan's (1974) intensive study of the social interaction patterns in a single classroom examined the contextual features of the classroom task structure as well as the processing responses of the students. Mehan (1974) found that most interactions
between the teacher and the students were embedded within the context of the situation. The teacher's instructions were indexical and often vague, ambiguous, and incomplete. He noted that during classroom lessons teachers did not provide children with all the information they need to follow the instructions so that students needed to look elsewhere for information that helped them make sense of the teacher's instructions (Mehan, 1974).

Studies such as Mehan's (1974) examine more than just the hidden curriculum in the classroom. According to Erickson (1982) ecological researchers ought to focus on the manifest curriculum of the classroom as well as on the hidden curriculum. Erickson (1982) bemoans his own neglect of manifest learning in his earlier research. In reviewing his old field notes, he found little information concerning the actual subject matter content in the classrooms he studied. "My field notes often did not include copies or originals of the pages from the book the children were reading or the workbook pages they were working on" (Erickson, 1982, p. 157). He noted that his descriptions of classroom activities were more than adequate to describe the social relations of the environment, but failed to account for the manifest curriculum.
In order to understand learning in schools, therefore, we need to go beyond research methods which ignore the setting, the interpersonal systems, and the complex interactions of both. We also need to see beyond the social/ecological approaches to classroom research which have focused on latent rather than manifest learning. We need to take the best of both perspectives and view the learner functioning cognitively in the social context of the classroom.

In order to explain how it is that students produce different responses to assignments made by the teacher, the present study examines those students functioning cognitively in the social context of the elementary classroom. Students were selected who differed in their success as school readers so that any differences in the ways in which they worked through reading tasks might be examined.
Research Questions

What are the dimensions of the task environment and the features of task definitions that contribute to students' successful or unsuccessful completion of assigned tasks in elementary classrooms?

In order to answer that question, it is necessary to answer the following questions:

1. What classroom reading tasks are students asked to complete?

   A. How do the textbooks, workbooks, worksheets, and other printed materials define the task for the student?

      1) What directions do those materials give for task completion?

      2) What strategies, if any, do they suggest for task completion?

   B. How does the teacher define the task for the students?

      1) What directions does she give for task completion?

      2) What goals does she suggest for completing the task?

      3) What strategies and resources does she suggest the students use to complete the task?

      4) How do the teacher's interactions with the students affect the way she defines the task for the students?
2. What do students do as they work to complete school reading tasks?

A. How do students define reading tasks?

1) What goals do students give for completing reading tasks?

2) What strategies and resources do they use to complete reading tasks?

3) What strategies do students consider using, but decide not to use in completing reading tasks?

B. How do their interactions with the teacher influence their definition of the tasks?

C. How do their interactions with other students influence their definition of the tasks?

D. What are the similarities and differences related to task definition and completion for successful and unsuccessful readers?

3. How do task definitions and task completion for children of differing success compare with the expectations of the teacher?
CHAPTER II

Design of the Study

In this chapter, three elements in the design of the study are presented and discussed: the participants in the study, the methods and procedures used in data collection, and the methods and procedures used in the analysis.

Participants

The participants in this study consisted of a single class of fifth-grade students from a small city school system in rural southwestern Virginia.

Classroom Selection

The teacher and her class were selected for this study for three reasons. First, the teacher was experienced. She had been an elementary teacher for over twelve years and had a masters degree in elementary education. Second, the teacher was considered to be a good teacher with a positive attitude toward children. The researcher's daughter had been in this teacher's class several years previously, and the teacher was known to be regarded highly by parents, administrators, and children. Finally, the teacher welcomed the researcher to come into her classroom which suggested that she did not find the
presence of an additional adult in her class to be threatening or disrupting.

Socio—Economic Status

The population of the school was diversified in socio-economic status. This was due, in part, to the size of the school system, the recent district-wide redistribution of classes, and a population and housing growth in recent years in areas around the school. The school, slated to be closed in 1987, was the oldest of the three elementary schools in the district. At the time of the study it contained only fifth and sixth grade classes.

In the fifth-grade class studied, the children represented the range of socio-economic backgrounds within the school. The parents of the children varied in educational attainment as well as in jobs held. Some parents had completed high school while others held advanced college degrees; parents held what have been traditionally considered both blue and white collar jobs. Though several children identified as "gifted" had been placed in another fifth-grade classroom in the school, the remaining fifth-grade students had been randomly assigned to all of the fifth-grade classes.

Reading Ability

The children in this fifth-grade class also represented the range of reading ability across all the
fifth-grade classes with the exception of the one classroom in which the "gifted" children had been placed. The students in this class had SRA (Science Research Associates, 1982) reading percentile scores from the previous spring ranging from a high of 91 to a low of 10.

Six students who had the lowest SRA reading scores and who were referred by their fourth-grade reading teacher, participated in a special Chapter I reading program. These children left the classroom each day during the reading period and received their reading instruction from the Chapter I reading teacher in the reading resource room. These six children did not participate in the study.

The remaining sixteen students (8 boys and 8 girls), along with the regular classroom teacher, were the participants in the study. The SRA reading percentile scores of the sixteen students ranged from a high of 91 to a low of 20. Their composite reading grades (the average of their six report card grades in reading) from the fourth grade ranged from A to F with the bulk of those grades falling in the B and C categories. During the fourth grade, all students in that school system were given the standardized, group-administered Otis-Lennon Mental Ability test (1967). The scores on the Otis-Lennon for the students in this reading class ranged from a high
of 116 to a low of 92. The range of test scores and grades for the sixteen students participating in the study are presented in Table 1.

The Reading Period

Reading period for this class was held Monday through Friday between 8:50 and 9:30 a.m. The class was treated as a single unit and all sixteen children in the class received the same instruction, directions, and assignments. On Monday, Tuesday, Wednesday, and Friday mornings the teacher directed a variety of reading activities which resulted, several days a week, in written assignments to be completed by the students and turned in to the teacher the following day. The written assignments were either corrected by the teacher or checked by the children as part of a group activity in class. Thursday mornings the students went as a group to the library from 8:50 to 9:10 to return books and to select new ones to check-out. The remaining twenty minutes of Thursday's reading period was devoted to independent reading in the classroom. The bulk of the reading activities for the rest of the week were derived from the basal reading program (Harcourt, Brace and Jovanovich, 1983) used in the class.
Table 1

**Students' Test Scores and Composite Reading Grades From Fourth Grade**

<table>
<thead>
<tr>
<th>Student</th>
<th>SRA Reading</th>
<th>Otis-Lennon</th>
<th>Reading Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andrea</td>
<td>61</td>
<td>96</td>
<td>C+</td>
</tr>
<tr>
<td>Anne*</td>
<td>67</td>
<td>116</td>
<td>A-</td>
</tr>
<tr>
<td>David*</td>
<td>86</td>
<td>98</td>
<td>C</td>
</tr>
<tr>
<td>Deidre</td>
<td>49</td>
<td>107</td>
<td>C</td>
</tr>
<tr>
<td>Howard*</td>
<td>91</td>
<td>/</td>
<td>B</td>
</tr>
<tr>
<td>Jason</td>
<td>64</td>
<td>111</td>
<td>C+</td>
</tr>
<tr>
<td>Karla</td>
<td>40</td>
<td>110</td>
<td>C</td>
</tr>
<tr>
<td>Luke*</td>
<td>76</td>
<td>107</td>
<td>D</td>
</tr>
<tr>
<td>Mario</td>
<td>43</td>
<td>112</td>
<td>C</td>
</tr>
<tr>
<td>Martha</td>
<td>60</td>
<td>109</td>
<td>B</td>
</tr>
<tr>
<td>Matthew</td>
<td>22</td>
<td>92</td>
<td>F</td>
</tr>
<tr>
<td>Paul</td>
<td>71</td>
<td>93</td>
<td>B+</td>
</tr>
<tr>
<td>Rena*</td>
<td>20</td>
<td>103</td>
<td>B-</td>
</tr>
<tr>
<td>Samuel</td>
<td>65</td>
<td>100</td>
<td>C</td>
</tr>
<tr>
<td>Sarah</td>
<td>48</td>
<td>102</td>
<td>C</td>
</tr>
<tr>
<td>Tess</td>
<td>71</td>
<td>94</td>
<td>C+</td>
</tr>
</tbody>
</table>

*Note. All student names are pseudonyms.*

*Transfer student from another district; no Otis-Lennon

*Focal students*
Focal Student Selection

Four focal students were selected from among the sixteen children in the reading class to be studied in greater depth. These four students were selected on the basis of their apparent success in school reading, their profile for task completion, and their comparability on verbal productivity and verbal receptivity measures. Table 2 compares the four focal students selected on the measures of reading success, task orientation, verbal receptivity and verbal productivity.

Success in School Reading

Two students were selected who were considered successful as classroom readers; two other students were selected who were considered to be less-successful in school reading. Five indicators were examined in order to determine success in school reading: 1) SRA reading subtest scores, 2) reading report card grades, 3) teacher evaluation, 4) researcher evaluation, and 5) the results on an informal reading inventory passage.

Scores on the reading subtest of the SRA were considered one indicator of success. Scores above the 50th percentile were considered to be successful and scores below the 50th percentile were considered unsuccessful.
<table>
<thead>
<tr>
<th></th>
<th>SRA</th>
<th>RDT</th>
<th>MINI PASSAGE</th>
<th>TCHR</th>
<th>RCHR</th>
<th>SUCCESS IN READING</th>
<th>TASK COMPLETION PROFILE</th>
<th>VERBAL RECEPTIVITY</th>
<th>VERBAL PRODUCTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SRA</td>
<td>RDT</td>
<td>Oral</td>
<td>Comp</td>
<td>TCHR</td>
<td>Rate</td>
<td>RCHR</td>
<td>Rate</td>
<td>Teacher Assessment of Task Orientation</td>
</tr>
<tr>
<td>ANNE</td>
<td>67</td>
<td>A-</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>high</td>
<td>116</td>
<td>5</td>
</tr>
<tr>
<td>DAVID</td>
<td>86</td>
<td>C</td>
<td>0</td>
<td>7</td>
<td>3</td>
<td>4</td>
<td>low</td>
<td>98</td>
<td>22</td>
</tr>
<tr>
<td>LINDY</td>
<td>76</td>
<td>D</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>high</td>
<td>107</td>
<td>11</td>
</tr>
<tr>
<td>RENA</td>
<td>20</td>
<td>B-</td>
<td>6</td>
<td>8</td>
<td>1</td>
<td>1</td>
<td>low</td>
<td>103</td>
<td>6</td>
</tr>
</tbody>
</table>

* SRA: Reading subtest score from fourth grade
* RDT: Composite Reading grade from fourth grade
* MINI PASSAGE: Number of error in oral reading that changed the meaning
* Comp: Number of correct answers - eight possible correct
* TCHR: Teacher and Researcher ratings on scale of 1 = low and 4 = high
* OCRH: Qualitative assessment by teacher
* OTIS-LENNON 6: IQ Score
* C-UNIT 7: Number of C-Units produced
* QUAL. OCRH 9: Average number of words per C-Unit
* OCRH 9: Qualitative assessment by researcher of verbal productivity measure (H=high, M=medium, L=low)
* OCRH 9: Assessment by researcher of comfort in the experimental situation (+= comfort w/ researcher and taping situation, - = awareness of and some concern with audio-taping)
The students' composite reading grade (the average of their six report card grades in reading) from the fourth grade were considered another indicator of success. Grades of "A" or "B" were considered to be successful and grades of "D" or "F" were considered unsuccessful. A grade of "C" was considered "average," neither successful nor unsuccessful.

The classroom teacher was asked to evaluate each student in terms of his or her success in classroom reading. The teacher rated the children on a scale of 1 to 4 (where 1 was considered to be unsuccessful and 4 indicated success as a school reader). Success was determined on the basis of how well the child read, whether the child knew lots of words or what those words meant, whether the child understood directions and procedures, and whether the child's work was accurate.

Using these same criteria, the researcher also evaluated the students in terms of success in school reading. Researcher evaluations were based on observations of the classroom reading lessons for the first six weeks of school.

The final indicator of success was student performance on a 5.5 (fifth grade) level informal reading inventory passage (Spache, 1981), which measured reading fluency and comprehension. Fluency was determined by the
number of oral miscues the student made. A student was considered to be fluent if he or she made no more than one miscue which changed the meaning of the text and no more than five miscues which did not change the meaning of the text (such as insertions, self-corrections, or repetitions of words or phrases). Comprehension on the fifth grade passage was considered successful if the student missed no more than three of the eight comprehension questions following the passage.

**Task Orientation**

In addition to using these indicators of success as selection criteria, an attempt was made to select focal students who varied on their task orientation. Task orientation was defined as the behaviors students exhibit as they work through assignments (such as whether they began to work promptly, completed the work, or handed it in on time). The students' profile for task orientation was determined by having the teacher rate the students in the reading class on a dichotomous scale as either high or low on task orientation measures. A student was described as having high task orientation if he or she typically got right to work, finished the work, finished the work on time, and turned work in. A student was described as having low task orientation if he or she typically did not pay attention to instructions, did not seem to know how to
get started, did not finish the work, turned in work late, or lost papers.

**Verbal Ability**

The focal students were also selected on the criterion of verbal ability. Afflerbach and Johnston (1984) note that reading research based on verbal reports is limited by the verbal ability of the readers being studied. Therefore, special care was taken in this study to select focal students who, though they differed in reading ability, were comparable in both verbal receptivity and verbal productivity.

**Verbal receptivity.** Verbal receptivity was based on the full-scale scores from the Otis-Lennon Mental Ability test, a group administered IQ test. I-Q tests, often considered to be a measure of verbal receptivity, have been used as comparable measures (Loban, 1976).

**Verbal productivity.** The verbal productivity of all the children in the reading class was measured as well. Each child was taken individually to a separate room off the school library, shown a picture and asked to tell a story about the picture. The stories were tape recorded and later transcribed. The communication units, generally called c-units (Loban, 1976), were counted for each story and the average words per c-unit, a measure of verbal productivity, was determined and compared across
children. General qualitative comparisons of the stories were made. Stories that were cohesive, contained a developing plot, and included details that extended information from the picture were considered to be representative of a high level of verbal productivity. Stories that were short and consisted mainly of a description of the picture were considered to be representative of a less fully developed level of verbal productivity. Finally, since the level of verbal productivity the students exhibited might have been related to their ability to relax in the assessment situation, each student was qualitatively assessed in terms of the comfort they exhibited with the researcher and the audio-taping procedure.

Based on the above considerations and a final selection conference with the teacher reviewing all the measures, four students were selected for an in-depth study of their responses to the reading instruction. All focal students were ten years old (with a six-month range of birthdates) and none of the students selected had repeated a grade.

Written parental consent was obtained for all four focal students and verbal consent was obtained from the students themselves. A letter sent to the superintendent of the school district requesting permission to conduct
the study in that school system was verbally acknowledged and permission was granted. The classroom teacher also signed a consent a form agreeing to participate in the study.

**Data Collection**

The focus of this study, an ecological examination of students' reading task definitions, required data collection about three different but related aspects of the classroom: the setting within which reading tasks were created, the task as generated by the teacher and the textual materials, and the task as it was defined by the students. Figure 2 illustrates these three aspects of the study from the perspective of Mosenthal's (1984) imaginary pyramid of classroom complexity.

It was necessary first to understand the classroom environment in which the reading tasks were presented to students. This understanding involved, to some degree, learning about the school, the classroom as a whole, the teacher, her instructional program, and her ways of focusing the classroom interactions within the context of the instructional program. Second, it was necessary to understand the reading tasks as they were presented to the students. This understanding involved learning about the activity structure of the reading instructional program,
First Aspect:  
The Setting

Second Aspect:  
The tasks Generated by  
the Teacher and the  
Textual Materials

Third Aspect:  
The Task as Defined  
by the Student

Figure 2. Three aspects of Data Collection.
the tasks embedded within those activities, and the
modifications of those tasks by the teacher as she made
assignments. Finally, it was necessary to understand the
ways in which the students defined and mediated the
tasks. This involved learning about the goals the
students set for task completion and the strategies and
resources they used as they worked through classroom
reading tasks.

Information about the classroom environment in which
the reading activities and tasks were presented was
obtained by naturalistic data collection techniques.
These techniques included participant observation,
examination of classroom related documents, and interviews
with the classroom teacher and the four focal students.

An understanding of reading tasks as they are framed
by both the materials and the teacher was also obtained by
naturalistic data collection techniques. Participant
observation, examination of classroom related documents,
and interviews with the classroom teacher provided
information about the reading task as it was presented to
the children. These techniques made it possible to
describe the tasks accurately and to account for any
modifications to those tasks made by the teacher during
the explanation of the assignment.
Information about the students' task definition was obtained by verbal reports of the cognitive processes of the participants as they worked to complete the tasks. Retrospective interviews and protocol analysis were used to determine the goals the students set and resources and strategies they used to complete actual reading tasks assigned by the classroom teacher.

Table 3 represents an overview of the data collection techniques and the data gathered for each aspect of this study: the focus on the environment of the classroom, the focus on the tasks as they were presented to the students, and the focus on the students' definitions of those tasks. Participant observation, document collection, participant interviews, and protocol analysis were the four major data collection techniques. These resulted in a variety of data: field notes, copies of teacher and student documents, journal entries, and transcriptions of audio-taped interviews and protocols. Descriptions of the four data collection activities and the data that resulted from each follows.

**Participant Observation**

Participant observation, defined by Denzin (1978, p. 182), is a "commitment to adopt the perspective of those studied by sharing their day-to-day experiences." The purpose of participant observation in this study was to
<table>
<thead>
<tr>
<th>DATA COLLECTION</th>
<th>DATA</th>
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<tbody>
<tr>
<td>Participant Observation</td>
<td>Field Notes</td>
</tr>
<tr>
<td></td>
<td>Audio-tapes of Reading Class</td>
</tr>
<tr>
<td></td>
<td>Journal Entries</td>
</tr>
<tr>
<td>Document Collection</td>
<td>Copies of Teacher Documents (lesson plans, teacher's manual)</td>
</tr>
<tr>
<td></td>
<td>Copies of Student Documents (text, workbook, worksheets, dittos)</td>
</tr>
<tr>
<td>Teacher Interviews</td>
<td>Audio-tapes of Interviews (reflecting on reading class)</td>
</tr>
<tr>
<td>Focal Student Interviews</td>
<td>Audio-tapes of Interviews (reflecting on reading class)</td>
</tr>
<tr>
<td>Participant Observation</td>
<td>Field Notes</td>
</tr>
<tr>
<td></td>
<td>Audio-tapes of Reading Class</td>
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<td>Audio-tapes of Interviews (reflecting on reading class)</td>
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<td></td>
<td>Audio-tapes of Protocols (correcting &amp; reflecting on assignment)</td>
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<tr>
<td>Retrospective Interviews with Focal Students</td>
<td>Audio-tapes of Interviews</td>
</tr>
<tr>
<td></td>
<td>Condensed Field Notes</td>
</tr>
<tr>
<td>Protocol Analysis</td>
<td>Audio-tapes of Protocol Collection</td>
</tr>
<tr>
<td></td>
<td>Condensed Field Notes</td>
</tr>
<tr>
<td></td>
<td>Journal Entries</td>
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</tbody>
</table>
understand the environment in which the reading tasks were presented to the students from the perspectives of the teacher and the children. It was also to understand the scope of the reading tasks as set by both the materials and the teacher.

Participant observation, in this study, consisted principally of classroom observations. Two levels of observations were used: general observations of the classroom instructional program and the classroom reading lessons, and focused observations of selected classroom reading lessons and the focal students.

**General observations.** General observations of the instructional program began in September on the first day of the school year. The entire first two weeks of school, typically a time during which teachers orient students to classroom routines, were observed. The researcher remained in the classroom all day for each of the first nine days. Journal entries that were both descriptive and reflective were kept for that period of time.

The researcher was introduced to the class as a student from a local university who was interested in learning about how children read in school. Several of the children knew the researcher from previous associations; she had taught seven of the twenty-two children for six months in Kindergarten five years
before; one of the children had been a Girl Scout for a year in a troop the researcher had led; two of the children lived in the same neighborhood as the researcher. These associations were acknowledged and discussed when the researcher was introduced to the class. Many of the children did not remember the prior associations, but regular new associations began to be established as the researcher encountered some of the children in the grocery store, at the recreation department, or at local high school football games. The children readily acknowledged and sought out the researcher in these extra-curricular situations.

Though the students associated the researcher with the teaching staff (she sat with the teachers at lunch, arrived early and left late with the teachers, produced teaching materials, and was available to assist students when help was needed), a number of their comments suggested that they did not consider her a bonafide teacher. Several children, even one who had been in her Kindergarten program, commented that the researcher was a "student teacher" and that when she was through learning about children she might get a classroom of her own.

The role of a teacher's aide was adopted by the researcher for the first two weeks of school. The researcher performed typical aide-type activities (e.g.,
xeroxing, laminating, making games, record keeping, putting up bulletin boards, and helping individual students) for the teacher and at her request.

During this time interaction between the researcher and the teacher was informal. The researcher arrived early and stayed after the children had left; sat in the teachers' lounge and chatted with the instructional staff; talked with the classroom teacher about both instructional and non-instructional matters; and was available to assist the teacher when needed. Conversations between the teacher and researcher were spontaneous and wide-ranging.

The researcher used a "reactive" field-entry strategy (Dyson, 1984) in interacting with the students during the first two weeks. Outside of direct teacher requests to assist a child having difficulty, the researcher waited for the children themselves to initiate conversations and interactions. The children did ask for assistance in a variety of ways. They asked for help in spelling words, understanding directions, locating information, and, in a few instances, controlling the behavior of other children in the room. The children also initiated conversations with the researcher. They commented, for instance, about classroom and community events, the heat, and even complimented the researcher on how nice she looked. The
children appeared relaxed and comfortable with the researcher's presence in the room.

Beginning the third week of school, the researcher began making general observations of just the classroom reading lessons. Observations of the reading lessons were made daily for the third week and every other day for the ensuing nine weeks of the study. Expanded field note entries were written for each general observation of a reading lesson. These were based on a combination of condensed field notes made during reading class and audio-tapings of some of the classroom lessons. In addition, a reflective journal entry was made for each observation.

When the general observations of the reading lessons were begun, the role of teacher's aide was dropped. The researcher assumed the role of an interested observer of the reading classroom. She arrived at school before the children and with most of the instructional staff, but left immediately after the reading period. Informal interactions with both the teacher and the students continued. Before school conversations were conducted between the teacher and the researcher on details of the data collection, on events that occurred in the classroom when the researcher was not there, and on non-instructional topics as well. The children continued to ask for help and to initiate conversations with the
researcher when that was appropriate for them. For most lessons, however, the researcher sat in one location in the classroom and observed what was being said and what was done.

Observations were facilitated by an observation guide (see Appendix A) which focused the observations on three aspects of the reading classroom: the framework of the reading activities as they were presented to the children, the interactions among and between all the classroom participants, and the behaviors of the students as they worked to complete reading tasks. The purposes of the general observations of the entire instructional program during the first two weeks, and of the reading program for the next five weeks, were to:

-- establish the types of typical reading activities students were asked to complete;

-- record the directions the teacher provided when assigning reading activities;

-- note any reasons given by the teacher for participation in reading activities;

-- note any suggestions of ways to complete reading activities given by the teacher;

-- observe the responses students had to classroom reading activities;

-- observe the interactions among and between teacher and students in the reading classroom;

-- monitor the history of the classroom;

-- assist in the selection of focal students.
Focused observations. Ten focused observations of reading lessons were conducted during the study. Focused observations were made after the focal students had been selected. The purpose of these observations was to observe the focal students functioning within the context of the reading classroom on those days when interviews or protocols were to be conducted. Expanded field-note entries were written for each focused observation of a reading lesson. These were based on a combination of condensed field notes made during reading class and audio-tapings of each of the classroom lessons. In addition, a reflective journal entry was made for each observation.

The researcher's role continued to be one of an interested observer of the reading classroom. For each of the ten days of focused observations the researcher remained at the school the entire day in order to work with each focal student and the teacher at times least disruptive to the normal classroom routine. No additional observations were made for that day, but informal interactions with the teacher, the focal students, and the other students in the classroom continued.

There was one exception to the role adopted by the researcher during this time. One Friday morning, toward the end of the data collection period, the classroom teacher became ill and had to leave school. The gifted
resource teacher was free to conduct the reading period, but there were no substitute teachers available to cover the class for the remainder of the day. The researcher substituted for the teacher and functioned fully as a teacher for that day, assigning work, correcting papers, and conducting lessons left by the teacher. Though a journal entry was made for that day, no other data were collected. The next time a focused observation was made, four days later, the role of interested observer was resumed.

Focused observations of the reading class were facilitated by an observation guide (see Appendix B) which guided the observations toward three aspects of the reading classroom: the framework of the reading activities as they were presented to the children; the interactions among and between the focal students, other students, and the teacher; and the behaviors of the focal students as they worked to complete reading tasks. The purposes of the focused observations were to:

-- describe the reading activities students were asked to complete;

-- record the directions the teacher provided when assigning reading activities;

-- note any reasons given by the teacher for participation in reading activities;

-- note any suggestions of ways to complete reading activities given by the teacher;
— observe the responses the focal students had to classroom reading activities;
— observe the interactions among and between teacher and focal students in the reading classroom;
— monitor the history of the classroom.

**Document Collection**

Copies were made of all printed materials which were available to the teacher and the students during the observed reading lessons. Materials the students used during the reading instructional period consisted of the reading textbook, the accompanying workbook, duplicating masters published by the textbook company to complement the reading instructional program, periodic tests designed by the publisher to assess skill progress, and occasional teacher-made ditto sheets focusing mostly on vocabulary.

During the first two weeks of school, selected documents were collected. Copies were made of all the reading materials the children used and some of the student work. Student work was selected to be copied if it highlighted observations made in a journal entry.

For the general observations of the reading lessons, which took place over the following five weeks, all reading materials that the children used were copied and kept with the field notes for each observation. In addition, copies were made of selected samples of student
work, provided by the teacher or identified by the researcher as interesting or illustrative of a point made in the field notes.

During the focused observations, copies were made of all of the reading materials that the children used during the reading instructional period as well as the assignments the children were asked to complete independently later in the day. Copies were also made of all of the work produced by the focal students for the assignments given on days of focused observations.

During the protocol phase of the study, focal students' work was copied immediately after completion and then, again, after it had been corrected by the teacher or corrected by the children in class and gone over by the teacher.

In addition, materials available to the teacher were collected. Copies were made of all the pages of the teacher's manual covering the instructional program for the first twelve weeks of school, the duration of the study. The teacher's lesson plan book for the first twelve weeks was also duplicated.

**Participant Interviews**

**Background interviews.** The four focal students were first interviewed on general topics. The purposes of these introductory interviews were to establish a rapport
between the students and the researcher, to help the students feel comfortable leaving the classroom and being audio-taped, and to obtain information about the students' family, interests, school life and their perceptions of themselves as school readers. A general background interview with the teacher was also conducted. She was asked about her education, career, and perceptions of the reading program in her classroom. The guides used for the general background interviews with the teacher and students are included in Appendix C and Appendix D.

Retrospective interviews. Retrospective interviews are interviews during which participants are asked about an event that has already occurred. Such interviews rely on the participants' perceptions stored in long-term memory (Ericsson & Simon, 1980, 1984; Yinger, 1986).

Five reading lessons were selected for focused observation and follow-up retrospective interviews with the teacher and the four focal students. The lessons to be observed were selected by the researcher in consultation with the classroom teacher. An attempt was made to observe lessons representative of the typical range of reading activities for that classroom. The teacher continued to design her instructional program as usual. Over the period of two weeks, however, certain lessons identified by both the teacher and researcher as
representing the range of "typical" were selected for the focused observations. Table 4 lists the reading activities which represent what was considered typical for that classroom. Table 5 outlines the activities observed during the focused observations connected with the retrospective interviews.

The classroom reading lessons on these five days were observed in their entirety. The observations of the lessons were focused on the activities assigned, the focal students' responses to those activities, the interactions between the focal students and the teacher, and the interactions between the focal students and the other children in the class. During the school day following the observed reading lesson, at times that were convenient for the normal functioning of the classroom, the focal students and the teacher were interviewed about the reading lesson that had been observed.

In the interviews, the focal students were asked to report on what they did and what they thought about as they attended to the reading lesson and worked through the assigned tasks. (See Interview Guide, Appendix E.) The students were asked to talk about:

-- what they had been asked to do during the reading lesson;
-- what they did themselves;
Table 4

Typical Reading Activities

I. Recitation

1. Vocabulary
2. Focused Discussion
3. Read Aloud From Text
4. Assign Seatwork
5. Correct Work in Class
   a. Provide answers
   b. Mark papers
   c. Go over corrected work

II. Seatwork

1. Read Story in Text Silently
2. Answer Questions at the End of the Story
3. Complete Workbook Pages
4. Complete Worksheet Pages
Table 5
Focused Observations for Interviews

<table>
<thead>
<tr>
<th>10/21</th>
<th>10/22</th>
<th>10/29</th>
<th>10/30</th>
<th>11/1*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recitation: Vocabulary</td>
<td>Recitation: Read Aloud From Text</td>
<td>Recitation: Focused Discussion Topic: Parts of a Book</td>
<td>Recitation: Class Correction Provide Answers Mark Papers</td>
<td>Recitation: Vocabulary Focused Discussion Introduction to Story Listen to Audio-Taped Story</td>
</tr>
<tr>
<td>Focused Discussion Introduction to Story</td>
<td>Focused Discussion Review of Story Assign Seatwork</td>
<td>Focused Discussion</td>
<td>Class Correction</td>
<td></td>
</tr>
<tr>
<td>Read Aloud From Text</td>
<td>Seatwork: Questions at End of the Story Read Next Story Silently</td>
<td></td>
<td></td>
<td>Seatwork: Write Clues Heard on Tape as Listen</td>
</tr>
</tbody>
</table>

*This activity was novel in that it was the only occurrence of this type of activity. The classroom teacher, however, said that it was one of several similar lessons based on audio-taped stories that she would be using periodically throughout the year and suggested that it be used for a focused observation. She considered it "typical" for that reason.
-- what they noticed the other children saying or doing;
-- what they remembered the teacher saying or doing;
-- what they thought about as they participated in the lesson.

In this study the instructions for retrospective reporting were general in nature. The students were asked to report everything that they remembered about the reading lesson. After the students had exhausted what they could remember about the event of the reading lesson specific prompts were provided. These prompts were in the form of questions about what the children remembered saying, doing, or thinking.

All of the student interviews were audio-taped and later transcribed for analysis. Since the reading period occurred during the first instructional period of the day, it was possible to complete all the interviews during the school day following each lesson. The interview schedule rotated the order in which the children were taken out of class to talk about the lesson. The rotation system was devised so that each student had the opportunity to report at least once when the memory traces of the lesson were most recent and to eliminate constant requests by the students to "be first."
In addition, all the materials available to the children during the reading lesson (textbook, workbook, ditto sheets, worksheets, and their own work) was available during the interview. The children were told that they could look at any of the items on the table, if they wished, to help them remember. If the children were unable to recall information about the lesson, stating that they did not remember something, they were asked if they wanted to look at the materials on the table to help refresh their memories.

The purpose of the interviews with the teacher was to ask her to report on her expectations for the reading activities that day and on what she had noticed about the students' responses to those activities as they progressed through the lesson. (See Appendix F for the Teacher Interview Guide.) The teacher was encouraged to talk about:

-- what she had asked the students to do in the lesson;

-- the purposes for having the students complete the activities of the lesson;

-- what she had expected the students to do as they worked to complete the reading activities;

-- what interactions between students she had noticed;

-- what she had noticed about the focal students and the ways in which they worked through the reading tasks during the lessons.
Each teacher interview was audio-taped and the tapes were later transcribed for analysis. The teacher was interviewed when it was most convenient for her during the school day following the lesson. Most often her instructional planning period was used for this purpose. Materials available to the teacher and the students during the reading period (textbook, workbook, teacher's manual, dittos, and worksheets) were also made available to the teacher during the interview. The teacher did not use these memory aids at all, however, to answer questions posed. She responded entirely from her own memory of the lesson.

Retrospective interviews have been shown to be of limited reliability. Afflerbach and Johnston (1984) have claimed that retrospective reports may be slanted to emphasize information that the researcher's instructions seem to want. Ericsson and Simon (1980, 1984) have suggested that the information sought by a researcher in retrospective reports may be too far removed to be remembered accurately. Yinger (1986) has argued that memory prompts may lead participants to report, not the original experience but an experience they recreate in the presence of the prompt.

No solution has yet been developed for these liabilities in retrospective reporting. However, the
methodology of this study was designed to reduce the unreliability of retrospective reporting as much as possible. First, in order to counteract the slant of specific instructions, students were asked to report everything they remembered about their cognitive processes during the lesson. Second, in order to assist the students to remember experiences which they might otherwise have forgotten, they were provided with specific questions about their experience and selected recall stimuli (i.e., the written materials of the lesson in question). Third, in order to avoid the potential artificiality of retrospective reports, students were asked to provide concurrent reports of their experience as well while they were in the process of completing classroom reading tasks.

Protocol Analysis

Protocol analysis, also called "concurrent reporting" or "thinking aloud" (Afflerbach & Johnston, 1984; Ericsson & Simon, 1980; Langer, 1984; Marx, 1983; Yinger, 1986), was used by Newell and Simon (1972) and described by Ericsson and Simon (1980) as a way to examine cognitive problem-solving strategies. It has also been applied successfully to the study of the cognitive activities of reading (Langer, 1984, 1985; Olshavsky, 1976-77) and writing (Emig, 1971; Flower and Hayes, 1981a, 1981b).
Developed by Simon (1957), "think aloud" techniques have been used successfully to make explicit the goals and strategies used for problem solving and task completion.

According to Afflerbach and Johnston (1984), protocol analysis involves two tasks: the primary task, in this case, the reading assignment; and the verbal reporting task. Participants can be asked to provide introspection concerning the process, called explanatory reporting, or they can give direct reports of the process as they work to complete the primary task, referred to as descriptive reporting (Ericsson & Simon, 1984). When explanations are not asked for, but, rather, direct descriptions of the contents of short term memory are expected, the process is termed "thinking aloud."

In this study students were asked to "think aloud" about the processes they used as they worked through classroom reading tasks. The students were asked to complete the reading assignment given to them by the classroom teacher and to report what they were thinking as they worked through the activities. Students were requested, with the exception of one silent reading assignment, to read everything aloud that they read and to talk about what they were thinking and doing as they completed the reading assignment.
Practice protocols. Since it is not a typical activity for children to report aloud what they are thinking, the students were given time to practice the procedure (Langer, 1984). The four focal students in this study were given three opportunities to practice "thinking aloud."

The classroom teacher made the reading assignments for the actual protocol collection and since those assignments had not yet been determined, the practice sessions were designed to give the students an opportunity to work with a variety of activities. Most of the practice activities asked the students to perform mathematical computations or to solve logic puzzles. The practice activities were also designed so that students would have the opportunity to work on tasks of varying difficulty. For the first session the students were asked to "think aloud" while they solved three short math story problems taken from their fifth-grade mathematics text, problems not yet encountered in their fifth-grade mathematics curriculum. The second session presented two additional math story problems and a maze taken from a workbook of puzzles for "gifted" students in middle grades (Forte, 1981). Though the first two practice sessions consisted of activities typically not assigned during the classroom reading period, the activity at the third
session was a reading-related assignment. At this session the students were given an article from a science publication for children (Ranger Rick, 1984) and asked to read it silently. At the end of each paragraph, there was a star and the students were asked to stop at the star and to report everything they had been thinking as they read that paragraph. This activity was included to familiarize the students with the silent reading type of protocol collection that they might be asked to do during data collection.

The instructions given for all tasks during the practice sessions were general. The students were told to say aloud everything that they were doing and thinking as they worked to solve the problem. All prompts were neutral. If a child paused for more than four seconds, the researcher prompted the child to continue to think aloud, saying, "Tell me what you are thinking," or if the child was writing, but not talking, the researcher would say, "Tell me what you are doing." If the child responded with a vague comment, such as, "I'm thinking about what I'm supposed to do," the researcher would say, "Tell me what you are considering." If the children stated that they did not know what to do or seemed concerned about the difficulty of the problem, the researcher would reassure and encourage them with a comment such as, "That's all
right. It's supposed to be hard. Just tell me what you are thinking about." This gave the researcher the opportunity to offer reassurance and support during the practice session in order to deemphasize the sense of failure the students might feel during data collection when they encountered something they could not do (Afflerbach and Johnston, 1984). When it was determined by the researcher that the children were comfortable with the procedure, that they were providing adequate responses and appeared to be able to give sufficient attention to both the processes necessary to complete the tasks and the reporting of those processes, then the actual protocol collection for the reading lessons was begun.

**Student protocol collection.** Five reading lessons were selected for focused observation and follow-up protocol collection with the teacher and the four focal students. The lessons to be observed were selected by the researcher in consultation with the classroom teacher. The protocol collection focused on a seatwork assignment made by the teacher to the children at the end of a reading lesson. An attempt was made to observe lessons which resulted in a variety of reading assignments representing the range of typical reading activities. Table 4 represents the range of typical classroom reading activities. Table 6 represents the activities which
Table 6

Focused Observations for Protocols

<table>
<thead>
<tr>
<th>Date</th>
<th>Recitation:</th>
<th>Class Correction:</th>
<th>Seatwork:</th>
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<tbody>
<tr>
<td>11/11-12</td>
<td>Focused Discussion</td>
<td>Go Over Corrected</td>
<td>Periodic Test</td>
</tr>
<tr>
<td></td>
<td>Topic: Parts of a Book</td>
<td>Work</td>
<td></td>
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<tr>
<td></td>
<td>Assign Seatwork</td>
<td>Provide Answers</td>
<td></td>
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<tr>
<td></td>
<td>Seatwork:</td>
<td>Mark Papers</td>
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<th>Seatwork:</th>
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<tbody>
<tr>
<td>11/13</td>
<td>Vocabulary</td>
<td>Provide Answers</td>
<td>Workbook Pages</td>
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<tr>
<td></td>
<td>Focused Discussion</td>
<td>Mark Papers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Topic: Story</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Assign Seatwork</td>
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<td></td>
<td>Seatwork:</td>
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<tr>
<td></td>
<td>Read Story Silently</td>
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<td></td>
<td>Questions at End of the Story Worksheet</td>
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<th>Class Correction:</th>
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<td>Workbook Pages</td>
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<tr>
<td></td>
<td>Topic: Topical Organization</td>
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<tr>
<td></td>
<td>Assign Seatwork</td>
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<td>Seatwork:</td>
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<td>Workbook Pages</td>
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<th>Seatwork:</th>
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<td>11/22</td>
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<tr>
<td></td>
<td>Focused Discussion</td>
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<td></td>
<td>Topic: Story</td>
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<td>Assign Seatwork</td>
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<tr>
<td></td>
<td>Read Story Aloud</td>
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<td>From Text</td>
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<td>Assign Seatwork</td>
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<td>Seatwork:</td>
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<td>Questions at End of the Story Worksheets</td>
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<td>Topic: Using the Library</td>
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<tr>
<td></td>
<td>Assign Seatwork</td>
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<td></td>
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<td>Workbook Pages</td>
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*One focal child, David, was absent for this lesson. He went over the material with the teacher the following morning and worked through the assignment in a protocol session before the class correction took place. His make-up lesson with the teacher was audio-taped and transcribed. The format of the make-up lesson was identical to the whole-class lesson.
occurred during the observed reading periods and the seatwork assignments which the students were asked to complete.

The classroom reading lessons, on these five days, were observed up to the point where the teacher made the assignment and asked the children to begin working. The emphasis for the focused observations of the lessons was on the activities assigned, the focal students' responses to those activities, the interactions between the focal students and the teacher, and the interactions between the focal students and the other children in the class. The focal students were asked not to work on the assignment until they worked with the researcher. They read library books or completed other work during any class time devoted to working on the reading assignment. Later, on the same day as the observed reading lesson, at times that were convenient for the normal functioning of the classroom, the focal students were taken, one at a time, to the small basement room used for the interviews and asked to "think aloud" as they completed the reading assignment given to them that morning.

Each protocol collection was audio-taped and the tape was transcribed. Pauses longer than four seconds were noted in the transcript. The protocols were similar to the practice sessions except that the students were
working through the reading work assigned by the classroom teacher. The instructions for the "think aloud" task were the same as they were in the practice sessions. The children were asked to complete the work assigned by the teacher and to "think aloud," relating everything they did or thought as they worked to complete the assignment. Prompts were neutral, as in the practice sessions, consisting of comments such as "Tell me what you are thinking," "Tell me what are you doing," or "Tell me what you are considering." The researcher did not offer any reassuring comments such as those made during the practice sessions. The children were told that the researcher would not be able to help them as they worked through the assignments. Appendix G contains a copy of the protocol instructions read to each student at the beginning of each session.

The focus of each protocol collection was on the students' "think aloud." Each protocol collection also included, however, a brief retrospective interview which provided additional insights into the thought processes of the students as they worked through reading tasks. When the students finished an assignment, they were asked to go back through the work and explain what they had done in each part. The students were asked if there was anything they were unsure of for each part and, if there was, to
explain it. Students were probed about specific items if they had provided an incorrect answer to the question and the reason was unclear, or if the student had paused for quite a long time and had not explained what he or she had been thinking about during that pause. The probes were neutral, e.g., "Tell me about number 4. What did you do on that one?" Not all incorrect responses were questioned in detail because it might then have appeared to the children that questions were probing wrong answers. The students appeared to see the probes, in fact, as reflections of the researcher's curiosity. The children responded readily to the questions, explaining their answers and volunteering reasons why they had selected certain responses over other ones.

The students' papers were copied at the end of each protocol collection session and the originals were turned in by the students to the teacher for checking and grading.

Teacher protocol collection. The day following each protocol collection, the teacher participated in a "think aloud" as she worked through the correcting and grading of the focal students' assignments. The teacher either corrected the assignment herself or she went over the assignment after the children had corrected it together in
class. Copies were then made of each of the graded student papers.

During these sessions the teacher was asked to talk about what she was thinking as she either corrected the work or went over the work that had been corrected. She was asked to report what she was thinking and noticing as she went through the focal students' work (See Appendix H for the Protocol Instructions to the teacher). After each of the focal student papers had been corrected, the teacher was asked how the responses given by the focal students compared with those of the rest of the class or, if those had not been corrected, with her own expectations. These sessions were audio-taped and the tapes were later transcribed. The teacher did not have practice sessions nor were her pauses monitored. The focus of the teacher protocols was on her definition of the tasks she had assigned and on her expectations concerning the students' performance.

Twice during the protocol phase of the study the work the students had completed was corrected together in class. These class correction sessions were observed. The focus for the observations was on the delineation of the task by the teacher, the interactions between the teacher and the focal students, the interactions between the focal students and other students in the classroom,
and the behaviors of the focal students during the task of correcting their own reading work.

Analysis

The data were analyzed according to the four general categories established by the research questions: 1) the environment of the classroom, 2) the task as represented by the materials and presented by the teacher, 3) the task as defined by the focal students, and 4) a comparison of the task definitions of successful and less-successful reading students with each other and with the expectations of the teacher.

The data consisted of expanded field notes, journal entries, documents, transcripts of retrospective interviews, and transcripts of "think aloud" protocols and the brief retrospective interviews following the protocol collection.

The analysis was focused specifically on the data generated from the focused observations, the retrospective interviews and the think aloud protocols. Descriptions of the data which were used for analysis are displayed in Table 7.

Codes

All the descriptive data were coded as discrete events. For the interview transcripts, discrete events
| **Table 7**  |  
|---|---|
| **Data Selected for Analysis** |  
| **FIELD NOTES** | Expanded field notes for all focused observations. Created from composite of condensed field notes and audio-tapes of reading periods. Includes all focused observations of classroom reading periods, some additional class correction sessions, and one make-up session. |
| **JOURNAL** | Reflective journal entries for all observations resulting in field notes, as well as interviews, protocols, and selected informal interactions with teacher. |
| **DOCUMENTS** |  
| **TEACHER DOCUMENTS** | All teacher documents used during the period of focused observations |
| **CLASS DOCUMENTS** | All documents available to the students in the classroom during the focused observations. |
| **FOCAL STUDENT DOCUMENTS** | All reading work produced by the focal students during focused observations or protocols. |
| **INTERVIEWS** |  
| **BACKGROUND** | Transcripts of informal background interviews with teacher and four focal students. |
| **RETROSPECTIVE** | Transcripts of five retrospective interviews with teacher and four focal students. |
| **PROTOCOLS** | Transcripts of five protocol collection sessions from the four focal students and teacher. Includes as part of the transcripts, short retrospective interviews done at the completion of the "think alouds." |
meant answers to particular questions. If, in answer to a question, a student discussed more than one topic, each topic was coded as a discrete event.

For field notes, discrete events were defined as interactions between participants which focused on a single theme or topic. For example, the following excerpt from a field note description of the classroom reading lesson represents three discrete events:

Mrs. Williams asked Andrea to read "right there on page 204." Andrea read the paragraph at the bottom of page 204. When she finished reading, Mrs. Williams said, "All right, now. If you've ever gone on a trip or had to pack to go on a trip, you know that there are lots of things you need. And (unintelligible). And there's lots of things you need when you go on a trip. And if you're not careful you just really get overwhelmed by all the things you have to take unless you get organized. And that's what an outline is supposed to do. Let's look on page 205."

Mrs. Williams asking Andrea to read and Andrea's reading was coded as the first event. Mrs. Williams' elaboration of the text was considered to be the second event. The third coded event was Mrs. Williams' instruction to the children to look at the next page in the text.

Occasionally one event would be interrupted by a second and unrelated event. In that situation, the initial event, the interruption, and the resumption of the topic would be coded as three events. For example, one day Mrs. Williams was explaining the importance of different parts of a book. She noticed David was playing
with some shells and interrupted herself to tell him to put them away. Then she resumed the discussion. The field note entry said,

Mrs. Williams said, "Page 179 this morning." She said, "I don't know how often we do this, but it's a good idea whenever you get a new book to look at the table of contents first. Why?" Someone said, "So you'll know what's in it." Martha said, "So you see what story's in it." Luke volunteered, "To see what other stories are gonna be about." David was playing with some shells he had brought to school. Mrs. Williams told him if he didn't put them away she would take them. Then she called on Jason who had his hand raised. Jason said, "To see who wrote the book." Mrs. Williams said, "Especially if it's somebody that you've heard about, you know the book's probably gonna be pretty good."

Four events were coded for this field note entry: 1) the teacher told the students what to look at; 2) the teacher began to talk about parts of a book and asked a question; 3) the teacher interrupted herself to tell a child to put something away; and 4) the conversation about the parts of a book continued.

Journal entries were also coded by theme or topic. All consecutive paragraphs which dealt with the same topic were coded as a single event. Most paragraphs dealt with discrete topics, however, and were coded as such.

Protocol transcripts were coded in two ways. Each item in the "think aloud" transcripts was coded as a discrete event—short articles, directions, informational paragraphs, and individual questions with "think aloud" answers. The short retrospective interviews, done after
the assignment was completed, were coded the same as the retrospective interviews of focused observations; the transcripts were coded by question.

Summaries

Once coded, the data were then summarized. The protocols, field notes, and interviews were rewritten in summary form so that the essence of what had occurred in the event was reproduced, but the length of the description was reduced. The names of the participants, where noted in the transcripts or field notes, were maintained in the summaries as were some of the shorter direct quotes. Long quotes were often summarized. The following event was recorded in the field notes.

Mrs. Williams asked, "All right what does the word theater mean?" Martha called out, "Theater means a place where you can watch movies." Mrs. Williams did not respond, but gave Martha a funny look. Martha said, "OK. I'll raise my hand." Mrs. Williams pointed to the chalk board. Martha said, "Oh. Ok." Jason had his hand up. Mrs. Williams called on him. He read the glossary definition of "theater." Mrs. Williams commented when he had finished, "OK. So Martha was right, too, wasn't she?"

The essence of this event was preserved, while the length was abbreviated in the following summary:

1.6 Tchr. ask what wd. "theater" meant. Martha called out answer. Tchr. made face & Martha said would raise hand. Jason had hand up. Rd. glossary definit. Tchr. said Martha was right.
Domains

All of the data were sorted into domains using the procedures described by Spradley (1980). The focus of the final data analysis was on five domains that provided information which helped to answer the research questions. These five domains were:

- kinds of reading tasks
- kinds of instructions to students
- ways students do reading tasks
- reasons for doing reading tasks
- ways of interacting while doing reading tasks

An example of the content of these domains is provided in an excerpt from the domain list for "kinds of reading tasks" in Appendix I.

The nature of the categories meant that some events appeared in more than one domain. For example, an event in the field notes which included a direction given by the teacher to Rena to read the definition of the word "riffling" and then, when Rena had done so, to tell how the word was pronounced in the book, also included Rena's response. This event was included in three domains: 1) as a kind of reading task, 2) a kind of instruction to the student, and 3) as a way in which a student completed a reading task. The domains appropriate for each coded event in the descriptive data were indicated on checklists. From these checklists, comprehensive domain lists were created.
Taxonomies

In order to further analyze the data, taxonomies, as outlined in Spradley (1980), were created within each domain. Taxonomies make explicit the relationships between events included in the domains (Spradley, 1980). Within the taxonomies, dimensions of contrast exist which represent units of meaning assigned by the participants to the events included in the domains (Spradley, 1980). The individual domains created in this analysis lent themselves to different types of taxonomies and different dimensions of contrast within those taxonomies. Each domain is described in turn.

**Kinds of reading tasks.** Events included in the domain "kinds of reading tasks" were derived from field notes, from the documents (the materials the children were asked to complete and the directions provided in those materials, as well as information from the teacher's manual and the teacher's lesson plan book), and from the protocol and interview transcripts.

Once a complete domain list for kinds of reading tasks was compiled, a taxonomy for the domain was created by lesson. A lesson was defined as a group of activities focused on a common goal. The goals for six of the seven lessons were derived from the Teaching Units supplied by the basal text. For example, the goal for the first
lesson was "Understanding and Appreciating Literature." This was part of the basal Teaching Unit 5. One lesson covered during the period of analysis was not related to the basal text.

The lessons were divided into instructional segments. Within each instructional segment were the activities which the students were asked to participate in during the lesson. For instance, Lesson One included one seatwork and two recitation instructional segments. Within the recitation segments the students were asked to go over the vocabulary words, to listen while the teacher introduced the story, to read aloud or listen to the story being read, to answer teacher questions, during the story, to read aloud or listen while the story was read aloud again, to listen while the teacher made the assignment, and then, later, to read aloud in class their responses to the questions posed by the textbook. Within the seatwork segment students were asked to respond to the questions at the end of the story in the textbook and to read a new story.

Each lesson differed in the number of days of reading instruction it represented. Lesson One, for example, represented three days of instruction, Lesson Two represented three days, and Lesson Three represented only one day. The lessons were illustrated by large charts
which delineated all the instructional segments for each lesson and all the activities included within each segment. Seven reading lessons occurred during the period of data analysis. All seven were charted.

The activities the students were asked to complete were then sorted into one of the four task categories suggested by Doyle (1983). These categories were for opinion, procedural, comprehension, and memory tasks. A categorical decision was made based on the principal function of the activity. For example, if a question asked the students about information presented in a story and expected the students to repeat that information using the exact words from the text, then the question was categorized as a procedural task. In this instance the students were asked to perform a simple matching procedure—look in the text, recognize the information, and report it on their papers.

Kinds of instructions to students. Events included in this domain were derived from field notes and from the documents provided to the students while they completed the reading tasks. Events in this domain frequently overlapped with the two domains "kinds of reading tasks" and "ways of interacting while doing reading tasks." The principal focus of the analysis in this domain was to identify the questions the teacher asked the students
during recitation. The questions asked of the students by the teacher were sorted into the four task categories suggested by Doyle (1983). For example, the question asking for the Spanish word for water was categorized as a memory question. In this instance the students needed to remember their Spanish lesson and provide the word "aqua."

Ways students do reading tasks. Events included in this domain were derived from field notes and the interview and protocol transcripts. The principal dimensions of contrast for this domain were the four focal students. A comprehensive domain list of what they did as they worked through reading tasks was developed for each student from the field note and interview transcripts. The protocol transcripts were charted across student by item in the written assignment, providing a comparison of task completion strategies and resources used between the successful and less-successful school readers. The responses made by the teacher as she corrected the children's work was also included in those charts. The events for each student were then compiled and placed on large charts which paralleled the instructional segments for each lesson. The charts for each student, written on thin tracing paper, were then overlaid on the lesson taxonomies developed for the domain "kinds of reading tasks." The result was that for each lesson the structure
of the instructional segments and related activities could be viewed in relation to the participatory activities of the individual focal students for each aspect of the lesson.

**Reasons for doing reading tasks.** Items included in this domain were derived from the field notes and the interview and protocol transcripts. There were five dimensions of contrast for this domain—each of the four focal students and the classroom teacher.

**Ways of interacting while doing reading tasks.** Events included in this domain were derived from the field notes and the interview transcripts. The principal dimensions of contrast for this domain were the four focal students. For each focal student two additional dimensions of contrast were identified: 1) ways in which the student interacted with the teacher, and 2) ways in which the student interacted with other students.

**Portraits**

Three portraits were written for each of the focal students. The portraits were essays based on the taxonomic analysis for a particular domain which related directly to the student. The portraits for each student described the ways in which that student did reading tasks, the reasons that student had for doing reading
tasks, and the ways that student had of interacting with the teacher and other students while doing reading tasks.

**Themes**

Theme analysis (Spradley, 1980) was performed on the taxonomies and the portraits developed from the five domains. Spradley (1980) describes theme analysis as the identification of "general semantic relationships among domains" (p. 144). He suggests that themes are assertions with "a high degree of generality [that] apply to numerous situations and recur in two or more domains" (p. 141). One way to perform a theme analysis is to identify one domain which appears to organize much of the information (Spradley, 1980).

For this study the domain of "kinds of reading tasks" was selected as an organizing domain. The reading lessons (instructional segments, activities, and tasks embedded within those activities) set within the context of the classroom were described and the relationship of other domains to this domain was described. The theme analysis was conducted during the writing of the portraits and the writing of the document. First, a description of the reading classroom, the lessons, and the activities and tasks the students were asked to complete was written. Against that backdrop the portraits of the students were
incorporated. Finally, the ways in which the focal students defined the reading tasks were described.

The framework for this analysis was provided by the research questions. The central question was concerned with students successful or unsuccessful task completion. In order to address this question, three further questions were posed which focused on the reading task as presented to the children by the teacher or the text, the ways in which the students understood and worked through those tasks, and a comparison of the successful and unsuccessful school readers in terms of task completion. Each of the three questions was addressed in a separate chapter of the document.
CHAPTER III

Results: Classroom Environment and Reading Activities

To examine students' task definitions from an ecological perspective it is necessary to understand three elements of the reading classroom: 1) the environment of the classroom, 2) the reading activities the students were required to participate in, and 3) the strategies, goals, and resources the students used as they worked to complete reading assignments. From descriptions of these three elements it is possible, then, to determine the tasks the students were asked to complete, to identify elements of ambiguity and risk inherent in those tasks, to delineate the task definitions created by the children, to compare the task definitions of successful and less-successful students, and to determine how those task definitions match with the expectations of the classroom teacher. The purpose of the following three chapters is to describe the three elements of the reading classroom, to detail the activity and related task structures, and finally, to describe the ways in which the students in the class mediated those tasks.

The first of the three chapters, Chapter III, looks at the classroom environment and the reading activities
the students were asked to complete within that environment. This chapter describes the school, the classroom as a whole, the teacher, her instructional program, and her ways of focusing the classroom interactions within the context of the instructional program. This chapter also describes the activity structure of the reading instructional program, the tasks embedded within those activities, the modifications of those tasks by the teacher as she made the assignments, and the elements of ambiguity and risk inherent in those tasks.

The second of the three chapters, Chapter IV, presents case studies of each of the four focal students. The case studies describe the strategies the students used, the resources they employed, and the goals they set for themselves as they worked through reading tasks in the classroom. The focus is on the ways in which the students define and mediate the classroom reading tasks and deal with the elements of ambiguity and risk in those tasks. This chapter also identifies the similarities and differences between the four focal students in terms of goals set, strategies and resources used, and task definitions.

The third of the three chapters, Chapter V, compares the task definitions of the successful and less successful
students with the expectations of the teacher and the reading materials.

The Classroom Environment

In order to understand the classroom reading tasks and how individual children worked through such tasks, it is necessary first to understand the context in which the tasks evolved, the environment in which the children and the teacher worked. The first part of this chapter describes the classroom and introduces the four focal students within the context of that environment.

The School

The school in which the study was conducted was in a small rural city in the mountain area of the southeastern United States. The children coming to the school were drawn from a mixed population. Some children were long-time residents whose parents and grandparents grew-up in the area. Others were new to the area, having moved there because one or both parents procured a job nearby. Most of the children's parents had completed the twelfth grade, some had gone on to college, and a few, mostly teachers at the local university, held advanced degrees. Job opportunities, besides those offered at the university, ranged from industrial plants located in the city to business and industries located within a thirty-
mile radius. Blue and white collar workers lived next-door to each other and their children attended the same schools.

The size of the city, less than 10,000 (without the college student population), and the disbursement of populations to the three elementary schools ensured a fairly even distribution of students in any one school or classroom. The school in which this study was conducted had been considered, for years, to be the least likely to support children from families with high socio-economic levels. The situation, however, had changed dramatically in the past fifteen years. Some transiency, low-income housing in other sections of the city, middle-income housing developments near the school, and the adaptation of school boundaries due to diminishing enrollments had all contributed to a much broader diversification of the school population.

The school building itself was old. It was slated to be closed and no longer used as a school after June, 1987. At the time of the study one entire wing of the school was being used just for storage. There were only three elementary schools in the city. Declining enrollment in the late 1970's and early 1980's, plus rising maintenance costs for the old building, led the local school board to consolidate classes in all the
schools in 1981. The school this study was conducted in was reduced to three fifth-grade and three sixth-grade classes.

In spite of the reduced enrollment, there were a variety of other support systems intact at the school site. They had a full-time librarian and remedial reading teacher as well as part-time instructional support in special education, guidance, speech, gifted education, hearing, Spanish, remedial math, physical education, and art. There was a full non-instructional support staff which consisted of a principal, a secretary, cafeteria and custodial workers. There was also a highly specialized class for early-identification and remediation of language delayed preschoolers which met at the school three mornings a week.

The small size of the school, less than 200 students and 10 full-time teachers, meant that a special closeness existed among the staff. They congregated frequently in the halls, particular classrooms, or the lounges to chat. The teachers sat together during lunch at a table apart from the children. There the teachers could talk together, but were also able to observe their classes and correct any inappropriate behaviors. The teachers had a "secret-pals" system of gift-giving and they planned special holiday parties and get-togethers both on the
school site and after school hours. They also planned similar instructional programs. They kept track of who was on what page of the spelling, math or reading textbook as well as sharing ditto masters, art activities, bulletin board ideas, and instructional materials such as globes, maps, microscopes, filmstrips, and books.

The Classroom

The impression on first entering the classroom was that the room was very old. This effect was created by the squeaky hardwood floors, high ceilings, black chalkboards and tall, multi-mullioned windows which flanked the outside wall. An exterior door at the back of the classroom went out to the black-top and grass play area.

The front of the room contained the teacher's desk, two four-drawer file cabinets, a podium, a small book case, and the overhead projector on a wheeled cart. This area provided the open space for the children's entrance and exit to the classroom as well as allowing the teacher access to the chalkboard, overhead, podium, and her desk.

The walls of the room were covered. The exterior wall had low bookcases underneath the windows. Lining the back wall of the classroom under the bulletin board area were storage cabinets. Against the back wall there was also a small magazine display rack and a large stand on
wheels holding the television monitor. The wall against the interior hallway of the school had a tall coat closet with doors that only closed part way and half of which were filled with stored teaching materials. The children deposited coats and jackets on the hooks, hangers, and floor of the closet, contributing to an overall cluttered look.

The room itself felt crowded. The furniture was clustered in the center of the room. There was an additional, but smaller, teacher's desk at the rear in the corner. A long work table used to store materials or sort papers was first located in the front and then, later in the year, moved to the back of the classroom. The students' desks were clustered in the middle of the room, most often in rows facing the front. Occasionally the teacher rearranged them into short, diagonal rows facing each other. The seating arrangement was changed often; ten different arrangements were recorded during the first twelve weeks of school.

The children's desks were small and vinyl laminated with metal legs and a metal basket underneath in which books were to be kept. The baskets were small and the children were required to keep several textbooks and all their writing materials in the baskets. Frequently the contents of the baskets spilled over on to the floor and
notebooks, papers, textbooks, and pencils slipped into the aisles between the desks to be walked on or stepped over.

Though cluttered, the atmosphere of the classroom seemed bright and cheerful. This effect was created in part by the colorful bulletin boards and the high windows. The bulletin boards were decorated with teacher-made or purchased displays focusing on themes such as the seasons, holidays, or on topics under study such as the parts of speech or grammar rules. Students' work—creative writing, social studies reports, and a variety of art work—was displayed on the bulletin boards and taped to cupboards and bare walls. One large bulletin board at the back of the room was covered with white butcher paper and sectioned off. Each child in the class was given a space and asked to draw pictures that represented his or her interests. This board was left up for over three months and children were often seen working on it during free-time, adding new items of interest to their square.

The Teacher

Mrs. Williams, the fifth-grade teacher in this room, grew up in the town in which she taught. Her parents and grandparents lived in the area. She knew many of the parents of the children in her classroom, having gone to high school with them.
Mrs. Williams had strong ties to education. Her mother was a teacher in the local schools and held both an undergraduate and a masters degree from the teachers' college in the town. One of her two younger sisters was a teacher in a neighboring school district.

As a child, Mrs. Williams attended a laboratory school then connected to the college. She described it as "an experimental training school," and said that "a lot of the educational practices [presented there] are just now being put in the [public] school system." She believed that the teachers she encountered there, along with her mother's interest in education, influenced her to become a teacher.

She noted that she had never been a particularly good student. "I was always a good student as far as doing my work and being meticulous about it, but I never felt really smart. . . . I had to work really hard." She also noted that reading had been a difficult subject for her and even as an adult she did not enjoy reading that much. She said that in elementary school she had many different teaching strategies presented as well as many timed tests. She said that the different instructional techniques may have confused her, but that the fact that she read slowly was probably the biggest reason why she did not feel good about herself as a reader. "I guess
nobody ever made me feel good that I didn't read as fast as everyone else." She commented that this made it difficult for her in college as she read very slowly and had to rely heavily on memorization to help her get through her exams.

In describing herself as a hard-working, but not an outstanding student, she said that she was better able to recognize when students in her own classroom tried to cut corners while completing assignments, citing examples such as when they copied sections of a book or information from the book cover and turned those in as part of a book report. She said that she had "pulled enough of [those] tricks when I was a child," and that this, maybe, made her a more effective teacher as she understood her students better.

Mrs. Williams contrasted her current approach to teaching reading to those that she had encountered as a child. She said that if she had learned the way she was teaching she might very well have had a different attitude toward reading. She explained that in her classroom she tried to "do things that are not going to turn them off to reading." She tried to do activities that were "functional" for them. She said she felt obliged to "stick pretty close to the textbook," but she noted that
the activities in the text were "usually pretty good for my class."

Mrs. Williams received her professional training at the teachers' college in town, the same institution which conducted her early elementary schooling and from which her mother had graduated. Mrs. Williams did her student teaching in the local schools and the year she graduated she was hired by that system to teach fourth grade. She married a man who was also a school teacher in a neighboring district and she quit teaching after two years because she was pregnant. She remained at home with her children for the next seven years during which time she completed the requirements for a masters degree in education at the same local college from which she had received her bachelors degree. She was rehired by the local school district and, at the time of the study, had been teaching for ten years in the same school, at the same grade level, and in the same classroom.

Reading Instruction

The reading instructional period was held first thing every morning. The first bell rang at 8:40 and the children, who if the weather was good, waited on the asphalt outside the classroom or if it was raining or cold, waited in the school cafeteria, were admitted to the room. They generally came in and emptied their bookbags,
settled down into their seats and talked quietly among themselves. They would address questions or comments to the teacher, give her signed papers or forms, and share stories with her about the bus ride, events which happened outside of school (family or Scout or sports related, mostly) or the behavior of other children as they waited outside to be admitted to the classroom.

At 8:45 the tardy bell rang and the teacher used that as a signal that class was ready to begin. During the five minutes following that bell she took the lunch count and attendance, assigned weekly helpers, and made announcements.

Another bell rang at 8:50 signaling the beginning of the first instructional period. This indicated to the six children who went to special reading class with Mrs. Cook that it was time to leave. These children, selected for their low SRA scores the preceding spring, their low reading grades the previous year, and on teacher recommendation, worked with Mrs. Cook every day during reading period.

When Mrs. Cook's children left, Mrs. Williams began her reading lesson with the remaining sixteen children. Mrs. Williams, as did the other two fifth grade teachers, taught the class as one single reading group. She explained why by saying that one year she tried splitting
the class into smaller reading groups but "they didn't like it . . . and I thought I never cared for that myself. So I put 'em back in the group." As a result, all sixteen children received the same explanations, participated in the same classroom discussions, and were given the same instructions and assignments to complete.

The teacher structured the reading lessons around the basal textbook. She worked through the basal text from the very beginning to the end, proceeding through the lessons outlined in the teacher's manual, modifying, skipping, or amending the lessons as she saw fit. Typically she eliminated from the suggestions offered in the manual some discussion questions and the supplementary or enrichment activities. During class discussions she often added many of her own questions. She had used this series (Harcourt Brace Jovanovich, 1983) for three years. She suggested that she perhaps did not spend as much time preparing the reading lessons because she had taught these stories for several years in a row and could anticipate the text as well as the children's responses.

The manual and the subsequent textbook were organized around teaching units. Each teaching unit had a theme or general goal and then several objectives which specified that goal more clearly. During the period of data analysis, five teaching units from the manual were covered
in the reading class. For each goal and its corresponding objectives the manual suggested activities using the textbook or the accompanying workbook and duplicating masters. Mrs. Williams used many of the activities suggested. Table 8 identifies the teaching units, describes the goals and objectives set by the teacher's manual, and lists the activities which Mrs. Williams used within each unit.

One non-textbook oriented lesson was held during the period of analysis and is not included in Table 8. This lesson occurred the day after Halloween, a Friday morning. The teacher planned a lesson around the classic story of *The Hunchback of Notre Dame*. She had a series of abridged classics on audio-tapes which she said she would be using with the children throughout the year. This was the first one she had tried. She used it because in the past it had been interesting to other classes and she thought she needed something different to hold the children's attention the morning after Halloween. She presented the lesson using activities similar to those she used to work through the textbook. First they went over the vocabulary words, then she introduced the story and made the assignment to go along with it, and finally they listened to the tape recorded story.
### Table 8
Overview of Units, Goals, Objectives, and Activities Covered During Data Analysis

<table>
<thead>
<tr>
<th>Teaching Unit 5</th>
<th>Goal</th>
<th>Objectives</th>
<th>Activities **</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding and appreciating Literature</td>
<td>- to recognize humor in fiction</td>
<td>- go over vocabulary words</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- to recognize word play as an element of humor</td>
<td>- introduce story</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- to recognize the unexpected as an element of humor</td>
<td>- assign questions at end of story in the text (4 comprehension &amp; 2 writing)</td>
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</tbody>
</table>

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<thead>
<tr>
<th>Teaching Unit 6</th>
<th>Goal</th>
<th>Objectives</th>
<th>Activities **</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding Parts of a Book</td>
<td>- to identify parts of a book where specific information may be found</td>
<td>- introduce new section of text book</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- to use a table of contents</td>
<td>- discuss parts of a book (framed by the text)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- to use an index</td>
<td>- talk about antonyms (framed by the text)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- to use a bibliography</td>
<td>- assign Try This in textbook</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- to describe the purpose of an introduction</td>
<td>- assign 3 workbook pages</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- to use a glossary to find pronunciation and meaning</td>
<td>- correct workbook pages in class</td>
<td></td>
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<table>
<thead>
<tr>
<th>Teaching Unit 6</th>
<th>Goal</th>
<th>Objectives</th>
<th>Activities **</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding Parts of a Test Book</td>
<td>- to use a table of contents</td>
<td>- discuss parts of a textbook (framed by the text)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- to use an index</td>
<td>- discuss antonyms (ditto sheet)</td>
<td></td>
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</tbody>
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<thead>
<tr>
<th>Teaching Unit 7</th>
<th>Goal</th>
<th>Objectives</th>
<th>Activities **</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding Topical Organization</td>
<td>- to identify topical organisation</td>
<td>- go over vocabulary words</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- to identify introductory paragraphs</td>
<td>- introduce story</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- to identify summary paragraphs</td>
<td>- assign story, questions after story, and duplicating master</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Teaching Unit 8</th>
<th>Goal</th>
<th>Objectives</th>
<th>Activities **</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using Outlines to Help You Read</td>
<td>- to write a topical outline</td>
<td>- discussion of outlines (framed by text)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- to write a title for a topical outline</td>
<td>- create an example outline on overhead</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- to identify definitions in context</td>
<td>- assign 6 workbook pages</td>
<td></td>
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<tr>
<th>Teaching Unit 9</th>
<th>Goal</th>
<th>Objectives</th>
<th>Activities **</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using the Library</td>
<td>- to locate and use library catalogue cards</td>
<td>- discuss using library and library resources (framed by text)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- to identify and use reference materials in which specific information may be found</td>
<td>- assign five workbook pages</td>
<td></td>
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</tbody>
</table>

* indicates teaching units, goals, and objectives listed in the basal text

** indicates activities actually conducted by the classroom teacher
Another recurring, non-textbook reading lesson not included in Table 8 was the weekly library period. Each Thursday, Mrs. Williams would take the children to the library, across the hall from their classroom. There Mrs. Langley, the librarian, would provide some instruction in the use of the library and time to check out books to take home or back to the room. This activity took most of the reading instructional period for that day. During the remaining few minutes back in the classroom, the children were typically asked to read their library books or complete an assignment made the previous day.

Mrs. Williams said of her reading instructional program that, "You know, they've been through the fundamentals and everything and it's my job to see that reading becomes a part of their life. More than just a subject." To this end she established a Touchdown Reading Chart on a bulletin board at the back of the room and kept track of the library books they reported reading. The children moved their footballs from the 50 yard line to an end goal—10 yards for each book read. A Touchdown equaled 5 extra points toward a final report card grade. Mrs. Williams had a long list of books, she called the "bibliography list," that children could read for the Touchdown Chart. During library time she encouraged children to check out books they could read to help them
get a touchdown and she regularly reminded children to read the books they had checked out whenever there was extra time during the day.

She stressed the integral nature of reading in other ways as well. She read aloud to the children every day after lunch from long, chapter books. She read, among others, The Mixed-Up Files of Mrs. Basil E. Frankweiler, Bananas Don't Chew Gum, and Mr. Little. She also created some instructional activities during reading class that emphasized her goal to integrate reading into their lives. She spent two reading periods, rather than the one she had originally intended, on a story play that the children read aloud in class. She explained that she had spent so long on it because "they had so much fun with it. . . . I like for 'em to see a different side to reading than just [the] lesson. . . . I [want] them to, you know, have a little bit different attitude about reading."

Mrs. Williams did not hold the students accountable for how much they enjoyed reading and incorporated it into their lives. Rather she graded students' performances on the skill-related written work regularly assigned during reading class. Even the extra points a child might earn by reading library books for the Touchdown Reading Chart were only awarded if the child turned in a satisfactory summary paragraph of the book. The children's report card
grade in reading was based on an average of the grades earned on their written work. Mrs. Williams acknowledged that there were other possible measures from which a reading grade could be derived. She said that some children were more skilled oral readers than others, but she chose not to grade them on that. "I'm not gonna grade it on how well they read it out loud or anything like that."

Most work was checked and graded by the teacher. Some graded assignments would be passed back to the children and Mrs. Williams would "go over" the corrected answers with them. If the assignment was important, as in the case of a test, she would ask the children to take the paper home to be signed by a parent and then returned. Sometimes, especially for workbook pages, Mrs. Williams would have the children correct their own work as part of the classroom reading lesson. She would review these corrected papers later. If, at that time, she noticed any discrepancies, such as a child who had missed an entire section and marked it as only one wrong, she would change a grade. Once she had looked over those papers, she discarded them.

The students were typically unaware of the standards by which they received points off for items they had missed. Mrs. Williams judged the number of items and the
amount of difficulty the children appeared to have had with the assignment and then decided how many points should be taken off for each error. In some cases the children were unaware even of the grades which were being recorded in the grade book. Mrs. Williams explained that occasionally she assigned a writing or drawing activity to accompany a story in the text. "I may grade those, although I am very careful not to put a letter grade on 'em." In these instances she put the grade in the grade book and a "word of encouragement" on the paper.

Mrs. Williams' instructional style focused on asking questions. She directed questions to particular students. She asked questions and called on students who indicated a willingness to volunteer an answer. And she asked questions of the class as a whole, who then chorused answers back at her.

When asked about her use of questions, Mrs. Williams indicated three reasons for asking questions of students in the classroom: 1) she wanted to test their understanding of the material, 2) she wanted to ensure that they were listening, and 3) she wanted to see if they could transfer information into another context.

I'm trying to see . . . if they understand what I'm trying to get across to 'em . . . . I also do it a lot to see if they're listening. . . . I'll ask 'em questions that they wouldn't ordinarily think of, like what page does something end on, to see if they're transferring that.
If a child was unable to answer a question correctly, Mrs. Williams typically repeated it. Only rarely did she offer additional information or rephrase a question for a child. On most occasions she would repeat the question once, twice, or even three times for the same student. For example, one time she asked David how many parts there were to the book whose sample table of contents they were looking at. At first David was looking at the wrong page in the text book. When he finally located the correct page, Mrs. Williams repeated the question, "How many parts in this book? ... In the table of contents, how many parts?" David gave an incorrect answer—the number of chapters in the book. She said, "No. How many parts? Look at 'em. How many parts?" Finally he was able to correctly respond with "four."

Often if one child was unable to provide a correct answer, she would address the same question to another child. For example, one time when they were correcting work in class Mrs. Williams read the question, "Are bath sponges found in the Atlantic Ocean?" The instructions asked the students to provide a page number from the sample index which indicated where this information would be located in the text. Mrs. Williams called on Sarah who gave an incorrect answer. Then she called on Samuel, who gave a different incorrect answer and then on Matthew.
who gave another incorrect answer. Finally she called on Anne who was able to give a correct response.

The interactive nature of the classroom reading lessons meant that Mrs. Williams needed to monitor the turn-taking aspect of the recitation. She expected the children to raise their hands when they contributed to the discussion. If they did not, their answers were frequently not accepted. Often she sanctioned children who were frequent violators of this practice. For instance, she was asking Rena a question when Samuel called out the answer. Mrs. Williams spoke to him sharply, "I'm talking to Rena." Another time Martha had called out several answers without raising her hand. Mrs. Williams first teased Martha about "running [her] mouth," but when Martha continued to talk out, she said in an irritated voice, "Shut your mouth, Martha!" Occasionally Mrs. Williams would accept answers that were called out of turn or without hands having been raised. If the class was particularly noisy and talkative, however, she was quicker to sanction someone who impulsively called out an answer or volunteered information.

Mrs. Williams' classroom was orchestrated as a public event. Only infrequently would an exchange between the teacher and a child be done in private. Much of the time Mrs. Williams either sat at her desk or stood in the front
area of the room at the podium, chalkboard, or the overhead. She would on occasion pull a chair up to the middle of the front of the class and sit with her teacher's manual propped on her lap. From this vantage point she would ask questions or give instructions to the class as a whole. If a child came to her desk to ask a question privately, she would often give the answer aloud to the entire class. For example, David once went up to her desk and admitted to her that he'd lost his parent-teacher conference form. Mrs. Williams sent him to the office for another and some extras as well. When he brought them back to her, she asked the whole class if "anyone else" had lost their form and needed another.

The teacher encouraged public acting displays. Tess was a master at creating a strong public presence. Mrs. Williams commented on Tess' behavior, but rarely sanctioned it. She said things such as "Tess certainly is feeling her oats today," or "She's really getting into it." These comments were made to the class as if they were an audience, while she and Tess were on stage making jokes for the benefit and response of that audience.

Mrs. Williams also made sanctions and punishment a public event. She explained that it was her belief that only other children could change a child's behavior pattern. "I am very strict, but what I try to get 'em to
do, is to get them to do it instead of my having to stand over 'em." To this end she publicly criticized children as a way of dealing with their misbehaviors. For example, she sent Martha out into the hall for talking, commenting publicly as Martha left, "and when you can come back in here and sit down and raise your hand, without buttin' in every five seconds, fine!" She elicited peer response to inappropriate behavior by making jokes about it. For instance, she told Samuel to throw away his gum or, "I'm gonna wrap that stuff around you all's ears!" to which the class laughed gleefully. She regularly teased the children publicly for misbehavior. This teasing encouraged comments, criticism, and laughter from the class at the expense of the child being sanctioned.

The Focal Students

All four focal children were in the fifth grade and were ten years old. David, the oldest, was only six months older than Anne who was the youngest. Luke and Rena were only a month apart in age. All four children were born in the small rural community that was their home. Three of the children, Anne, Rena, and Luke, had parents who grew up in the area and attended local schools. They each had grandparents living nearby at the time. David's family moved to the town from other locations. His parents grew up in the mideastern part of
the United States and his grandparents, who never lived in
the town, were deceased.

None of the children had repeated a grade in
elementary school and all had attended the local school
system. The only exceptions were that Luke went to
Kindergarten in a neighboring school system and Rena
attended Kindergarten and first grade in that system as
well.

Anne. In her family Anne was the youngest of two
children. Her older brother was thirteen years old and
attended middle school. Anne's mother was a homemaker and
her father worked at an administrative level at a local
industrial complex. Both parents attended college in
neighboring states.

Anne related that she enjoyed her dance, piano,
ballet and gymnastics classes as well as family oriented
activities such as boating, water-skiing, and playing with
her pets. The family frequently vacationed at a nearby
lake resort area where her grandparents owned property.
Anne said she liked watching television, but also liked
playing with friends. She said that she rarely played
alone as it was "no fun playing by yourself."

When asked about school Anne said that the school
lunches were "disgusting," but that she especially liked
math and social studies. She said reading was "OK," but
by that she meant, "reading in books." She said that she "[didn't] like to do the stuff in the books . . . like the workbook and all that stuff," but she "[loved] to read" and thought the reading part was easy for her.

In class she read and participated in the Touchdown Reading Program the teacher initiated at the beginning of the year. Anne was proud of her success and noted where she stood compared to other children in number of books read. She commented that she especially enjoyed the Beverly Cleary books about Ramona. She said, "The easy [books] that everyone is reading, about whales and stuff, I can't stand those. I would rather read a thick book . . . . Those [other] books are just so boring." She admitted that many of the books she was reading for the Touchdown chart she had read many times before. "I've read each [Ramona book] about ten times before."

Anne was an active participant during the reading class. Though it was rare that she raised her hand to contribute voluntarily, she was often called on by the teacher. Anne was always prepared to answer such questions, with her book open and her papers spread out on her desk. On a few occasions Anne raised her hand to volunteer an answer, but mostly she sat and waited until the teacher called on her.
Anne's public presence in the classroom centered on the laugh she developed over the first 12 weeks of school. It was a forced, fake-sounding, deep, throaty laugh. It was generated in response to public classroom events that were silly or playful—events at which the rest of the class laughed uproariously. When the class hooted with laughter at a public joke, Anne's was the loudest and most distinctive. Anne's laugh earned her considerable public attention from both the teacher and the children. Once when the class was discussing the vocabulary word "individualist," Mrs. Williams asked the class for an example. A child said that Anne was an individualist. The teacher agreed and, by way of corroboration, made a reference to Anne's laugh. Another time Mrs. Williams asked Anne if anyone else in her family had such a laugh.

Anne's overt interactions with other students during the reading class period were minimal. Several times she brought a copy of News Fun and shared that, with the teacher's permission, in front of the class at the beginning of the reading period. Only two or three children appeared to listen as she shared. Rarely did she speak to other children during reading class. She did show her dictionary to Tess once and reminded other children to read or answer on occasion. Other than her
laugh, to which the children responded with obvious
delight, and her clear expertise in providing correct
answers to the teacher's questions, Anne seemed to have
little public presence in the classroom. What
interactions she did have with other children were mostly
private and cooperative.

David. David was the only child whose parents and
grandparents did not grow up in the area. David's family,
however, moved to the area before he was born. His father
was an administrative manager at an industrial plant in
the town and David implied that his father was moved to
assume that position within the company. David was the
youngest child in the family of seven children. He had
five older sisters and an older brother. Several of his
sisters were married and had moved away. His brother was
away at college so he and his sister, four years his
senior, were the only children left at home. David's
parents were divorced. His father had moved to the
midwest and had recently purchased a farm there. David
talked about visiting his father at Christmas and
mentioned that he had gone on a trip to the Orient with
his father the summer before fifth grade.

David stated that he mostly enjoyed active, out-door
activities such as riding bikes, going to the store, and
playing ball. He was not sure if he most enjoyed playing
with friends or playing alone, but he acknowledged doing both. He often spoke of playing with his "action figures" and other toys at home. He also talked quite a bit about television shows that he had seen, especially movies that were shown on the local cable channels.

David was adamant about not liking math, social studies, science, spelling, or health in school. He said he liked playing kickball, drawing and reading. He commented that he did not like having to write things about what he had read, "I don't like to do that." But he admitted that he read well, "I can read very good. I know that. Some people mess up on words, or skip words, or make up their own words. And I never do. And I know I can read good. And I'm not bragging."

He acknowledged that he was not participating in the independent reading activity the teacher had set up for the class, indicating that it was the theme, not the activity that he objected to, "I'm just not interested in the Touchdown chart . . . I don't like football that much. Football is the sport I like least." He did say he read quite a bit and enjoyed books on a variety of topics—"Spiders, Ramona and Her Father, another spider book, Sharks, Fishes Dangerous to Man. I like to know what they do and why . . . they attack. Why they bite and attack and spin webs. Why their dorsal fin's sticking out of the
water." He was frequently observed reading library books during reading class discussions—books like *Dracula* and *Indiana Jones*.

In spite of his self-professed interest in reading, David did not participate in reading class. He rarely raised his hand or volunteered any comments during class discussion. Typically he spent most of his time staring off at nothing or playing with things on his desk. In describing his own behavior, he declared that he did not listen in class. He said that some things might be private so he did not listen to what the teacher said to other children. He was rarely prepared to answer questions posed by the teacher when she did call on him.

David's public presence in the classroom centered on his inattention. Mrs. Williams teased him when she noticed that he was not paying attention—focusing public attention on him and eliciting class laughter. She made comments such as, "Earth to David!" One time when she asked him a question he looked perplexed and obviously had not been listening to the discussion. Mrs. Williams made a face at him and asked where he had been, "Concord [a large city 45 miles away]?" Another child suggested, "In the clouds." The class laughed, but Mrs. Williams said, "No, he's been to Concord. A short trip. He's back, right? David we're on page 36 and we're on question 3."
She also made public her annoyance or anger when he misbehaved. One time when she returned from a day's absence, she read aloud the note the substitute teacher had left for her. She read: "I put David's name on the board after many warnings. I substituted for Mrs. Moore [David's fourth grade teacher] many times last year. She had his name on the board all year." Mrs. Williams commented, "We're trying to get over that kind of a reputation, David. Isn't it funny how some things don't change? . . . I mean, really. It must have been pretty bad because everybody else said they noticed it." Another time when David announced to the class that Jason had missed 21 on his paper, the teacher publicly sanctioned him for saying that. Moments later when David turned around and stared at Jason, she told him to turn back around and that he was being a "little nerd." When David said that was an "insult," she responded with, "and so are you."

If Mrs. Williams was frustrated by David's classroom behavior, the other children actively rejected him because of it. They complained about him and alternately ignored him and ridiculed him. When they were wrestling together, Howard complained to the researcher that he wanted David to stop bothering him or he would hit him. One time when asked if David was coming to school that day, Kevin said,
"I hope not." Once in response to a comment made by David, Jason made a face at him and told him to shut up. Another time Martha sneered at him when he spoke to her.

David was critical of the other children and obviously annoyed by them. Martha, struggling with the word "technician" in class, was first helped by Mrs. Williams, but the second time she tried to say the word David said it for her, sounding annoyed and having the teacher sanction him for it. Once when he gave the word "Marsopolis" for Rena he said it in an exaggerated fashion, "Mar-sop-o-lis." Another time when the children were answering the teacher's questions in unison, David turned toward the class and said, "You sound like a bunch of zombies!"

Children refused to help David when he asked. One time when David asked Rena what page they were looking at in the text, she would not answer him. Another time when he asked Jason what they were supposed to be writing down, Jason refused to tell him until they were through with the writing exercise.

David, in turn, mimicked, teased, and made fun of the children. Paul, for example, was reading aloud and the teacher had been encouraging him to read with more expression. David put his hand over his mouth and mimicked Paul's voice in an exaggerated monotone. Another
time David turned in his seat and laughed at Rena who was crying because she had lost her homework papers and had to do the entire assignment over again.

David's interactions with the teacher and the other children were both negative and tension-filled, accentuating in a public way his alienation from others in the class.

Luke. Luke was the youngest of the two children in his family. His older brother was in high school and Luke's parents both worked at the same industrial plant performing different blue-collar jobs. His parents grew up in the area and his grandparents lived in a neighboring community.

Luke reported that he enjoyed activities centered around the family such as going out to eat with his dad and brother on Friday nights when his mother worked late, passing the football with his dad, and watching television. He said he enjoyed recreation department organized activities such as football, but mostly he played at home by himself, since recreation activities "interfered with school work." He said he liked sitting on the porch and petting the family cat or dog.

Luke had lived in a neighboring community when he was five years old and attended kindergarten there. His kindergarten teacher was one of Mrs. Williams' younger
sisters. Luke had never repeated a grade, but had been in Chapter I remedial reading for several years. Though he was no longer in the program, he was in a special math class for remedial students.

He reported that he liked social studies, science, reading, computers, and lunch at school, but said he disliked spelling. He said he liked reading, especially stories and funny poems, but he definitely did not like the worksheets or workbooks. He would not say if he was a good reader. "Let's just say I'm a reader... I wouldn't say I was marvelous... but I wouldn't say I was bad either."

He said he worked some on the Touchdown reading activity, but admitted he did not really like reading books that much. He said, "I really don't like some books... They're too big." The books he did read—Spiders, Terrible Tiger, and Blue Whale—all had fewer than 50 pages and many pictures. He said he thought he would get at least one Touchdown, but did not express much interest in it.

Luke's classroom participation was spontaneous and enthusiastic. He frequently volunteered information about what words meant or told stories about topics mentioned during class discussion. Most of his comments referred to knowledge he had of the world—television commercials, his
dad's job, or a family trip. A discussion of dinosaur names prompted him to tell Mrs. Williams that he had learned about dinosaurs when he was in her sister's Kindergarten class. Another time, during a discussion of the word "witchcraft," he told about the movie "The Exorcist" which he had seen on television.

Luke regularly made comments which were asides to no one in particular. He listened to the tape about The Hunchback of Notre Dame and blurted out, "even his own mother didn't want him," to no apparent audience. Another time he commented about pamphlets he had seen while on a trip. And another time he noted that they had learned about the Dewey Decimal System last year. Occasionally his comments were drowned in the general cacophony of noise and talk made by other children.

Though he often was an active contributor to the reading class, there were other times when Luke did not appear to be attending to the classroom discussion. He would play with his shoes, erase marks on his chair, or stare off into space. Once when Mrs. Williams called on him he looked puzzled and said, "Huh?" She had to tell him the page and the item they were on.

There were two elements to Luke's public presence in the classroom: he was regularly sanctioned for impulsively calling out answers and he participated actively in the
public and humorous performance aspect of the classroom.

Raising hands became a major issue in Luke's relationship with the teacher. She often told him to raise his hand and refused to call on him if he did not. For instance, she told him one time as he called out an answer to a question she had posed for Samuel, "Luke, your name's not Samuel." Another time she snapped her fingers at him as he talked out of turn. Though her annoyance at his impulsive behavior was a regular feature of her interactions with him, her response to his calling out answers without raising his hand was not always consistent. On occasion he would call out an answer which would be accepted or acknowledged. On other occasions Mrs. Williams would instruct him to raise his hand and he would, but then she would not call on him.

Though Mrs. Williams was often annoyed at Luke for not raising his hand, she readily participated in his public classroom displays of humor. For instance, she once commented to the class that they had already had five interruptions that day and the lesson had just started. Martha immediately interrupted to compliment Mrs. Williams on her sweater. Luke without a pause said, "That's six." Mrs. Williams, recognizing and appreciating Luke's joke, thanked Martha, laughed, and told Luke she would not count that one. She became a collaborator in these exchanges,
building on his humorous remarks even if they poked fun at her. Once while discussing what to do if they did not understand something in an assignment, she suggested several alternative courses of action and said that as a last resort they could, and again without pause Luke said, "Ask the great and mighty, powerful . . . " and Mrs. Williams added "Think Tank," (a foolish character in a story read the week before).

Many of Luke's remarks in class were designed to make the other children laugh. Once he commented during a discussion of the word "algae" that on television they wear little grass skirts to clean the algae off the shower. This remark was met with considerable laughter. Another time he told Mrs. Williams about how he had fallen from a window when he was five years old. She asked if he had been hurt. He said that actually he had jumped, that he had indeed been hurt, and proceeded to stand up in the aisle between desks and reenact the fall accompanied by the laughter of the children in the class.

On the whole, Luke's relationship with the other children was easy-going and relaxed. He was rarely teased maliciously and his playful sense of humor kept him performing and entertaining the class.

Rena. Rena, the youngest of four children lived with her mother and step-father, sister, step-sister and step-
brother. The three older children were three and four years older than she, the girls in high school, the boy in middle school. Her mother was a teacher in the school system and her step-father worked for the military.

Rena reported that she enjoyed activities such as riding her bike, watching television, and playing with Barbie dolls. She noted that she often played alone and commented that her temper sometimes got in the way of her play with friends, "I can play better by myself sometimes when I get mad." She also told about playing with her older sisters and spending the night with friends.

Rena had gone to kindergarten and first grade in a neighboring community. She had never repeated a grade, but had been enrolled in the Chapter I Remedial Reading Program for a number of years previously. She was eligible for the program again this year based on her low SRA scores for reading the previous spring, but she was not selected because her reading grades from fourth grade had been high and because Mrs. Cook, the Chapter I teacher, had tested her during the first month of school and decided against including her in the program this year.

When asked what she liked and disliked about school, Rena said that lunch was her favorite activity during the school day, but complained about the limited choices
available. She noted that her sisters had many more lunch choices at the high school. She listed teachers she did and did not like, but otherwise she was noncommittal about school.

Rena was one of four black children in Mrs. Williams' class. The other three children were also girls. Rena and two of the other girls, Tess and Karla, were in Mrs. Williams' reading class. Marcia went to Mrs. Cook for reading.

When first interviewed, Rena said she thought reading was fun. In a later interview, however, after a lesson during which "there was a lot of discussing and stuff" and she "played with [her] necklace a lot," she commented, "I hate reading. I hate reading class. I like to read in books and stuff. I just hate reading class." Another time she said that one aspect of reading that she didn't like was the workbook pages they were asked to do. She said that though sometimes such pages were easy, "sometimes I just don't understand them." At the first interview she noted that she liked to read aloud because, "if I don't understand it, Miss Williams'll help me." But when in class the teacher tried to help her with a word Rena said, "Wait a minute!" and tried to say it herself without any help.
Rena said that she was "kind of half-and half" a good reader, but when asked who in the class she would classify as a good reader she immediately replied, "wouldn't be me." She said, "I'm not the best reader in the world." She noted that children who read better than her probably practiced a lot more. Rena said she read sometimes but mostly she watched television or rode her bike. She said she "like[s] to read, period. But most of the time I don't read too well."

At the first interview she said she was not interested in participating in the Touchdown Independent Reading Program. She explained why, saying she did not want to read those short books that kids have to read to get a touchdown. Rather she "[got] long books . . . books I like," and read those. She told of reading the Ramona books by Beverly Cleary and other books by Judy Blume. In a later interview she seemed more inclined to become involved in the program. She noted that,

I like to read in books by myself and stuff. But in books that I get. Most of the time they're long, but this time I got some that were short so I could get it moved off of that sixty-yard line. Trying to get a touchdown.

In reading class Rena was reticent. Only occasionally did she raise her hand or volunteer. Most typically she was silent. When called on to answer a question, Rena paused for long periods of time before she
responded. When she did answer her voice was low. She spoke slowly, almost hesitantly. And sometimes she mumbled so that what she said was unintelligible. She often was unable to pronounce words when she read aloud.

Rena frequently made comments as asides to no one in particular. When she was sitting in the back of the room, many of her comments were picked up on the researcher's tape recorder, but no one else appeared to hear or respond to them. She talked to herself as she did things, saying things like, "I have to give this to the teacher, don't ask me why." When Rena's desk was moved up to the front of the room the teacher began to notice Rena's running commentary. Mrs. Williams noted to the researcher one day at lunch that Rena had "certainly begun to talk a lot."

Though Rena was typically quiet and reticent, the teacher was regularly critical of her when she did participate. During the introductory time before the reading lesson began, every interaction between Rena and the teacher was characterized by the teacher mimicking or scolding or reprimanding Rena. Rena described the bar-be-que for lunch as "gross" and "slimy," and Mrs. Williams told her curtly not to share that kind of stuff. When the teacher asked for girls who had not been helpers, Rena leaned back in her seat, raised her hand high, and waved it back and forth; Mrs. Williams said, "Rena, I cannot
call on someone about to tear the room down raising her hand." Another time, Rena commented on a fight that had occurred on the bus, saying that she was glad that particular girl had been beaten up. Mrs. Williams said that she could not believe Rena had made such a comment, "I don't want to hear you talking like that. Next thing you know I'll be trying to get you out of trouble and with that kind of attitude I might let you just lay in [the office] and rot."

During reading instruction itself, the criticism continued, focused mostly on Rena's not finishing the assigned work or doing it incorrectly. Sometimes Mrs. Williams was exasperated at Rena's mistakes and would lecture her. Sometimes she would mimic her. Other times she would ignore her. Once when correcting an assignment together in class, Mrs. Williams called on Rena to read her answer. Rena said, "I didn't do it." Mrs. Williams asked, "How come?" and Rena replied, "I didn't understand how to do it." Mrs. Williams said, "Oh, really? Did you understand it while I was going over it with everybody yesterday?" Rena did not respond so Mrs. Williams went on, "You know I went to a great deal of trouble to give you examples in the book." Another time when the class was reporting aloud how many each had missed on an assignment, Rena said she had missed 22. Mrs. Williams
assumed Rena had not finished the assignment and asked why. Rena said she had not had enough time. The teacher asserted that she had certainly had enough time and the children agreed. Mrs. Williams said in mock exasperation, "Rena! Rena!" Some of the children mimicked the teacher, calling Rena's name.

Rena had few overt interactions with other children in the class. Occasionally other children, taking their cue from the teacher, would tease her or laugh at her. For example, once in response to Mrs. Williams' question, "What is a subtopic?" Rena answered, "on the bottom," referring to a discussion the day before about "sub" meaning "under." When the teacher laughed at her for this, some children began to tease, "Rena's on a roll," and "you bet your life-saver," prompting other children to join in the laughter. Another time the teacher called Rena's name as she asked a question. This was one of the few times Rena had not been attending. She looked puzzled and said, "Huh?" The teacher asked if she were ready now to which Rena replied, "I guess." The class snickered and someone mimicked her, repeating her "I guess."

Rena seemed genuinely fond of Tess, the only child to whom she talked on a regular basis and, though she did play with or smile at a few other children, she did not
The Classroom Activities and Tasks

To understand the ways in which students work through reading tasks in Mrs. Williams' classroom it was necessary to understand the academic tasks that those students were asked to accomplish. Tasks are the cognitive elements of the reading activities the students are asked to participate in. They are a framework for learning, "[regulating] the selection of information and the choice of strategies for processing that information" (Doyle, 1983, p. 162). The tasks are set by both the materials and the teacher within the framework of the instructional program (Doyle, 1983, 1984).

The reading lessons in Mrs. Williams' class were divided into two major instructional segments: recitation and seatwork. Each of these segments consisted of several types of activities and embedded within those activities were a variety of tasks.

Doyle (1983) describes four types of tasks as illustrative of ones often presented to students in classrooms: comprehension, opinion, memory, and procedural tasks. These broad categories prove useful as a basis for understanding the reading tasks in Mrs. Williams'
classroom. In her classroom the reading activities contained three of these types of tasks: comprehension, memory, and procedural tasks. Comprehension tasks, are those which require understanding of the material in order to successfully complete the task. Doyle (1983) suggested that "to accomplish comprehension tasks . . . a student must build a high-level schematic structure or schema that can be instantiated in several ways as particular circumstances demand" (p. 164). Memory tasks are those which ask the students to remember information. All tasks require activation of the memory sites of short and long-term memory, but Doyle (1983) describes memory tasks as those which focus on the surface features of the information. Memory tasks do not require semantic integration. They are rote memory functions requiring verbatim recall or mnemonic representations in order to successfully complete the task. Procedural tasks require that a series of steps or a routine be applied to the information in order to successfully determine an answer; Doyle (1983) refers to such tasks as algorithmic in nature. There were no opinion tasks, tasks which elicit a student's preference, assigned in Mrs. Williams' reading classroom.

Table 9 outlines the activity and related task structures in Mrs. Williams' classroom. Following are
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<th>Instructional Segments</th>
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descriptions of the activities and the tasks embedded in those activities that the students were asked to complete.

**Recitation Activities.**

During the recitation instructional segment of the reading class, children were expected to engage in several different activities. They were asked to look up vocabulary words in the glossary at the back of the textbook; read selected pieces of text aloud; answer questions posed by the teacher; listen to explanations or instructions given by the teacher, to answers given by other students, or to parts of text read by the teacher or other students; and to correct some of the written work together. Each activity within the recitation segment of the lesson will be discussed in detail.

**Looking up vocabulary words.** Mrs. Williams introduced vocabulary words at the beginning of every new story in order to familiarize students with both the word and the word meaning so that when the word was encountered later, within the structure of the text, they would be able to understand the meaning of the text. The most typical vocabulary activity set by the teacher was to have the children look at the words listed on the chalkboard, look the words up in the glossary at the back of the text, and read the definition aloud if called on. The student was expected to recognize the word which was on the board.
Mrs. Williams often modified the vocabulary activity by elaborating on the vocabulary word herself, telling a story or giving an example of the use of the word. For instance, once when they had the vocabulary word "gypsy," she told an extended story about going as a child with her grandfather to visit a gypsy camp. Another time, when discussing the word "coral," Mrs. Williams talked about "coral reefs," what they were, where they grew, and how dangerous they were for boats traveling near. Then she went on to talk briefly about the "rosy-orange" color coral.

Mrs. Williams also expected the students, in addition to looking up the vocabulary words and listening to her elaborations, to contribute by providing their own examples of the use of the words under discussion. One time, for example, Mrs. Williams asked the students to elaborate instances when they had heard the word "spiral." She took a story one child had related about a snail he had seen and commented that the word "spiral," was one of their vocabulary words for the next story. After another child had looked up and read the definition for "spiral," Mrs. Williams asked if they had ever seen a spiral staircase, encouraging children to talk about ones
they might have seen. Tess shared that she had a spiral staircase at home and that she bumped her head on it once and Matthew told about going to visit a friend who had one in her house. Occasionally Mrs. Williams asked specific questions to elicit information, as in the example above, but often she implicitly encouraged the children's contributions by her response, acknowledging and adding to their comments. She indicated in this way that their contributions were both welcomed and expected.

The activity of looking up and reading vocabulary words was a procedural task, where the children were required to follow the steps to locate the words and to then report the information following that word. By asking for or expecting the students to elaborate on the words from their own experiences, and by generating her own elaborations of the words being discussed, Mrs. Williams implied comprehension tasks. In these instances the students were expected to tap their long-term memory for occasions when they had heard the word used or to add new information that the teacher was providing to what they already knew about the words. Mrs. Williams stated that she did not want the students memorizing their vocabulary words, "I want 'em to learn to use 'em."

Oral reading. The activity of reading aloud had two elements to it: pronunciation of the words in the text
and understanding what the text meant. Mrs. Williams often rotated turns around the room so that each child had an opportunity to read aloud. Here the focus of the activity was on the correct pronunciation of the words and the appropriate oral expression as the children read their sections. Mrs. Williams readily provided the children with the pronunciation of the words they did not know (such as "historiscope," "projector," "decorated," "easel," or "lighting"), commenting later in an interview that she wanted them to understand the story, not have to stop and figure out the words. She said, "Since they were reading aloud like that I just . . . tried to keep 'em going with it." She also stopped and encouraged the students who read parts of a story containing dialogue, to read with expression. One time, for example, she tried to encourage Paul by saying, "Let's put a little umph into the way we read. You know what I mean by that? Make it just really interesting and try to take on the character."

As they read, Mrs. Williams also asked the children questions related to the story (such as where Martians were from, what outer space was, or what a historian was) that focused on the meaning conveyed by the text. As the children read through the story she regularly stopped and elaborated obscure terms or confusing uses of vocabulary words (such as when she explained what a space probe was,
or what insignificant meant, or the double-play on the meaning of noodle in the name of the character "Apprentice Noodle," or what public domain meant).

At least two tasks, then, were represented in these activities. The children were expected to recall from memory the words they encountered in the text so that they might pronounce them correctly as they read aloud. They were also, based on the instructional cues provided by Mrs. Williams, expected to understand the text, a comprehension task.

Answering questions. Mrs. Williams used questioning activities extensively in her classroom. Often she would ask students to identify and then report information that was displayed for them in the text, on the overhead, or on the chalkboard. For example, having told the students to look at a sample subject card in their text, she then asked, "What's the subject on this card?" She even provided the students with the clue that the subject was written in a different kind of type. The students had to examine the subject card in the text open on their desks, locate the subject, and report that it was "Braille System." At other times she asked what the name of a chapter was or what the topics were that were listed in the text. In these instances, the students had to locate, recognize, and report the correct information.
She also asked questions which required recall of information that the students had previously encountered in a class discussion or that she assumed they knew. She asked once, for example, what the term "miscellaneous" meant. The word was written on a page in their text, but there was no clear definition of it on the page. Other times she asked what would be found in a glossary, or what a pamphlet was, or what century we are now living in. Once she asked what an apprentice was, suggesting that they had "heard the word before," and reminding them that they had learned about apprentices last year in social studies.

Mrs. Williams would frequently ask one question, follow it up with another related question to the same student, and, perhaps, even with another. This indicated an instructional attempt on her part to clarify the students' understanding of the material and to generate a new understanding of a concept. For instance, having read a short paragraph in the text about a boy getting ready to go on a camping trip, Mrs. Williams directed the children's attention to a list of items in the text that represented things the boy might take with him. She asked the children a series of questions about the list. The structure of this line of questioning signaled her attempt
to elicit the students' understanding of topical organization as well as topics and subtopics.

The particular questions the students needed to answer, however, did not require the generation of new information. She asked one child to read the list aloud. She asked another child what the boy had done in creating the list. Then she asked another if the boy had topics on his list and asked what those topics were. And finally she asked what the items listed under the main topics were called. The focus on reproducing information from the text or information that the children already knew was made explicit by Mrs. Williams when Howard could not answer the final question she posed, "What do you call the things you put under each one of these main topics?" Mrs. Williams tried prompting his memory by association, asking, "Where does a submarine go?" and when he said "under water," she said, "Under. So what do you call those topics underneath?" When Howard did not respond she asked, "Don't you remember?" Another child finally provided the correct answer, "subtopics," and Mrs. Williams asked Howard, "Now do you remember?" When he nodded she said, "Good!"

The activities of answering the teacher's questions, then, represented two principal types of tasks: procedural and memory. Though the teacher's intent may have been to
create comprehension tasks, the products generated by most of her questions required only that the students follow step-by-step procedures to produce an answer or recall from memory rote reports of information already stored there.

**Listening.** Students were asked to listen to explanations or instructions offered by the teacher, to answers provided by other students, and to readings from the text. This listening required the students' attention, a basic cognitive process (Winne, 1985), and inherent to the listening activity is the task of comprehension or understanding. The teacher assumed that the children not actively answering or reading were listening, that their listening was directed to the goal of understanding the content of the discussion and that they were assimilating or accommodating new information or activating prior information.

**Correcting assignments in class.** All of the workbook assignments were corrected by the children in class. Mrs. Williams had the children take turns reading aloud the questions and the answers they had written on their papers. Children marked their own papers, counting at the end the number incorrect and reporting that to the teacher.
There were other times when the children were required to read aloud their responses to written work, but that work was not corrected by them. Mrs. Williams went over the Periodic Test with the students in class though she had corrected the tests earlier herself. In this instance she rotated turns around the classroom, reading the questions and asking the students to provide the correct answer. For the writing skills questions at the end of the "The Book That Saved the Earth," Mrs. Williams asked each student to read aloud the answer he or she had written. They did not correct those answers or grade them, but turned them in to the teacher to be graded later.

During class correction, Mrs. Williams typically read the question, called on a student to provide the answer and then proceeded to the next question. Often she rotated around the room so that the children all received an opportunity to answer. If a child was not able to answer the question correctly, Mrs. Williams repeated the question for another child. She would clarify or elaborate on the question only after a correct answer had finally been provided.

An example illustrates this. The teacher read the question from the workbook page aloud to the class, "Can a sponge be used to wash a car?" The directions had asked
that the students look at the sample index and identify
the page on which one would look to answer such a
question. Mrs. Williams called on David to read his
answer. David's answer was, "Yes." The teacher said,
"No, no, no. That's not the answer. The answer is . . .
what page?" David looked at the workbook page with the
sample index and said, "17." The teacher said,
"Noooooo." She called on another child who had a
different incorrect answer and then another who also had
it incorrect. She said "Nooooo," for each of them and
finally called on Andrea who provided the correct answer.
It was at that point that Mrs. Williams tried to clarify
the question. She asked why so many children had had a
problem and David volunteered his particular source of
confusion. "It says 'Sponge, bath' on page 17." "But,"
she commented, "that's a bath. To wash a car is 'uses.'"

The teacher expected the children to provide the
correct answer. If they were not able to, she expected
another child to do so. If she explained confusing or
ambiguous questions, she did so only after the correct
answer had been provided.

The tasks, then, in correcting written assignments in
class were essentially procedural. The students were
asked to read aloud the answer from their paper and to
mark those answers as either correct or incorrect. The
procedural aspect of this activity was emphasized by the teacher's expectation that the students would eventually produce the correct response, her cursory explanations of inaccurate reasoning, and her insistence that such explanations be provided only when the correct answer had been given.

**Seatwork Segment**

The other major instructional segment in Mrs. Williams' reading classroom was seatwork or assigned written work, sometimes referred to by Mrs. Williams as "homework." This activity segment consisted of written reading assignments, made by the teacher, to be done independently by the students. These assignments were given approximately three days a week. Thursdays were library days and the students were regularly not assigned homework on days they went to the library. The teacher felt that she could not expect fifth-grade students to complete homework assigned over the weekend, so independent seatwork was regularly not assigned on Friday either. The reading lessons on Mondays, Tuesdays, and Wednesdays often consisted of some recitation and then a written assignment to be completed independently. Students were given time during the reading period, and often during an afternoon work period, to complete their assignments. They were told to take unfinished work home,
but were not allowed to take workbooks home under any condition, and were sanctioned if they took a textbook home and failed to bring it back the next day. As a result, most students attempted to complete the reading assignments at school.

The accountability system in the classroom focused principally on the students' written work. Nearly all their written work was corrected, graded, and that grade counted toward their reading report card grade. Occasional assignments, such as making a list while listening to an audio taped story, were not graded. A few others, such as creative writing or drawing assignments, received grades in the grade book, but not on the papers.

The students had only a vague awareness of what it was that they were graded on and how those grades were arrived at. Each assignment was given one composite grade in Mrs. Williams' grade book. Thus eight workbook pages done as part of the same assignment would be given one grade. The children knew the number of errors they had made and the numerical grade that they received for the work they corrected in class. Some work corrected and graded by the teacher was returned to the children to take home. Certain papers deemed important were given back and the children were asked to take them home to have them signed by their parents and returned to the teacher. Work
that Mrs. Williams felt reflected a creative effort, writing and drawing activities, were often given grades in the grade book, but the grades were not put on the paper for the children to see. The focal children understood that all their written work was graded, but they were confused, somewhat as to whether class recitation activities were graded as well.

Seatwork included a variety of activities. Students were asked to read a story from the text; they were assigned both comprehension and skill application questions to answer at the end of a story; they were given workbook pages to complete; and they were given dittoed skill sheets to complete. The only other activity was a Periodic Test, part of the assessment aspect of the basal program, which was assigned as seatwork. It was treated both as a test and as a worksheet.

To understand the task environments created by the different activities it is necessary to discuss the activities as they were presented to the students. The written materials (the text, workbook pages, or worksheets) and the directions they contained framed the task environments for many of the reading activities. Mrs. Williams' modification of some of the assignments provided important instructional cues which modified those task environments for some students. Each activity within
the seatwork segment of the lesson will be discussed in detail.

Reading a story. The students were asked to read stories from the text as part of some seatwork assignments. All of the stories assigned, whether read aloud in class or silently during the seatwork segment of the lesson, were followed by "Understanding What You Read" questions, a global indication that the students were expected to have comprehended the story. Though the stories which the students read aloud in class were punctuated by teacher comments and questions which focused on helping the children understand the reading, the stories which were assigned to be read silently for homework received little comprehension emphasis by Mrs. Williams.

For "Shell Treasures," for example, Mrs. Williams did "preview" the story with the children by having them read the topical headings. And she did comment that shops at beach resorts often displayed crafts made of shells, similar to the crafts described in the story. She then, however, discussed the subheadings throughout the story in terms of which were topics and which would be considered subtopics. She told the children, "I want you to read the story this morning. Pay particular attention to the way it's organized." Her emphasis in this assignment was on
reading to be able to answer the skill questions at the end of the story, one of which asked the students to order a list of topics from the story. The introductory paragraph on the title page of that particular story also emphasized the organizational focus for the reading. It said, "As you read, notice how the author has organized the different topics in this selection. The headings will help you to understand this organization."

The silent reading assignments focused on the responses required to answer the questions at the end of the story. The tasks embodied within the silent reading activity varied, then, with the tasks embedded in the questions at the end of the reading. Most of the children read the stories, however, without a clear understanding of what the questions at the end were asking since the teacher's explanation of the questions, as she made the assignment, was typically brief and cursory. The task of silent reading, then, was defined by both the teacher and the text principally by the questions at the end of the story.

**Questions at the end of the story.** There were two types of questions at the end of the assigned readings: "Understanding What You Read" questions and "Applying the Skills Lesson" questions.
The "Understanding What You Read" questions asked for either factual recall of information presented in the text (such as, "What is a royalty?") or an inferential judgement based on the information presented in the text (such as, "What was unexpected and funny about the Martians' understanding of the Mother Goose rhymes?"). The factual questions, requiring a strict recall of information from the text, did not require that the student understand what was read in order to answer the question. Most of the "Understanding What You Read" questions asked at the end of a story were factual. This aspect was reinforced by the teacher's requirement that in order to have answered correctly, students needed to provide exact or very similar wording to that in the text.

A few of the "Understanding What You Read" questions required inferencing. They asked that students reading the material both understand what was read and synthesize or integrate textual information to create new understandings. The question at the end of "Starting Your Own Theater" which asked, "What does the author suggest you should do if you want to start your own theater?" provides an example. The answer requested by the teacher's manual and counted as correct by the teacher as she graded the work was: "The author suggests starting your own theater or becoming an apprentice at a
professional or community theater." One part of the two-part answer, "starting your own theater," was implied throughout the text, but never actually stated. The other part of the answer was explicitly stated in the text. For the students to respond correctly, they needed to have both understood what was written and the author's intent.

The teacher did not comment on the "Understanding What You Read" questions she assigned. She simply told the students to do them. Once she did interrupt a child who was reading aloud the story, "Starting Your Own Theater," to point out a part about play royalties. Mrs. Williams told the class to pay attention to what a royalty was because that was important. The children apparently did pay attention because all four of the focal children were able to turn immediately to the page and section to find where it had said what a royalty was when they went to answer that particular question. Other than that one occasion, Mrs. Williams never commented to the children about the comprehension questions. She did say to the researcher in an interview, however, that she thought the questions were "easy."

The "Applying the Skills Lesson" questions were different from the "Understanding What You Read" questions in that they required that the students apply their understanding of information presented in class to some
aspect of the text they had just read. Among the activities required by the skill questions were these: children were asked to locate the introductory and summary paragraphs in a story they had just read; they were told to look at the first paragraph of a story and to use it as the basis for outlining; and they were asked to demonstrate their understandings of the elements of humor in a story by writing a section of the story in a different way.

The ways in which the students needed to apply their understanding varied with the question posed. Some skills questions asked the students to demonstrate their understanding of the instructional content of the lesson in relation to the text they had just read. These questions asked students to understand what they had learned and to apply it to a new situation.

The teacher's presentation of skills questions varied. One time, for example, she presented two such questions as problem-solving activities. In this instance, she introduced the questions following the story "The Book That Saved The Earth" by asking the students to close their eyes and imagine what it was like for the Martians to land on Earth. She went back to the text and went over the examples used there in an attempt to help
the students see that the Martians' perceptions of things on earth would be very different.

Other skills questions asked the students to manipulate information from the text. The use of step-by-step routines necessary to achieve a correct response were emphasized by the teacher as she made the assignment. In one instance, the question in the text asked the students to create an outline of the story they had just read. Mrs. Williams told the children the title, showed them where they would find the main topics and suggested that they look back in the story to locate the subtopics.

There was one set of skills questions covered during the period of analysis which Mrs. Williams assigned without comment. One of these questions asked the students to identify and report the introductory and summary paragraphs in the selection they had just read. The other question asked the children to recognize the topics from the reading selection and to place those in the order they appeared in the story.

The questions at the end of the reading selections, then, consisted principally of procedural or comprehension tasks. Procedural tasks, by far the most frequent, ranged from simple matching tasks, locating in the text of the story a verbatim answer to a question, to considerably more complex tasks requiring multiple steps in processing.
an answer. Ordering the topics from a selection or creating an outline of the story were examples of two complex procedural tasks. The comprehension tasks, which occurred infrequently, required the student to understand the information in the text and to apply that information in some novel way. The procedural and comprehension elements of the activities were sometimes emphasized by the teacher's comments as she made the assignments.

**Workbook pages.** The workbook activities focused on skills which had been presented in the recitation segment of the lesson. These skills ranged from manipulating topical organization in order to create an outline, to using the library to locate materials.

Information on workbook pages was presented to the students in three ways: 1) through informational paragraphs relating to the instruction, 2) in the form of an example, and 3) in short articles about non-instructional topics. The workbook pages included informational paragraphs, such as what a cross-reference was, what a topic and sub-topic were, or what information was found on a fiction or non-fiction catalogue card. Information on the workbook pages was also presented in example form, such as a sample table of contents, a sample card catalogue, or a sample glossary. Information was also presented to students in the form of short articles.
For instance, for a series of workbook pages dealing with topical organization the students were asked to read short articles and then provide their understanding of the topical organization by filling in an outline about the article.

For all workbook pages the students were expected to read the informational paragraphs and to complete the related exercises. The formats for most workbook exercises were short answer, fill-in-the-blank, or multiple choice.

Many questions in the exercises asked students to look back at the sample presented (e.g., table of contents, index, glossary) and supply information found there as the answer. Questions such as "How many meanings are listed for 'aquatic'?" required that the student look at the sample glossary item.

*aquatic* [a kwat'ik] adj. 1. living or growing in or near water 2. performed on or in water

and report that there were two meanings listed.

The format for some matching questions, though requiring the same look and report response, were more difficult for the students. For example, on one workbook page the students were told to use the sample catalogue card from the preceding page to answer the questions. The students could not see the preceding page as they read
each question. They needed to turn the page to view the catalogue card they were to use. There were eight questions listed such as "Is the magician Henrietta in the book?" The card on the previous page listed under the "Contents" the names of eight magicians. Henrietta was not among them. The short-term memory requirements were demanding in this instance because the children needed to turn back to the preceding page to check the sample card and read all eight names while retaining Henrietta in memory. In spite of the increased difficulty of the procedure, such questions all required the student to recognize and report information from the text.

For other workbook activities, a match between the question and the information in the text was required, but the procedural aspect of these activities was more complex. For example, the Practice Exercise on one workbook page asked the students to, "Use the portion of the index on page 32 to find out on what pages you can expect to find the answers to the following questions." Two of the ten questions that followed were "What does a brittle star look like?" and "What are the eating habits of sea cucumbers?" The index entries for these questions were
Brittle star, 11
   description, 12-13
   habits, 14-15
   where found, 15

and

Sea cucumber, 9, 56
   description, 9
   habits, 9-10
   where found, 10

To answer these questions the student needed to find the key items, "Brittle star," or "Sea Cucumber" in the index, locate the topics that told what a brittle star looked like ("description, 12-13") or what a sea cucumber's eating habits were ("habits, 9-10") and report the corresponding page numbers. The activity required a match of information, but also appropriate procedural applications in order to correctly respond.

Some procedural-based activities were made even more complex by removing the matching element. In one example, the students were asked, "Where can sea wasps be found?" The index entry was a cross-reference which said, "Sea wasp. See jellyfish." The students had to look then at the entry for "jellyfish,"

   Jellyfish, 49
      description, 50-51
      where found, 53

and locate the pages where a jellyfish would be found. In order to answer the question of where sea wasps could be found, the students needed to report where jellyfish were found. The application of the appropriate procedure
ensured a correct response to the question, but in this instance there was no final match which might assist the student in locating the answer.

Some workbook questions required that the students remember information presented during class recitation or from previous presentations of the material (e.g., the textbook). The information necessary to answer the questions was not available on the workbook pages. For example, the children were asked in one exercise to select from among the parts of a book (introduction, glossary, index, bibliography, or table of contents) the parts which represented the phrases listed in the workbook. The phrases were, for example, statements such as "Gives the pronunciation of words," or "Lists major topics by chapters." Some of the answers could be found directly in the text of the informational paragraphs on the preceding workbook pages. Three of the answers, however,

a. glossary: is arranged alphabetically
b. introduction: is located at the beginning of the book
d. index: is usually located near the end of the book

were not stated directly on the workbook pages. Each had been discussed earlier in the day during the recitation part of the reading lesson. The location of the introduction and index had been explicitly talked about while the alphabetical arrangement of the glossary had
been implied by its comparison to a dictionary. Such questions expected that the students would recall information that had already been presented to them.

The teacher's explanations of the workbook pages reinforced the procedural aspects of most activities. She reminded students to look at one part of the page to answer questions on another part and she reminded them to be sure to read their instructions.

Her emphasis on the procedural aspect of the workbook assignments can be seen in her explanation to the students of how to answer the question. "What key word in the pronunciation key shows how to pronounce the vowel sound in the word 'carp?'" Under the sample glossary section was a box containing the following pronunciation key:

<table>
<thead>
<tr>
<th>Pronunciation Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>add, ëe, cáe, päe, pãe, end, ëual; ët, ëce; odd, øpe, ørder; ëëk, øëk; up, bãm; ë = ë in above, e in sicken.</td>
</tr>
<tr>
<td>i in possible, o in melon, u in circus; yë = u in fuse; ëll; ëost; check; ring; thin; ëis; zh in vision.</td>
</tr>
</tbody>
</table>

Mrs. Williams' explanation of how to solve this problem reduced it to a matching procedure. Rather than focusing on the nature or use of glossaries and pronunciation keys, she simplified the problem to recognizing typographical similarities.

Ok. Let's look at 'carp.' It's an 'a' and it has those two little dots over it, right? Now, go down in your pronunciation key on page 36 and find me a word that's written like that.
A child called out the word "palm" and Mrs. Williams said it was correct. Then she asked, "You understand? You know what the question was asking you?"

The tasks embedded within the workbook activities were either procedural or memory tasks. Through her explanations the classroom teacher emphasized the procedural aspects of the tasks, focusing student attention on those features. Though many tasks required simple procedural steps of matching or locating information in the text, some tasks were procedurally more complex requiring a number of steps in order to complete the task successfully. The memory tasks asked students to report information they had stored in long-term memory either from classroom recitation discussions or from information previously presented in the text. The emphasis was not on synthesis or integration, but rather on the rote reporting of such information.

Worksheets. The worksheets were, like the workbook pages, fill-in-the-blank, short answer, or multiple choice in format. As in the workbook pages, there were short articles to read and sample parts of books to use to complete the blanks. Unlike the workbook pages, there were no instructional paragraphs on the worksheets. The worksheets were either a test of knowledge previously acquired, as in the case of the Periodic Test, or
additional practice with the skills and concepts already presented, as with most of the Duplicating Masters.

Most worksheet questions asked the students to identify and reproduce information already present on the worksheet in order to answer a question. For instance, the student was given a sample table of contents on the Periodic Test and asked questions such as, "Which chapter is about Jamestown?" The student then needed to look at the contents, locate the chapter titled "Jamestown," and write the answer.

The worksheets had questions that were more complex. For example, the students were asked, "On what page does the chapter on Maryland end?" The sample table of contents they were to look at contained only the first page of the chapter. The students needed to apply the correct procedure in order to produce the answer. Mrs. Williams' explanation, in this instance, emphasized the procedural aspect of the question. She instructed the children to find the first page of the next chapter and to subtract one from that number.

The worksheets had some questions which required the students to remember information provided during the class recitation or from previous presentations of the material (e.g., the textbook). An example of a question which tapped such long-term memory sources was the worksheet
fill-in-the-blank question which followed a short article about snails and oysters. The question said, "The first paragraph is an ________ paragraph." The correct response was "introductory," a term discussed during recitation the day before but which did not appear anywhere on the worksheet itself.

The worksheet questions, then, were similar to the workbook in that they consisted primarily of procedural and memory tasks. They required that students apply procedural routines of varying complexity to information and they also required students to recall previously presented information in a rote form in order to successfully complete the tasks.

Elements of Ambiguity and Risk

The reading tasks in Mrs. Williams' classroom involved varying degrees of ambiguity and risk. The elements of ambiguity and risk influenced the students' perceptions of those tasks as they attempted to work through them. Table 10 outlines the classroom activity and task structures and the related dimensions of ambiguity and risk. Any classroom reading task requiring a response was considered to be a high-risk task. Those for which no overt response was necessary were considered to be low-risk tasks. Tasks which had clearly delineated
<table>
<thead>
<tr>
<th>Instructional Segments</th>
<th>Type of Tasks</th>
<th>Ambiguity</th>
<th>Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recitation Segment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Look Up Vocabulary Words</td>
<td>Procedural</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>Comprehension</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>Read Aloud from Text</td>
<td>Memory</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>Comprehension</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>Answer Teacher Questions</td>
<td>Procedural</td>
<td>Low/High</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>Memory</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Listen</td>
<td>Comprehension</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Read Answers Aloud</td>
<td>Procedural</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Mark Correct/Incorrect Responses</td>
<td>Procedural</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Report Number Incorrect</td>
<td>Procedural</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Seatwork Segment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Read Story</td>
<td>Varied with Questions</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Questions at End of Story</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;Understanding What You Read&quot;</td>
<td>Procedural</td>
<td>Low/High</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>Comprehension</td>
<td>Low/High</td>
<td>High</td>
</tr>
<tr>
<td>&quot;Applying the Skills Lesson&quot;</td>
<td>Procedural</td>
<td>Low/High</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>Comprehension</td>
<td>Low/High</td>
<td>High</td>
</tr>
<tr>
<td>Workbooks and Worksheets</td>
<td>Procedural</td>
<td>Low/High</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>Memory</td>
<td>Low/High</td>
<td>High</td>
</tr>
</tbody>
</table>
product goals or precisely delineated formulas for completion were considered low on the measure of ambiguity. Tasks which contained vague wording, imprecise referents, unspecified forms for a product, or required complex procedural manipulations were considered to be highly ambiguous. The following discussion elaborates those elements in the context of the reading classroom.

**Ambiguity**

The ambiguity in classroom recitation tasks varied. Most tasks were well defined by the teacher as the response expected was clear and precise. When she asked what a "subtopic" was or where a bibliography would be located in a book or for the response to a workbook item a child had written on his or her paper, Mrs. Williams was asking for clearly defined answers.

There were times, however, when Mrs. Williams would phrase a question in such a way that the student could not be sure what response was required. On these occasions she would give incomplete verbal directions on the assumption that the child knew what it was that should be done. For example, one time she told David to open his book to page 204 and to read. David asked how far he should read and Mrs. Williams replied, "Just read it out loud." He read until she stopped him. Another time she wrote vocabulary words on the board and told the children
to "get busy," assuming that the instructions were clear. In many cases the children's understanding of normal classroom routines allowed them to know what a seemingly ambiguous direction intended, but not always.

Once she asked Rena to "read for us first," and as Rena flipped through her workbook, Mrs. Williams specified, "Page 31." Rena asked, "At the top?" but Mrs. Williams did not hear her and did not respond. Rena began reading at the top of the page, read two paragraphs and then stopped as Mrs. Williams told the children to turn to the next page. Later in an interview, Rena said that she had been unsure of what to do.

I didn't know what to read because she just said 'Read.' And I just started reading. . . . The only thing I thought about was if I was reading the right thing or not . . . 'cause if I was reading the wrong thing, I would have been embarrassed.

When asked how she knew if she was reading the right part, she said, "'Cause Mrs. Williams didn't say anything."

The element of ambiguity in seatwork activities varied with the activity. Silent reading, factual comprehension questions, and simple procedural workbook and worksheet tasks were for the most part unambiguous. It was clear what was being asked, the form the response should take, and the procedures required to produce such a response. An example of an unambiguous question is the following: "In Part II there are ______ chapters."
Here the students needed to look at the sample table of contents, count the chapters listed under Part II, and write that number on the line. The question was precise and the response required was clearly specified. All workbook and worksheet activities were fill-in-the-blank, short answer, or multiple choice questions. Another example of an unambiguous question is:

A theater is ____________.
   a. a group of people who go to see plays
   b. a person who acts
   c. a place where people put on plays.

The formats for responding to such questions contributed to their clarity.

Some seatwork questions were, however, ambiguous and when they were, they were sometimes so for different reasons. The phrasing of some questions influenced their ambiguity. An example of an ambiguously phrased question followed the story "The Book That Saved The Earth." It asked: "What would you expect someone to do with a book? What unexpected events make the scene on pages 118-119 funny?" Here the student needed to determine who the "someone" was in the first question (was it an Earthling or a Martian?), which events on pages 118-119 were unexpected (it did not say in the story that some events were "unexpected") and, finally, what made these events "funny." The students needed to make the referents in the
question clear before they could begin to generate an answer.

In another case the referents were clear but the phrasing did not specify the form the answer should take. For example when the students were asked "Which chapter is about Jamestown?" the question was a simple procedural matching task, but the form for reporting the answer was unclear. Should the student give the chapter name, "Jamestown," or the chapter name, "Chapter 2"? Another example of a question that did not clearly specify the response necessary for completion was the "Applying The Skills Lesson" question which asked that the students find a paragraph in the story they had just read that introduced the selection and a paragraph that summarized the information presented in the selection. This question did not indicate to the students what they should do with the paragraphs once they had been located. Though infrequent, such questions were ambiguous in their phrasing.

Other questions were ambiguous because they required complex manipulations which confused the product goal of the task. Some tasks, for example, asked questions the students were not supposed to answer. Rather, the students were supposed to understand that their task was to locate places (e.g., in a text or a library or an
index) where the answers to these questions might be found. The response the student was expected to produce, therefore, was not the answer to the question itself, but the location of the answer. For example, the instructions to one exercise said,

What part of the book *Sea and Shore Life* would you look in first to find the answer to each of the following questions? Write table of contents, index, bibliography, glossary, or introduction on the line below each question.

These instructions were followed by questions such as, "Does the book have a chapter on snails?" The students' task was not to determine if the book had a chapter on snails, but to respond with the location in the book *Sea and Shore Life* where they would look to find out if it had such a chapter. The problem in this instance was compounded by the fact that the preceding six workbook pages had presented, as examples, parts of a book called *Sea and Shore Life*. There was a sample table of contents, a sample index, a section of a bibliography, and a paragraph from the introduction of this book. Thus a student could indeed examine the sample table of contents and discover that the book did not have a chapter on snails. A negative response by the student might indicate an understanding of where to look to locate the answer to such a question, but would be, of course, incorrect because the instructions indicated a different procedure
was necessary to report the answer. The instructions were explicit. They asked the student to write the book part below each question. The formulation of each question as a real question and the information provided on the previous pages the students had just completed, made the exercise potentially confusing and ambiguous.

Other questions were ambiguous because they were presented to students in such a way that made the formulation of the answer difficult for them to imagine. For example, the skills question following the story "Starting Your Own Theater," was complex and confusing.

It read:

Make an outline of the selection you have just read. Your outline should show three major topics. (Hint: See the skills note at the top of page 214.) The subtopics are the different jobs mentioned in the selection. Remember to give your outline a title that states the general topic of the selection.

The students were asked to do five things: 1) make an outline; 2) include three major topics in the outline; 3) look at something called a "skills note" on page 214; 3) include jobs mentioned in the selection as subtopics; and 5) give the outline an appropriate title. The skills note on page 214 to which the students were referred was not labeled as such. Page 214 was the title page of the story. It had a short paragraph in bold print and a single sentence in italics leading to the final four words which were capitalized and clearly represented the title.
of the story. All the writing was superimposed on a picture of children looking at a stage. The students needed to realize that the short paragraph was the "skills note" referred to in the instructions. This "skills note" said,

As you read, think about how you would outline this selection. Notice that it tells you about three groups of theater workers: people who give directions to others; people in charge of things used in a play; people who perform.

The product goal of this question was to make an outline of the story. The question itself provided hints designed to help the students create that outline, but the hints were confusing and the instructions, rather than clarifying the task, obscured it.

Thus, though many classroom tasks had clearly specified product goals, some did not. The formulation of some questions obscured the goals and the operations necessary to successfully complete such tasks.

Risk

The element of risk in Mrs. Williams' reading recitation class might have, at first, appeared to be low. She asked numerous questions, helped students pronounce words as they read aloud, shared the burden of answering across all the students, and none of the tasks in the recitation period were graded. In fact, though,
the risk level for answering the questions the teacher posed was extraordinarily high.

The reason for this lies in three important features of Mrs. Williams' classroom. First, the classroom was a public arena; second, the teacher gave the impression that recitation activities were graded; and third, the teacher expressed an intolerance for incorrect responses.

Mrs. William's classroom was orchestrated as a public event. A child who approached the teacher's desk to ask a question might very well find her answer given to the entire class. The teacher's explicit form of pupil correction was to garner the help of the other children in the class. "The only way they will change [their inappropriate behaviors] is if the other [children] make them change," she said. Errors as well as lapses in behavior were broadcast to the class. To respond to a question, to read aloud in class, to volunteer information—all responses were public and held up for public scrutiny.

Mrs. Williams indicated in an interview that the recitation activities were not graded. She had no entry in the grade book for such activities and explained that they were not a good measure of a child's knowledge. She did, however, suggest several times to children that they needed to "get busy" on their assignments or to take out
their library books and read, so that they would get a good daily reading grade. She used this comment when she needed to focus their attention on a task she wanted them to complete, as a source of motivation, and as a way to, as Doyle (1984) notes, elicit their cooperation so that the work of the classroom could continue. Such comments may have left the students unsure of the accountability of their responses and thus raised the risk level for some of the tasks they felt most unsure of. The students interviewed expressed some uncertainty about whether their recitation activities would be graded. When asked, they said they did not think so, but were not sure. Rena was the most unsure. She said, "We might get graded on what we did in class, on how well we paid attention or something." She went on to illustrate that she had taken Mrs. Williams' attempts to encourage cooperation in library reading seriously by saying, "'cause she grades us on how well we read our library books."

Mrs. Williams also frequently demonstrated an impatience with and intolerance for incorrect or tardy answers. Often she would tease children she felt would benefit from some encouragement to respond more quickly or to respond at all. She would say things such as, "I'm falling asleep [waiting for your answer]," or "Earth to Howard! Are you there?" For other children who gave
incorrect answers she would often respond with a.
"Noooooo! Anybody else want to guess?" Once she asked a
third question of a child who had just given two incorrect
answers. Mrs. Williams began her third question with the
comment, "Want to try to get three in a row?"

Her teasing gave way to frustration and anger when a
child seemed to her to deliberately respond
inappropriately. David, reading the answer he had written
on his paper to the question, "Why did the author write
this book?" said "because he felt like it." The workbook
item, though phrased as a question, was intended to be
answered by putting down the part of the book one would
look in to locate the answer. The correct response,
therefore, was "introduction." Mrs. Williams told David
that the answer he had given was wrong and commented to
the class that she did not approve of his behavior. The
sense was that children needed to respond quickly and
correctly during recitation or their attempts to answer
might be ridiculed or sanctioned.

The risk level was very high for the activity of
correcting work together in class. There were several
reasons for this. First, the activity had all the risk
elements of other recitation tasks: the answers students
provided were public, the teacher continued to expect and
accept only correct answers, and, in this case, the
students received grades on the accuracy of their written responses. One additional factor influenced the risk level for class correction. When the work had been corrected, the teacher called out the children's names and they reported aloud the number they had missed on the assignment. Mrs. Williams would give them, then, their numerical grade equivalent to write at the top of their paper and she would record the grade in her grade book.

Once when Mrs. Williams called on Samuel to report the number he had missed so she could tell him what grade to put on his paper, he objected to having his grade made public. Samuel's response reflected the element of risk he attached to the requirement that he announce the number he had gotten wrong. When Mrs. Williams called on Samuel, he said, "Eight," and she asked if that meant he had gotten eight wrong. Samuel acknowledged that he had and, not wanting Mrs. Williams to publicly announce his grade went on to say, "I know what it is. Don't say it out loud." Mrs. Williams said it anyway, "eighty-four." Samuel wrote it on his paper and said, "Thanks," with a sarcastic tone to his voice. Mrs. Williams, indicating that it should not matter that his grade was announced aloud, said, "Big deal!"

The risk level for all of the seatwork tasks was very high because the students were held accountable for all
seatwork which had been assigned. All seatwork was graded and seatwork activities were the sole basis for the students' reading report card grade. The teacher stressed regularly—in her instructions as she set the assignment, in her corrections in class, and in what she would accept as correct—that she expected accuracy on seatwork assignments. She reminded the children to read the instructions and the questions carefully so that they could give the correct answers to the questions. The public nature of the evaluation, the sole dependence on the seatwork for a reading grade, and the teacher's expectations for accurate responses made the completion of such work a high-risk activity.

Classroom reading tasks which required a response, then, were high risk for the students in the room. This suggests that when the students encountered ambiguous or problematic questions their responses would be tempered by the risk involved. Since all the children operated under the risk as a constant, there is no way to determine from this data how differently they might have reacted to similar tasks presented in another environment with a lower risk factor. However, it is important to take the risk factor of this classroom into account as the attempt is made to understand the ways in which the students in
this class defined and worked through classroom reading tasks.

Summary

This chapter described the environment of the classroom, the activities and tasks presented to the children within the reading program, and the levels of ambiguity and risk inherent in the classroom tasks the children were asked to complete. These descriptions constitute a response to the first research question which asked what tasks the students were asked to complete.

The task environments in Mrs. Williams' classroom were set by both the teacher and the textual materials. Each of these two sources provided information to students concerning the nature of the task, the product goal expected, the related strategies the students might use, and the resources available for completion.

The task as presented by the text. The basal text tended to present a narrow range of reading tasks for students. Most tasks were procedural in nature and many of those procedural tasks were one-step matching tasks. For such tasks students were asked to match information from a question with information in the text and report what they saw. On occasion the procedural tasks became
more complex, requiring that the student apply multiple steps in order to complete the task successfully.

Memory tasks, though less frequent than procedural, were also required of the students. Memory tasks were often poorly cued in that the students were not given any signal from the text that the task required information which would be stored in their long-term memory systems rather than information that was in the text.

There were few comprehension tasks required of the students during classroom reading instruction and the students in Mrs. Williams' class were not asked to complete any opinion tasks.

Some tasks were ambiguous and when they were, it was often the way in which the text phrased the questions which made them ambiguous. Ambiguous tasks obscured the operations necessary for completion by obscuring the product goal of the task. Instructions in the text, in an attempt to provide helpful suggestions, often created confusion for the students as they attempted to understand what the tasks were asking of them.

The task as presented by the teacher. The teacher in her presentation of the classroom reading activities, reinforced the procedural and memory aspects of the reading tasks presented in the text. For the most part, she modified and explained the tasks in the text by
emphasizing their procedural elements. She suggested to the students that the tasks they were to complete would be easy to understand and would tap information that the students already knew. She asserted that they would be able to complete the tasks with ease if they would read their instructions and questions carefully.

The risk level in the classroom was very high. This was due to three factors: 1) the class was orchestrated as a public event, making all responses available for public scrutiny; 2) the teacher expected correct responses, assuming that the students should be able to complete the tasks with relative ease and that their responses would be accurate; and 3) the teacher used teasing and ridicule as a way to solicit cooperation from the students. These factors operating together meant that in this classroom inaccurate responses or inappropriate behaviors were responded to publicly and students who did not conform ran the risk of public ridicule or sanction.
CHAPTER IV

Results: Case Studies of Focal Students

When children in Mrs. Williams' classroom worked to complete reading tasks, three elements came into play: 1) their definition of the task, 2) the strategies and resources they use to complete the task, and 3) the performance goals they set for themselves. It is the purpose of this chapter to illustrate each of these elements in the performance of the four focal students as they worked on a variety of reading tasks.

Task definition is the student's understanding of the cognitive requirements of the task. It is their problem space for the instructional task. Students defined the tasks they were asked to complete in a variety of ways. Their definitions sometimes coincided with the dimensions of the task as set by the teacher or the materials within the task environment, and sometimes they did not. In asking the children to look up words on the board, for example, the teacher might have intended her assignment to be a procedural task in which the students were to find in their books the words that matched those written on the chalkboard. Some children might have defined the task as the teacher did and proceeded to search for the words in
the glossary at the back of their books. Other students, however, might have construed the task differently. They might have perceived the focus of the task to be remembering the meaning of the words rather than looking the words up in the glossary.

Students' definitions of tasks include what they perceive to be the product goal of a task as well as the strategies and resources that they consider possible to complete that goal. In other words, students' task definitions are the students' understanding of what the task is asking them to do. How students define tasks and what they subsequently do as they work through tasks to completion, determines what they learn from those tasks. Understanding student definitions of school reading tasks is an important aspect in understanding what students learn from reading instruction in school.

It is possible, however, for students presented with the same task environment to differ in their understanding of what that task is asking them to do. In Mrs. Williams' class students did define and work through tasks differently. Table 11 identifies the range of tasks and student task definitions within Mrs. Williams' classroom for each of the reading activities.

The ways in which students define a problem or task has a direct impact on the strategies and resources they
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use to complete the task. Strategies and resources are the tools students use to complete the tasks. Winne (1985a) refers to tasks as "something the student must do" (p. 800). Strategies, then are what students do as they complete tasks and resources are what they use as they employ the various strategies. They may reread directions, for example, count lines, locate answers in the text, do what they judge to be the easiest part of the task first, or check over their answers. Table 12 lists the strategies used by the students in this class as they worked to complete reading tasks.

The strategies in Table 12 have been organized into four categories. Generic strategies are those strategies which students use as they work through tasks that essentially emanate from the students' own experiences or understandings. They are strategies such as predicting or creating associations or generating hypotheses which appear to be driven by the students innate sense of what is to be done. They are strategies that the students use to make sense of their world, to process information. Text-based strategies incorporate generic strategies to the extent that they are what the students use to make sense of the text. The text is the focus and, basically, the resource. Text-based strategies include locating answers in the text and rereading segments of text in
Table 12  
Strategies Used By Students in Working Through Reading Activities

**Generic Strategies**  
- attending  
- making predictions  
- evaluating  
- making associations  
  - associations which aid in the encoding of information  
  - associations which aid in the retrieval of information from LTM  
- generating hypotheses

**Text-Based Strategies**  
- locating answers in text  
- re-reading parts of text  
- re-reading questions  
- re-reading directions

**Procedural Strategies**  
- counting items or lines  
- checking off or crossing-out choices on list  
- completing the "easiest" items first  
- using each item on list once  
- counting paragraphs  
- recognizing a task audience

**Monitoring Strategies**  
- checking predictions with the text or peers  
- checking answers with peers or teacher  
- checking answers with text  
- evaluating the complexity of task or the text  
- justifying answers with the text  
- justifying answers with prior knowledge  
- asking for clarification  
- recognizing uncertainty
order to determine answers. Procedural strategies also incorporate generic strategies in that procedural strategies are ones in which the students use their knowledge of procedures to help determine the answers. Monitoring strategies, often referred to as metacognitive strategies, are those generic strategies which the students use to validate their answers as correct or appropriate, and to monitor their own learning.

Within all strategies children have a variety of resources available for their use. For instance, they may look to the teacher, the text, their fellow students, the researcher, as well as to their own prior knowledge and experience to help them complete the task. Which resources they select will be dependent on which strategies they employ.

All four focal students had a rich repertoire of resources and strategies from which to choose in the performance of any single task. That they selected different strategies and that they employed them with different degrees of aptness and facility contributed to their different levels of success in completing reading tasks.

The students brought more to reading tasks than their own definitions of the task and their own inventory of strategies and resources. They also brought the
Table 13

Focal Students' Purpose Goals During Classroom Reading

Tasks

- To complete the task
- To complete the task successfully
- To avoid participation in the task
- To avoid teacher sanction
- To appear to participate in the task
- To produce answers
purpose goals they set for themselves as readers in the classroom. Purpose goals are the reasons students set for doing an activity. The goals the four focal students in this study set for themselves ranged from that of successful task completion to the goal of task avoidance. A list of the goals set by the focal students in this study is contained in Table 13.

The interactions of task definitions, strategies, resources, and goals are complex. Understanding the impact of one on another is possible only by examining the students' performances within the environment of the classroom and in response to the demands of the particular reading tasks assigned. The following case studies of the four focal students demonstrate the complexity of those interactions as the students work through the reading tasks in Mrs. Williams' classroom.

Anne

Strategies and Resources

Anne was the most successful student of the four focal children. She regularly received high marks on her written work and had a record of above average grades in all the major subjects throughout her elementary years. The teacher described her as "successful," saying that she always had her work in and seemed to understand what she
was doing: "She's probably the best reader in the class as far as independent reading goes." Mrs. Williams recognized Anne's ability to complete tasks independently, but she was also critical of Anne. Once she said, "a lot of what [Anne] does is over-achieving, anyway." Another time she commented,

She likes to please. But she won't do one ounce more than I expect her to do, you know. Or if she thinks it's something I might like, you know, I say that I wished somebody would do this, and she'll rush to do it. But she won't do another ounce of anything.

Again later she said, "Anne is the best student, you know, just picking up her report card and looking at it. She is the best student. She's not the best thinker." Mrs. Williams expected Anne to be successful. Two different times in commenting on Anne's work, Mrs. Williams said, "I thought hers would be the best," or "she didn't do as well as I'd hoped."

Mrs. Williams was right about Anne being a good student. Anne worked hard and used powerful strategies to work through problems she encountered in reading tasks. Her choices of strategies and resources can best be seen by looking at what she did as she worked through the recitation and seatwork activities.

Recitation. Anne often did not raise her hand to volunteer during reading class. She was, however, regularly called on by the teacher and she was always
ready to answer. During the recitation period of the reading class, Anne related using several different strategies: she predicted information about content, she predicted information about procedures, and she attended to class discussions and instructions. While employing these strategies, she made use of a variety of informational resources in the classroom—the teacher, the text, and other students.

Anne predicted answers to questions that other children were called upon to answer. For instance, when the teacher asked other children to answer questions that were printed in the text, Anne would look at the question and attempt to answer it as well. During one lesson the children were asked to provide antonyms for a "Word Play" exercise in the text. Mrs. Williams read the words and called on children to give their antonyms and, in some cases, sentences using the word. Anne reported that when the other children were called on, "I was trying to figure it out for myself ... before they did it." She would go through the questions predicting the answers and then check those answers against what the other children said and the response of the teacher to their answers.

Given a list of vocabulary words, Anne would often predict what each word meant and then check her prediction against the definition given. Once she looked at the
vocabulary words on a sheet the teacher had handed out. She read one of the words and the corresponding definition aloud, but reported that for the rest she was, "trying to figure out what the word meant," while the other children read. She admitted, "Like, some of 'em I didn't know about." She gave examples of "hunchback" and "gypsy" as words that she had heard of but was not sure about. She said the definitions and the teacher's stories helped her to know what these words meant. For this strategy Anne relied on information presented in the text as well as information garnered from other students and the teacher.

Anne also predicted classroom procedures that might occur. For instance when she sensed that the teacher was bringing a recitation lesson to a close, Anne would take out a piece of notebook paper, write her name on it and be ready to accept and begin an assignment she anticipated the teacher was ready to give. She explained once that while the teacher was reading a story aloud from the text, "[I was] getting out my notebook 'cause I didn't know if she was gonna assign [something]." She laughed, acknowledging that as a good strategy because, "She did [make an assignment]." Anne anticipated which word from the vocabulary list would be the first one they needed to look up, would find it and often be the first one ready to volunteer the glossary definition. She had her own
paperback dictionary that she kept in her desk and which she used if a word could not be located in the glossary at the back of the text. Anne relied on the teacher's cues and on her own understanding of classroom procedures to help her negotiate and predict the classroom routine.

Occasionally Anne would misinterpret a procedural cue and would, as a result, give an inappropriate response. Once Mrs. Williams, responding to a story from a student about snails he had seen on the side of his house, noted that "spiral" was one of the vocabulary words they were going to be learning about that day. "Snail shells are like that," Mrs. Williams commented as she wrote the vocabulary words on the chalkboard. She said that the story that day was about shells and that "spiral" was one of the words she wanted them to look up. When she wrote the list of words on the board she put them into two columns:

| descriptive | spiral |
| crescent    | ridged |
| draw        | hinge  |
| drift       | coral  |

Before she had finished writing the list, Anne had looked up the word "descriptive," and had her hand raised. Mrs. Williams called on her first, but when Anne offered the definition of the word "descriptive," Mrs. Williams said that she wanted "spiral," and asked who had that. This is
an example of Anne using her understanding of a typical procedure in the class, addressing the top word in the left-hand column first, as the essence of her prediction. In this instance, however, the teacher had given a verbal indication of which word she was interested in first. Anne attended to one cue and missed the other.

This situation was unusual for Anne because she was usually very attentive to the teacher's cues. Anne listened to and actively processed information provided to the class as a whole within the recitation system. She reported listening to what the teacher said in class and to the verbal exchanges between the teacher and the other children. She changed her responses to questions based on information the teacher provided and she reported using information from the teacher to clear up misunderstandings she had about ways in which words were pronounced and the meanings of some of the vocabulary words. She listened to the teacher's explanations of the material in the text and attempted to incorporate that into her understanding of the text, even if the teacher's was confusing.

Anne was the only student who attempted to use the convoluted explanation the teacher had provided to make sense of a play the students read aloud in class. Mrs. Williams attempted to explain the time frame of the play to the children, but her explanation was confused. The
play was set in the twenty-sixth century in a museum. The museum historian was relating a story about a Martian invasion that had occurred in the late 1900's. Mrs. Williams tried to explain the situation to the children:

The time of the story is 1988 where they land, but it's in the twenty-sixth century. It's sort of like on Star Trek or any of those . . . you know how sometimes they flip back in time? . . . They live in the twenty-sixth century but they've been put back on Earth and it's 1988.

Later when asked about the story, Anne attempted to explain why she thought the story was "different" from others she had read, "Because like you don't usually read stories about people that come back into the different years like they skip years and like it's ten years between their life and stuff." In this situation, the influence of the teacher's explanation can be identified because it was erroneous and confusing. Anne attempted to use that explanation, however, to make sense of the text.

Besides relying on cues the teacher might give, Anne also relied on the text for information. She was observed and she reported following along while others read, using pictures to help her understand what was in the text, and reading or looking at the text when the teacher made a reference to it during the class discussion. Once in an interview she commented on the fact that even though she was only assigned one part to read aloud in the play they read in class, she read the other parts silently as well.
"I read along with the other people, too. Don't ask me why." She used the text as a basis for her answers to questions in class. One time Mrs. Williams had read a short article about art materials aloud from their text and then asked questions about the organization of that text. The rest of the class volunteered answers to the questions based on either what they remembered the article had said or what they had known previously about art materials. Anne, on the other hand, went back to the text and volunteered information from that source, using the exact vocabulary from the text, such as "curved surfaces" and "texture."

Her concern about losing her place showed how strongly she relied on the text. She mentioned losing her place several times as a problem she encountered during the class discussion period. When this occurred she used other students to assist her in locating where they were in the text. One time she said she found her place "right quick 'cause [I] think we were near turning a page. [Then] they just turned the page and I just turned the page and started off again." Another time she reported that she listened to what other students said and that helped her locate where they were.

She also used information from other students, as well as the teacher and the text, to clarify points being
made and to provide information about the task being performed. Frequently Mrs. Williams would call on students to answer and when they did not have the answer she wanted, she would repeat the question for another child to answer. Often after one or two failed attempts, the teacher would call on Anne. Anne’s answers were almost always correct. For instance, once Mrs. Williams asked the question, "Where did Robert McCloskey get the names for some of his characters?" One child said, "From his friends." Mrs. Williams repeated the question phrased a little differently, "Where'd he get the names for most of the characters?" She called on Anne who was able to respond, "Ancient men." Anne had the advantage of having heard an incorrect response and a subtle clue in the rewording of the question from the teacher that helped her answer correctly. Anne listened carefully and used such information to her advantage. Other children, called on after one or two incorrect responses, did not always use that information and so would repeat inappropriate responses that had already been given. For example, Mrs. Williams read the question, "Are bath sponges found in the Atlantic Ocean?" The children were to look in the sample index, locate "sponges, bath, 17" and then find the subtopic, "where found, 21." The correct answer was "21." Mrs. Williams called on Sarah who said, "17."
called on Samuel who said, "19 through 20." She called on Matthew who also gave an incorrect answer. She called, finally, on Anne who gave the correct answer, "page 21."

During the class correction part of the recitation Anne generally had her work out, pencils or pens, or both, poised and was ready to respond. She was called on in rotation and regularly was able to provide the correct answer.

The fact that she was so often able to provide the correct answer may be why Mrs. Williams called on Anne to supply answers when other children were unable to. Anne most often could. There were two reasons why she was able to answer correctly. First, as we shall see, she monitored the completion of her written work until she had answers she was satisfied with. As a result she was more apt to have a correct answer than some other child who had not used self-checking strategies. Second, if Anne did not have a correct response, by the time the teacher asked her the question, Anne then had other sources of information—she knew the answers the other children had given that were incorrect.

Anne changed some of her written answers during the class correction period. One time when she was asked in an interview about an answer that she appeared to have changed, she replied that she had changed it before the
teacher had given the correct answer. In another instance, however, Anne changed six of the eight incorrect answers on her paper and counted all six as correct. In this instance she changed only those that were the least obvious, such as making a "1" into a "12" or a "3" into an "8," adding a number onto a string of numbers, or erasing a letter that should not have been there from a string of letters. The answers she did not change were ones that might have been apparent if she had attempted to do so. Though she did not comment on these, the nature of the changes indicated a deliberate attempt to cheat.

The teacher, in fact, seemed aware that Anne occasionally changed some of her answers, but Mrs. Williams indicated that she was not particularly concerned about that fact. She commented,

I have seen her do that . . . to change an answer, but lots of times I think . . . she's not cheating; that's not what it is. She's making sure she has the right answer down and lots of times she'll go ahead and tell me that she corrected it on her paper but that she got it wrong. I think she's just being careful.

Seatwork. Anne used a variety of text-based strategies to help her answer seatwork questions. She predicted answers and checked them against the text. She predicted answers and checked them against the question or directions. She reread parts of the text to locate specific answers. She used procedural strategies
effectively to assist her in completing her seatwork. And she monitored her responses using strategies which helped her check to see if her answers were correct.

Anne frequently predicted an answer to a question posed in the workbook, text, or on worksheets. She would then check that answer against information in the text. She complained about some of the inferential questions at the end of the stories, questions where the answers were not explicitly stated in the text. She said she did not like the ones where "they never have the answers in there. I read it about fifty times and . . . still can't find the answer." For the factual questions, however, she regularly could find the answer. For instance, in answering the question "How can a shell-identification guidebook be useful?" about the story "Shell Treasures" she had just read, Anne commented that she thought she knew what the answer was and then, when she checked and found the answer in the text, she commented to herself, "Good!" Every time that Anne made a prediction she would try to check the answer with the text before writing it down.

When Anne went back to find information in the text, sometimes she just remembered where that information had been mentioned. One example of this occurred when she remembered that the teacher had told them to pay attention
to the word "royalty" because that was important information. Anne was able to go directly to the section on royalties and locate the answer. Other times she figured out where in the story information might logically occur, such as when she realized that suggestions the author would make about how to learn more about the theater would be made towards the end of the story.

Often Anne used key words to help her locate information in the story. She would identify a key word in the question and look for that in the text. When she found the key word she would then locate the answer to the question. For instance, she was asked, after having read the article "Stringed Instruments," to list the subtopics which had been mentioned under the more general topics of "Drawing a bow across the strings," "Plucking the strings," and "Hitting the strings." In each instance, Anne went back to the article and looked for the key words, "bow," "plucking," and "hitting." Another time she located the specific sports needed to fill in an outline by locating the more general topics of "Outdoor Sports" and "Indoor Sports" in the article.

Anne used other text-based strategies such as rereading segments of the text, rereading questions, and rereading directions to help her successfully complete reading seatwork tasks. If she could not locate an answer
in the text against which she could test a prediction, Anne would test her prediction against the question she was attempting to answer or against her understanding of the directions. Her strategies in such cases were sometimes quite complex and she employed them assiduously. Once, for example, on a worksheet, the children were asked to read a short article about shells, and then respond to a fill-in-the-blank question underneath the article. The question read: "The first paragraph is an ________ paragraph."

Information about introductory and summary paragraphs had been provided the day before during a class recitation period. Anne reread the question and then looked at the first paragraph of the article. It said, "There are many kinds of animals that live in shells. One such animal is the snail. Another is the oyster." She read the first two sentences aloud to herself and then went back and reread the question two more times. She looked back at the first sentence of the article and again reread the question. She posited the word "topic" as a possible answer to the question and again reread the first paragraph. Then she reread the fill-in-the-blank statement inserting the word "topic." She appeared to think that it did not fit and reread the question without the word.
At this point Anne looked at her textbook which had been closed on the table next to her. She had the textbook there in order to complete the second part of her reading assignment, to read the story "Starting Your Own Theater" and answer the questions following it. She opened the book to the questions at the end of the story she had not yet read. She read the first skills question.

Find a paragraph in the selection that introduces the topics that will be covered. Find a paragraph that summarizes or ties together all the topics.

Anne considered that the word "introduce" might be the word she needed for the worksheet fill-in-the-blank statement. She commented that the word that fit the blank needed "to start with a vowel. I can tell you that much because [it has] 'an' instead of 'a.' 'Introduces' starts with a vowel, see here." She reread the worksheet statement inserting the word "introduction," accepted that as her answer and wrote it on the blank.

Anne also used procedural based strategies to help her complete tasks. She would, for instance, count lines on a workbook page to determine how many responses were required. She would check off items from a list as she used them to fill in blanks on a worksheet. She even checked off items on a list in the textbook she was asked to put in order, erasing the checks when she was finished.
She used her knowledge of procedures to verify her answers, just as she sometimes used the text, question, or directions. Once she was asked to read a series of phrases, such as "a book of funny riddles," or "a book by Jamake Highwater." She was then asked to identify the type of catalogue card she would need to look at in order to locate such a book, selecting the author, subject, or title card and reporting that information using the letters A, S, or T. Finally she was instructed to locate the drawer in which such a card would be located and identify the drawer number from the picture of a sample card catalogue file. Anne began to correctly identify the type of card, but used the first letter of the type of card, such as author, subject, or title, as the letter of the drawer she would look in. This meant that there were only three choices that were possible from a picture that had twelve drawers. Anne completed three of these items and then realized that procedurally the question was probably more complex. She paused and commented, "[It's] looking like there's something wrong." She went on to say, "Oh, I was looking at the S, at the S or the A or something like that. Oh, boy!" She realized what she had done and went back and fixed it.

If she was unsure of a procedural format because it was new or unfamiliar, she would become anxious and unsure
of her answer. She expressed this uncertainty when working through some seatwork tasks during the protocol collection. When working in the classroom, however, she would ask the teacher to clarify a procedure that was new to her or that she did not entirely understand and other times she would use other children in the class as a resource to help her understand the procedures. Once, for example, she reported asking Mrs. Williams how to do a workbook exercise that was procedurally very confusing. On another occasion she reported that she was confused by a procedure but did not have to ask; she said that she overheard other children asking the teacher about the problem and she listened to what the teacher had told them.

Anne used the other children in the classroom to help her clarify any uncertainties she had about what to do and to provide a check on the answers she finally generated. She watched the other children in the class if she had a question about what to do. For instance, when she was unsure if she was to read two stories or one during the seatwork period, she watched the other children and when they closed their books quickly, she knew that she only needed to read one. She also did not hesitate to ask the other children if she was not sure what to do. She reported asking how to spell a word or if they were
supposed to write about just one or both nursery rhymes. Mostly she relied on information from Andrea and Deidre. Her requests for help were done inconspicuously, but she reported them readily and unselfconsciously.

Most importantly, perhaps, Anne used other children as a check on the work she did. She would check her answers with Andrea or Deidre to see if they had all put the same information down. If there were discrepancies, they would explain what they had written and why and then modify their answers to reflect this new understanding. Anne explained this saying, "It makes me feel . . . I can't think of the right, uh, well, it makes you like, if you [do] have something that she doesn't have, like you could help [her] with that and she could help you with . . . like she helped me yesterday and I helped her today."

Anne remembered Mrs. Williams' explanations given during recitation as she worked to complete her seatwork assignments. Anne listened to the teacher in class and attempted later to use the information she provided. For instance, on the Periodic Test two related questions were: "If you want to know about Magellan's travels, which chapter should you read?" and "Which chapter is about Jamestown?" The children were to look in the sample Table of Contents and to find the answer to these questions. The chapters were listed as follows:
PART I Discovering the New World

1. Christopher Columbus 6
2. Magellan 17
3. Cortes 38

PART II The First Colonies

4. Jamestown 50
5. Plymouth 64
6. Maryland 88
7. Salem 124
8. Rhode Island 148
9. New Haven 162

Anne selected "Magellan." as her answer to question number four and "Jamestown," as her answer to number six. She did not hesitate in producing an answer for question four. In answering question six, she briefly considered "page 50," but reread the question and, instead, put down the name of the chapter. The question was ambiguous. It was not clear from the phrasing if she should have given the chapter name or the chapter number. Anne's unhesitating response, however, can be traced to an earlier class discussion about similar questions.

During class, Mrs. Williams asked the children several questions about a sample table of contents in the textbook. She called on Anne to answer the question, "In which chapter would you look to find what an atom is?" The sample Contents page had that chapter listed as

1. The World of Atoms 9

Anne said, "Chapter one." The teacher then asked her for
the name of the chapter and Anne correctly replied, "The World of Atoms." Mrs. Williams did not explain why she asked the second question. Mrs. Williams was, perhaps, asking the second question to focus the attention of some of the other children in the room on the text or to elicit more information about the table of contents. But she did not tell Anne that, so Anne had no way of knowing which answer was correct. Anne may have assumed that the second answer, the name of the chapter, was what the teacher wanted in the first place as an answer to the question.

This misinformation was not cleared up by subsequent questions to other children in the classroom. Luke was asked, "Which chapter would you look in to find what plants do not carry seeds?" The chapter was written as:

11. Plants Without Seeds 133

Luke replied, "Number eleven. Plants Without Seeds. And page 133." Mrs. Williams commented that all it asked for in the question was "which chapter, but that [additional information] was OK." Having noted that Luke had given too much information, she failed to specify which information it was that she wanted. Nor was the situation clarified moments later when the teacher read aloud another question from the text and called on Anne. The question said, "Suppose you wanted to learn about adding equations. What pages would give you this information?"
Anne looked at the sample Index in the text book under the topic "equations:"

Equations
  addition, 2-3, 25-27, 165-167
  with missing addends, solving, 25, 165
  with missing factors, solving, 89-91

and gave "addition," as her answer. Mrs. Williams asked Anne, "What does it say?" Anne looked at her book, but did not reply. Mrs. Williams then said, "What pages?" Anne said, "Oh!" Mrs. Williams cautioned, "You have to be very careful," focusing Anne's attention on the precise wording of the question. In the case of some ambiguous worksheet questions, however, attention to the precise wording was not helpful for Anne. The questions asking for "which chapters" were not precise and the teacher's explanations did not clarify the response required.

Anne used evaluation regularly as she worked through seatwork assignments. She commented on items or pages she had just completed as "simple," or "easy," or "easy enough." She noted when going through an assignment that had been explained in class, but which she had not yet done that the pages would be "simple" or, maybe, "a little bit harder." She commented on the text or the pictures in the text, tying them to her own experiences (such as going to the beach) and laughing at parts she thought were funny or obvious.
Purpose Goals

For Anne reading tasks were to be done and done correctly. Anne stressed repeatedly that it was important for her to finish her seatwork. She became anxious when the work of data collection took any of her afternoon work period. She once explained, "I'm still swamped with work. . . . We can't take our workbook pages home . . . and I'm still three pages away from [finishing] it." Anne never turned in incomplete work. She did what she needed to do to get it done. Task completion appeared to be a very salient goal for Anne.

As well as having her work complete, Anne also wanted to have it correct. Successful task completion was important to Anne. She used very powerful strategies to accomplish this goal: monitoring her understanding of the task, verifying her answers with multiple sources, predicting and checking. She also, on occasion, changed answers on her completed work, giving herself credit for those changes, in an attempt to produce correct responses.

Task Definition

Anne's ways of dealing with reading activities, isolating the tasks involved and working through them to completion provide a measure of the active nature of her processing in the classroom. She was flexible in her use of strategies, able to accommodate them to the varying
task requirements. She even redefined tasks, changing the focus of her strategies in order to work through the task more successfully. Though the problems that Anne encountered as she worked through reading tasks were identical to many that the other focal students encountered, Anne was able to define tasks with greater accuracy and, therefore, modify her strategies to accommodate the task.

Anne identified most recitation activities as simple procedural matching tasks and skillfully used text-based strategies of rereading, locating key terms, and following along in the text to be able to respond appropriately when such a question was asked. She also perceived some recitation activities, in part, as memory tasks. Her prediction strategies, attempting to figure out the answers before others and then verifying those answers with the information presented, indicated that she was using recall of previously acquired information to help her process the information presented.

Though Anne seldom volunteered in class, waiting instead to be called on, when she responded to questions she demonstrated that she had perceived most tasks accurately. She used strategies which helped her successfully complete procedural tasks, such as looking up glossary definitions or answers to teacher questions in
the text. And she recognized and occasionally contributed responses to memory tasks such as when she volunteered that another example of the word "ridged" was "ridged potato chips," or that pamphlets were distributed at visitor centers along major highways.

Anne correctly defined most seatwork tasks as memory or procedural. She assumed that many questions had answers provided directly in the text. She would at times, refer directly to the text for an answer, as when she responded to the question, "What is a sea shell?" at the end of the story "Shell Treasures." She looked back at the first page of the story, located the information, saying, "Here it is." She read the sentence explaining what a sea shell was and wrote that verbatim as her answer. If she predicted or posited an answer, she would always check the text to be sure it was correct.

Anne also correctly identified most procedural tasks as such and used procedural strategies to complete them. She was able to, for example, search an index and correctly locate page numbers for most items. She was even able to correctly perform, in most cases, complex procedural manipulations such as cross references in indexes and the use of the pronunciation key.

Anne used the procedural strategies suggested by Mrs. Williams for the "Applying the Skills" question following
the story "Starting Your Own Theater." It asked her to create an outline of the selection read. Though, at first, Anne was confused by the directions, saying, "Oh, foot!" an expression she used when particularly perplexed, she went back to the beginning of the story and the "skills note," used each topic suggested and filled in the subtopics by looking through the text.

For most comprehension tasks, Anne was able to correctly identify them as comprehension and use appropriate strategies to complete the tasks. For instance, when asked to write how the Martians might interpret the nursery rhyme "Snips and Snails and Puppydog Tails," Anne wrote a dialogue between two of the Martian characters which carried on the humorous tone of the original text.

Anne's response to ambiguous tasks was to use multiple resources in helping her understand what it was that she was being asked to do. She would, when faced with an ambiguous question, often define it as a procedural matching task, looking in the text to locate an answer based on that task expectation. She would also ask the teacher, go back to the text, check with other students, or reread the question or directions. She was diligent in solving problems she encountered, using monitoring strategies to determine for herself if the
answer she finally reached made the ambiguous question more plausible.

Occasionally Anne had difficulties with some ambiguous procedural questions which she failed to recognize as ambiguous. For example, she defined the last question, "What are the names of some other authors who write about sea life?" on a page of similar questions, as a procedural task. The instructions asked her to indicate, not the answer to the question, but what part of the text she would use to locate the answer. Though she had answered the other questions correctly, she answered this one by writing in the names of authors she had located in the sample bibliography on a previous workbook page. She put down, "Lynwood Smith, R.W. Minier." In this instance, the correct response was "bibliography," as the place to look to locate additional names of authors. Anne misinterpreted the task and though she illustrated that she knew how to use and understood the purpose of a bibliography, she put down an incorrect answer.

When she did recognize tasks as problematic, Anne was willing to redefine them in order to produce a plausible response. If she read a question and was not sure what it was asking of her, she might define it one way and attempt an answer. If that answer was not satisfactory, then she would redefine the task and try again. Once Anne
redefined a task as procedural in order to generate a response that fit within the constraints of the task. When she first encountered the question, "The first paragraph is an ______ paragraph," in the worksheet, Anne treated it as a memory task. She attempted to use the word "topic," but rejected that because it did not begin with a vowel. She then redefined it as a procedural matching task and searched the text until she found a word which began with a vowel and which seemed conceivable in terms of the sentence. She later explained that she had "tried everything" in order to locate an answer. When asked why she looked in the textbook she said, "because maybe they had some words . . . down here that I could pick from . . . I was just looking around for some words."

Anne added the memory element to many of the procedural seatwork tasks, much as she did during class recitation, by predicting a response before she searched the text for an answer. In these instances, she recalled a possible answer and then verified that answer by rereading the text.

Anne had the help of a small, but positive support group in the classroom. There were a few girls who together were able to share their work and their concerns. Anne's use of this support group, though not
overt, provided Anne with a powerful resource, especially in the high risk atmosphere of the classroom.

Anne's response to the risk level in the classroom was to do what was necessary to provide accurate and complete responses to reading tasks whether during recitation or seatwork. She was diligent and thorough, avoiding sanctions and ridicule by having the answer and having it right. When she did not have the correct answer, she would change her answers, if possible, so that it appeared that she did.

David

Strategies and Resources

Mrs. Williams referred to David as "moderately successful" in reading, admitting that though "he's probably one of the best readers I have in the room, orally and silently," she had reservations about him because "he doesn't always do his work." She said of David, "He's sharp," but she would not categorize him as a successful reader in school because of his work habits. She said, "David is very capable. . . . He's spastic about the way he does his work. He doesn't pay attention most of the time. . . . It's just, 'I'm gonna get this over with,' or else . . . it's not finished. One or the other. He just doesn't put his mind on it." In fourth
grade David's average reading grade for the year was a "C." He maintained "C's" or "C+'s" in fifth grade as well. Mrs. Williams commented, "He can do better than that." She was frustrated by David's inattention in class and his attitude about school work. She noted he "doesn't read his instructions," and "sometimes I wonder if it would do any good to go back and explain it because he very obviously [doesn't] try." She related an incident that had happened in social studies as an example of his behavior.

I graded all those social studies tests last night. . . I did not have one for David and I checked [the] attendance and he was here. So I asked him about it. It was in his book. He didn't bother to turn it in. It was finished except for the last question and I said, 'Do you want to finish this?' and he said, 'No.' So he got it wrong right away.

The source of Mrs. Williams' frustration can be observed in the ways in which David completed classroom reading tasks. The ways in which he defined the tasks, the strategies that he used and the goals that he set as he worked, illustrate David's borderline and reluctant participation in both recitation and seatwork activities.

Recitation. David did not readily participate in classroom recitation activities. He rarely raised his hand to volunteer and was often unprepared to answer when the teacher called on him. David said that he did not listen during recitation and reported thinking of other
things such as the music from the movie Halloween II or just "daydreaming." David's behaviors in the classroom during recitation reinforced his claim. He did things such as staring; tapping his desk, chair, or foot; making faces at no one in particular; putting his head down on his desk; and playing with things—shells, a ticket to the high school football game, his sweatshirt, his jacket, or his "action figures." He also read library books.

His responses, when called on to answer a question, illustrate David's inattention during recitation. Typically he would say, "Huh?" and look searchingly at his textbook to see where they were. Mrs. Williams would often be required to give him the page they were on and the item to look at so he could answer the question. For example, once Mrs. Williams asked David, "What is a summary?" They had been talking about catalogue cards in the library and David, though he had his book out and open, had not been listening. He quickly referred to his book and read a summary from the sample card in the text. When he was finished Mrs. Williams said, "Yes. Except we are on page 226." Someone snickered as David turned to the next page and read the summary off the sample card there.

During an interview David explained why he did not listen in class, saying, "I don't listen to [the teacher
asking other kids questions] . . . 'cause it might be private . . . I don't listen . . . It's none of my business." Though willing to admit his inattentiveness privately, he was not willing to admit it publicly. Once in class he was turned sideways in his desk and staring off at space. Mrs. Williams called his name softly and asked if he were listening, to which he responded, "Yes."

David used the text and his own prior knowledge as important sources of information in answering questions posed during recitation. When asked a question he always looked at the text or his paper to locate the answer. Using this strategy, his responses to questions were often correct, even when he had apparently not been attending and needed to be reminded where in the text they were. David recognized the help the text provided him in producing answers and commented in an interview that, "[the teacher] ask[s] her own questions. Her questions [aren't] from the book. . . . It makes it harder to understand the question . . . because [when you get questions in the book] you know what to do."

When the class recitation focused directly on some aspect of the written text, David tended to be more involved in the lesson. He volunteered some answers and was ready with a response when the teacher called on him. Once when Mrs. Williams went over a ditto sheet with the
class, David volunteered responses five times during that part of the lesson. During an earlier segment of that lesson David had not participated at all. Another time when the teacher was having children read topical headings aloud from the text, David put down his library book, followed along, and was ready when she asked him to read the last one.

David also used his own knowledge of the world as an important information source when he attended to class lessons. He volunteered that he thought Notre Dame was a town and said aloud the correct pronunciation of a Japanese name on a workbook page. When working with just the teacher in a make-up lesson the morning after he had been ill, David told her that "cobblestones" were "sort of like, it's got these little round stones on 'em." He also listened to her explanation about which words should be capitalized in the topics of an outline and then volunteered that an exception would be names, all of which would be capitalized.

David evaluated the text to some degree, commenting that a story was "funny" or laughing at pictures, but more often he evaluated the assignment made by Mrs. Williams. Once when she assigned a story to be read as seatwork he wanted to know the extent of the assignment, asking if there were questions to be answered at the end of the
story. Another time he commented, "Oh, no!" when Mrs. Williams wrote a lengthy workbook assignment on the board. Once he said in an interview that the definitions they had learned that day were "easy . . . I know what all those words mean."

David appeared, at times, to calculate the effect of his participation in class. He would, for instance, not look up any vocabulary words and then rush to get the last one before someone else did. At other times he would not appear to be paying attention but then when the teacher began to ask questions based on a part of the text, he would quickly ask Jason or Rena where they were. Once as the teacher asked a series of questions from the textbook, David did not appear to be paying attention, tapping his book and attempting to speak to Jason. Then, as Tess read the last question, David gasped, raised his hand, waved it in the air, and began hitting his head with his hand. Tess gave the correct answer to the question and David sank back in his seat.

David appeared to want to look like he was participating without actually doing so. An example of this can be seen one day as the class was asked to look up vocabulary words. David took out both his textbook and his library book, Dracula, and put them on his desk. He looked up the third word on the vocabulary list, "hinged,"
raised his hand before anyone else had the opportunity to look it up, was called on, and read the glossary definition aloud. Then he sat back, opened his library book, and began to read. Several vocabulary words later, Mrs. Williams called his name. David looked up and said, "Huh?" Mrs. Williams commented, "Sorry, I thought you had it," and went on to ask another child for the definition. David quickly looked up the next word and frantically waved his hand to volunteer. When she called on someone else he said, "Darn," settled down into his seat, and resumed reading Dracula.

When correcting work in class, David read the answers he had on his paper when he was called on, but he only raised his hand to volunteer answers when another child was incorrect and David thought he had the correct answer. There were occasions when the teacher called on him and he did not have an answer. When this happened, he told her he had not done those parts. Once this happened in class and he later showed the researcher his paper which then had the correct answer written for the question he had said he had not done. David told the researcher that he did not know why he had told the teacher he had not done it when the answer very obviously was there on his paper. He said he did not remember telling her that.
On other occasions, however, David changed the incorrect answers on his paper to make them appear correct and he marked answers correct that were actually incorrect. He was also observed writing answers provided during class to work he had not completed before hand. His changes and additions were often relatively obvious. He wrote over the top of answers, erased lightly, or simply tacked the correct answer on after an incorrect one. The teacher, in going over the corrected work later, did not notice these discrepancies, apparently focusing on the grade he had written on the top of the paper.

David's attempts to appear involved in the task, yet avoid such involvement, carried over to his written work as well.

**Seatwork.** David calculated his participation in seatwork tasks by not doing a task if he thought it was unnecessary. For example, once Mrs. Williams assigned a reading selection for the textbook. It was a biographical sketch about the author, Robert McCloskey. There were no comprehension questions at the end of the piece (David had asked), but Mrs. Williams explained that the purpose for reading the text was to prepare the children for reading a story that McCloskey had written which was to be their next reading assignment. David announced in the interview that he would not read the McCloskey article because
"We'll read it tomorrow [in class]." He said he would wait and read it then. Another time, on a workbook page, he began to read an informational paragraph about types of card catalogues, but then stopped. He looked down the page, read the directions, and answered the questions in the exercise. When asked later what had made him stop reading, David explained that at first he "thought those were the directions," but then he realized they "just had something about how you use the card catalogue and I already knew that. So it would just be a waste of time to read it." He said that he regularly just read the directions and not the information contained in the text. Another time he skipped an entire page in the workbook that contained information about outlines and a sample outline. He explained, "Ok. So it doesn't even matter. I don't have to write anything down here 'cause she just said to read it." He did not read it, but went on to the next set of questions. David focused his attention on those seatwork activities for which he was to provide a response.

When asked to respond during seatwork, David relied principally on his own memory resources to answer. Most often he did not refer back to the text to answer a question. His usual way of responding to questions was to read them and to write the answer from his memory of the
text or from his own understanding of the world. In one instance he wrote the answers to all three comprehension questions at the end of the story, "Shell Treasures," without looking back at the story. He explained that while answering the questions, "I was just thinking about the shells or what I read." Another time when answering the question "What are some of the jobs of the producer?" at the end of a story he commented, "Oh, boy!" He looked under the term "producer" in the glossary at the back of the book. Unable to find it there, he slammed the book closed, paused, reopened it, reread the question, and wrote his answer from memory. He explained, "[I] just thought up the answer."

During one assignment, David referred to the text to answer one question at the end of the story, but wrote the answers to the rest from memory. He explained why he had looked back in the story to answer the first comprehension question, saying, "I just couldn't remember [the answer, but] I remembered they said something about it." He noted, however, that he wrote the answers to the remaining comprehension questions from memory, saying, "These were easier to make up. I mean, its not fibs. ... I put down what they would do, what I would do, what he or I would do." He said most of the time he thought up the answers inside his head.
David used some rereading as a strategy to help him answer questions. Occasionally he would refer back to the text or locate specific information in an article or sample part of a book in order to answer a question. When asked once, for example, to put a list of topics in the order in which they occurred in the story, he went back to the story and reread the subtitle headings which were in bold print throughout the text before he put the topics in order.

More often, however, if he needed help answering a question, he reread the question and sometimes he reread the instructions. Since the questions he was asked in the exercises were often not designed to be answered, but rather were posed so that students would report where information necessary to answer the question might be located, he frequently needed to orient himself to the question and the instructions before he could answer correctly. One such occasion occurred in working through the Periodic Test. He was asked to,

Decide which part of a book you should use to find the information asked for in each of the following questions. Choose from bibliography, glossary, index, introduction, or table of contents. Write your answer on the line next to each question.

David read the question, "On what page does a chapter on freshwater fish begin?" He read the phrase "freshwater fish" again and then reread the entire question. He
paused, still uncertain what to do. At that point he went back and reread the list of possible choices in the directions. He said, "Oh!" and reread the question again. He was finally able to write his answer, "table of contents."

Another time he attempted to answer the question, "If you want to know about wars in Russia, what topic should you look up?" He looked at the entry for "Russia" in the sample index on the page. It said, "Russia. See Soviet Union." David said, "I don't understand." He reread the phrase, "Russia. See Soviet Union" eight times before he reread the question and noticed that it asked for the "topic." He realized then that the "Soviet Union" was the topic and that the question was not asking for a page number as the preceding questions had required. He wrote down, "Soviet Union."

David often reread parts of questions several times. He appeared to be orienting himself to the activity by doing this. One example occurred when he was working to complete a worksheet. Having read the short article about snails and oysters, David was asked to complete the fill-in-the-blank statement, "The first paragraph is an _______ paragraph." He reread the entire statement, reread twice the phrase "is an . . . ," looked back at the first paragraph, and reread the question again. At first
he skipped the question because he still did not know what
to put, but later he wrote "sea animals." In this case
his repeated rereadings did not and probably could not
have provided the cue for the correct response since the
answer, "introductory," was discussed the previous day
during recitation and was not mentioned at all on the
worksheet.

His understanding of procedures and his use of
procedural strategies sometimes helped David complete
reading tasks. He used procedural knowledge effectively--
counting chapters, crossing out words on a list as he used
them in a fill-in-the-blank exercise, counting lines in a
list to be filled in, and counting topics in order to
number his paper.

There were times, however, when he did not know what
to do procedurally. Once he read the directions for an
"On Your Own" exercise in the workbook,

Suppose you are looking for each of the
following books. Decide what kind of card
you would look for and write T for title,
A for author, or S for subject in the column
marked Kind of Card. Then, using the card
catalogue pictured on page 55, write the number
of the drawer in which you would find the card.

He said he did not know what he was supposed to write, "it
just says write the first letter for these words. Just
write two letters?" Though he was unsure, he finally put
down a letter and a number for each one. Another time he
read an "Applying the Skills" question which asked him to locate a paragraph that "introduces" and one that "summarizes" the topics in the article. He asked, "Do you have to write down each of the paragraphs?" Since the researcher would not help, he decided to skip it, commenting, "I don't understand that one. It's too hard."

Though he was able to use procedural strategies to help him answer questions, he displayed, on at least one occasion, a startling lack of awareness of the effect of his procedural strategy on the answer he produced. He was asked on a worksheet to cross out, from a list of topics, ones that had not been covered in the article at the top of the page. He was also asked to put the remaining topics in the order they appeared in the article. David crossed off, from memory, all of the topics that did not appear in the article. His list looked like this:

the oysters body
uses of oysters
where snails are found
how oysters move
where oysters are found
snails as food
the snail's body
how snails move
how pearls are formed.

He had correctly responded to the first part of the question. In working through the second part of the question, reordering the topics to represent the order they had appeared in the article, however, David decided
to cross out each topic on the list as he used it. When he was finished, his list looked like this:

- the oyster's body
- uses of oysters
- where snails are found
- how oysters move
- where oysters are found
- snails as food
- the snail's body
- how snails move
- how pearls are formed

David did not notice that his procedure had obscured the answer to the first part of the question. Mrs. Williams marked that part as incorrect, commenting, "David doesn't read his instructions." David had read his instructions. He appeared, however, to be dealing with each task independently, focusing on completion, and then moving on to the next task without seeing that or how they related.

When David encountered a problem while completing his seat work he either asked for help, copied his answer from the Answer Key, or quit.

During the protocol aspect of data collection, David regularly asked the researcher to verify that an answer was correct, how to spell or pronounce an unfamiliar word, or to clarify what the directions were asking him to do. The researcher declined to give assistance. Sometimes he pressed for help, saying, "I wish you could tell me ... Why aren't you telling me?" Once he finished a skills question at the end of the story which asked him to list
the topics in order. In working through the task he had made several changes. The researcher had noted those changes on her paper. When David was finished the researcher said, "Ok. Good. All right." David misinterpreted the "all right," and asked, "So it's right? Yes," he said, glancing at the researcher's notes, "there's the answer." When it was explained to him that those were notes representing his own answering process he asked, "Sure? Are you sure or is that the answer?"

David rarely said that he would ask the teacher for help if he was having difficulty and he only did so once during the period of analysis. It was done spontaneously, but did not prove to be helpful in generating a correct answer. In this instance he did not understand the directions to an "Applying the Skills" question. The instructions were complex, but essentially it asked him to make an outline of the story, "Starting Your Own Theater." He said, "I just don't understand the whole thing." Interrupted at that point, David returned to the room for the morning "Break." While there he asked Mrs. Williams how to do the question that he had been working on when the bell rang. He said later that Mrs. Williams told him he had to do something similar to what he had been asked to do on the worksheet (complete a fill-in-the-blank outline of an article about a musical production)
which was also part of the assignment. "She said you have
to do something like this," he reported, pointing to the
worksheet he had already completed. David then reread
the instructions for the skills question and copied the
outline from the worksheet. He explained, "She said
something about that . . . so I just copied that . . .
It's good enough."

David copied answers to seatwork questions when he
could. The workbook was set up so that most exercises had
the answers written at the back of the book in the Answer
Key. The directions for these exercises all ended with
the phrase, "Use the Answer Key to check your answers."
There were some exercises, "On Your Own," which did not
have the answers printed in the Answer Key. David once
said, "Oh, boy! I hate 'On Your Own.'" For the other
exercises, David used the Answer Key to check some of his
answers, but principally to copy from.

The first time he copied from the Answer Key during a
data collection session was at the end of the first page
of a workbook assignment. He read the directions for the
second page and the accompanying article on "Stringed
Instruments." He looked back at the Answer Key to check
his answers to the first exercise, noted that they were
all correct, and then commented, "And now to cheat."
Before he began to copy from the Answer Key, however, he
asked the researcher for help; asked if she would tell the teacher if he cheated; said he did not want her, the researcher, to think he was "bad;" and said he was not sure he could trust her. He then copied the answers to the next exercise. When he was finished, he commented again that he wished she had helped him.

He explained over the course of the study that the Answer Key helped him do it "quicker," helped him "see what [the answers] looked like," and that "[when] I can't understand, I just copy the answers." He said it was "easier to copy it . . . besides, I get an A+ and I get my work in."

There were occasions, in non-workbook questions, when David could not copy the answer, could not get help, and still did not know what to do. These were times when David quit. Once on an "Applying the Skills" question he had asked for help and then decided that it was too hard and he would skip it. Another time he did not write down the "clues" he heard as the class listened to the tape of The Hunchback of Notre Dame. David said that he had not heard the instructions in class and he had asked Jason, but Jason would not tell him what to do until the tape was over. David noted that Howard had not written anything either, but then admitted that he was concerned about not having it. "'Cause the teacher would start yelling at me
that I didn't have it. She'd say, 'Well, why didn't you write it down. I told you to write it down.' That's what she would do."

**Purpose Goals**

David set two goals for himself in reading class: to avoid active participation in the task and to avoid Mrs. Williams' sanctions. To that end the appearance of participation and the appearance of completion became salient goals for David as he encountered reading tasks.

David attempted to appear to be participating in class recitation by timing his voluntary responses to questions, having his book open so that he could refer to it when necessary, and by immediately raising his hand for any question following one to which he had given an incorrect response. During seatwork he also gave the appearance of participating, but he copied answers, figured some responses were "good enough," and did what was "quickest and easiest" in order to complete the task.

**Task Definition**

For David, then, reading tasks were a chore to be avoided. He participated at a minimal attentional level during class recitation and participated only in those seatwork activities for which he would be held accountable.
When he did participate in reading recitation activities, David viewed them as, principally, procedural matching tasks. He assumed that whenever he was called on, such responses as he was required to provide were available in the text and that once he was able to orient himself to that text, if he was attending to something else, he would be able to provide the correct answer. There were many such procedural tasks included as part of the recitation activities. He was, thus, often able to provide the correct response to questions once he had been directed to the appropriate page or item.

When the activity involved a memory task, particularly recall of information presented to the students earlier in the lesson or in a previous lesson, David was not as successful. Once, for example, David was playing with his "action figures" in his lap while the class was discussing almanacs—what they consist of, when they are published, and how helpful they were. Mrs. Williams called on David to answer the question, "If I wanted to find out what happened in 1986 . . . which almanac would I have to get?" David looked at his textbook to try to locate the answer, but since they had been talking about a topic not covered in the textbook, the answer to the question was not there. Mrs. Williams continued on, asking another child to answer the question.
When the class was reading aloud from the text, reading stories or instructional paragraphs, David did not follow along in the text. He did, though, report listening when others read. Once he was observed counting children and counting paragraphs so that he knew what it was he was going to read aloud as they rotated turns around the classroom. He appeared more concerned that he would be ready with what he would be called on to read, than in attending to the story as it was read.

Though David had a large fund of world knowledge from which to draw, he appeared, by his own admission, to be inattentive to the cues which would signal a memory task and therefore to be unable to respond regularly to such tasks. Since he calculated his limited participation in the classroom activity structure, his perception that most tasks were asking him to look and report from the text, allowed him, perhaps, to be maximally successful in those calculations.

For seatwork activities, David defined the tasks as either memory or procedural tasks. He defined the questions that were asked at the end of a story principally as memory tasks, responding by recalling his own experiences and rarely returning to the text to locate an answer. Often he responded sensibly to a question, but, based on the text he had just read, inaccurately.
One time, for example, he wrote an inaccurate answer to the question "When is the best time to collect shells at the beach? Why?" The text of the story said explicitly,  

While it is fun to look for shells at any time, it is best when the tides are at their highest and lowest. This happens when the moon is either crescent or full. High tides bring in more shells. Low tides show greater areas of beach.

David wrote, without referring to the text or apparently remembering what he had read, "Summer. because that is the usual [sic] place to go during the year." Other times he appeared to remember information from the text and his responses were, as a result, closer to the information presented in the text and more acceptable to the teacher. For example, when he was asked, "What is a sea shell?" he wrote that it was "a sea house that a small sea animal builds." The text said that a sea shell "is the house of a soft-bodied animal called a mollusk."

When working through workbook or worksheet assignments, David defined most questions as simple procedural matching tasks. He was successful in locating the correct answer in the text for most tasks that actually were procedural. For those workbook or worksheet tasks that were memory or complex procedural tasks, however, he was unable to define them appropriately and, as a result, found them problematic. The procedurally complex "cross reference" tasks such as "Russia. See
Soviet Union," or "Sea wasp. See Jellyfish." were examples of such problematic tasks for David. He defined these as simple matching tasks and used strategies that were not as appropriate for the more complex nature of the tasks. For instance, for the question, "If you want to know about wars in Russia, what topic should you look up?" David was able to successfully respond by defining this as a matching task, but only after struggling with it for quite a while. He read the phrase in the sample index at the top of the page, "Russia. See Soviet Union," eight times before he went back to look at the question. In rereading the question he noticed the term "topic" and wrote "Soviet Union" as a topic. Another example, where he was unable to generate the correct response, was the question "The first paragraph is an ______ paragraph." This was a memory task. To answer correctly David would have had to recall the term "introductory" from the lesson the previous day. He defined the task as procedural and kept looking back at the first paragraph of the article, finally settling on the term "sea animal" to describe the paragraph.

Since his first response as he worked through workbook activities was to treat a question as a simple matching task, he had a great deal of trouble with questions that were ambiguous. For instance, when he was
asked on a workbook page to identify what part of a book he would use to find the answer to some questions. David read the questions and attempted to answer them as they were stated. He assumed that it was a procedural task and that he was to locate the information in the previous workbook pages. So he responded, for example, to the question "On what page does the chapter on jellyfish begin?" with the answer "P. 49." This was the page listed for the Jellyfish chapter in the sample table of contents seven workbook pages earlier. The correct response was "table of contents," a book part listed in the directions.

In the case of ambiguous questions that looked like questions to be answered, but in fact were not, he occasionally defined them as memory tasks, recalling information from his prior experiences to answer the questions. For example, the question "Can a sponge be used to wash a car?" was not meant to be answered. The instructions indicated he was to locate the pages in the sample index where he might expect to find the answer. David read the question and wrote "Yes." For another question in that exercise, "Why did the author write this book?" David wrote, "because he felt like it."

In order to appear that he was participating, David often gave the answer that he first thought of, based on his initial definition of the task or, when possible,
wrote his answer from the Answer Key. He also frequently asked for help, relied somewhat on procedural strategies, or skipped it when a question was difficult.

Ambiguous directions gave David pause. He would immediately assert that he did not understand or did not know what to do and often he would not go back and reread such problematic instructions.

His response to the high risk level of all aspects of the classroom activity system was to participate as much as he needed to in order to make it appear that he was an active participant, but to actually participate as little as possible. He recognized the importance of producing correct responses and to that end, he added information to his written work, marked items correct that were incorrect, and copied answers in order to illustrate that he, too, could produce such answers.

Luke

Strategies and Resources

As a reading student, Luke was not very successful. He did not receive high grades on his work and his oral reading was not fluent. Mrs. Williams labeled Luke as "unsuccessful," saying, "He asks a lot of questions and he doesn't seem to know what to do most of the time." She described him as "a real puzzle," saying later that,
"Sometimes he does all right and then other times he just doesn't do anything right." She explained, "He doesn't always listen when you try to explain things to him. I think that's one of his biggest drawbacks." She went on to say, "but now Luke was in special reading before he was in here," a comment she repeated many more times during the course of the study as an explanation of some of the difficulties Luke had in completing the work successfully. She said, "I just think maybe he's been used to getting that one-to-one attention . . . somebody being right there every time he needs 'em."

Luke's definition of the tasks involved in the classroom reading activities highlight the difficulties he had in being successful in reading.

Recitation. Luke's behavior in recitation was inconsistent. Sometimes he would appear to be paying attention, volunteering information and answers to questions. Other times he would appear to be inattentive, playing with his shoes or staring off into space. When he was attentive, Luke used one prominent strategy to negotiate the demands of the recitation tasks. He related new information to what he already knew. This was a powerful strategy for Luke because he knew a considerable amount of information about many different things.
He knew a great deal about words, for instance, and he shared what he knew readily with the teacher and the class. He knew words like "gaudy," and "elaborate." He was able to relate the word "omega" to a television commercial he had seen about an "Omega Supreme!" He told the teacher that a "crusade" was like a cause, like the cause of preventing cruelty to animals. He acknowledged words he had not heard of before such as "iota," or "The Great and Mighty Think Tank," a character in the play they read. He predicted what they might mean, saying, for instance, that he had at first thought that "Think Tank" might be a computer, "a tank that thinks." He readily asked questions about words. He asked the teacher what "on the contrary" meant and what the name of that "castle" in Washington D.C. was that they had talked about in social studies. He knew what a "hyphen" was and what "inferior" meant. During one interview Luke acknowledged his interest in words, "I like to learn new words and I like to know words when I see them."

This knowledge about and interest in words evidenced itself especially during the vocabulary activities done during recitation. Luke was an active participant in this part of the lesson. He would listen to the answers the other children would give; he would wait impatiently for his turn to participate, "[hoping] to get to do one;" and
he would interject with a great deal of animation when he thought of an answer or information related to the words being discussed. He would call out answers and information. He told about seeing "flawed" or "damaged" items in outlet stores with his mother and about driving down a curvy road with his family in the "Blue Rridged Mountains."

Luke knew more than just words. He knew and connected information about the world around him to topics introduced in class. While the recitation part of the lesson was going on, he would listen and often demonstrate information about things that he had seen or done. When the teacher mentioned "microfiche," he told about how his daddy worked in a shop that reproduced blueprints on to microfilm. When she discussed "pamphlets" that might be found in the library he told about finding them at tourist places while he was on trips with his family. They encountered some dinosaur names as they corrected a workbook page in class and Luke told about being in Kindergarten and learning all about dinosaurs. He was also able to talk about "cue cards" that were used in the theater to prompt actors. He told about the "braille" menus at McDonald's. He remembered that they had learned about the Dewey Decimal System in the fourth grade and he knew that the "d" in a biographical sketch with a date

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after it meant that the person is dead. He contributed that the second most famous book in the English language is the dictionary.

His interest in classroom recitation activities was not consistent, though. He announced that he didn't like the part of the lesson where they just talked about books. "I didn't like that," he said. It was apparent when his interest waned. He would stare off into space, play with his shoes, button and unbutton his jacket, put stickers on his desk, erase pencil marks on the seat of his chair, or just put his head down on the desk.

He did, at times, appear to follow along in the text and was, with only one exception, ready to read from the text when the teacher asked him. He reported "looking at the pictures" in the book to help him figure out what it was talking about. He also listened to the teacher and was influenced by her instructional cues. He read his part in the play, "The Book That Saved The Earth," with a great deal of enthusiasm and remarked later that he remembered Mrs. Williams telling children the day before to read with expression.

Overall, his participation in the classroom recitation discussion was motivated and directed by what Luke knew about the world and words and his interest in sharing that information. He was enthusiastic and
energetic in his participation, but erratic in his attention. When the discussion moved away from words or relating stories, he became much less focused and participated less. He did attend to the text, for the most part, as it was highlighted by the lesson, but he seemed to focus on the pictures or where they were on the page rather than on the instructional cues provided by the teacher.

Luke's retrospective reports of problems he had when doing his work were vague. He explained corrected work, commenting, "I just put that down because I couldn't figure out . . . what it was," or "I can't remember that, how I did that." He said things such as, "couldn't find anything else . . . just needed an answer," or "I don't know why I did that" in response to questions about items he had gotten wrong.

When he got items wrong he did not think about why or compare the incorrect response with the correct response. He explained that an item was marked incorrect "because it was wrong." He said he simply "marks 'em wrong and [goes] on."

Once at the end of a class correction part of a lesson the teacher asked Luke how many he had missed. He said he had missed thirteen. She asked him if he had missed them or not done them. He replied that he had
missed them and she asked if he understood them now. He said yes. Later, in an interview session, however, he could not explain his errors nor could he demonstrate that he knew what the correct response should be. A similar instance occurred when he was asked in an interview if he had been unsure of anything while correcting his work that day in class. He replied, "Nope. I wasn't." But when asked how many he missed he said, "ten." And when asked to speculate why he had missed those he said, "I don't know."

Once during class correction Luke changed an incorrect answer and counted it as correct. He made other additions to the paper, but those were items from the workbook pages that he had neglected to include when writing his answers. His changes were all printed, rather than written in cursive as his answers had been. He did not indicate them as correct answers, but also did not count them as wrong. One time when he had skipped a question, he counted it as one mistake. He did not count the thirteen parts of the question as errors.

The overall view of Luke in class correction may have been misleading to the teacher. One day in class correction she called on Luke several times as she rotated turns around the room. Each time he had the correct response. He also volunteered several stories about
related information. Mrs. Williams must have thought Luke knew what he was doing and it must have been surprising for her then when she asked him how many he had missed and he said thirteen. He seemed smart and he volunteered a great deal of information in class, but he had considerable difficulty getting his written work done accurately.

Seatwork. In working through the questions posed by the text, workbook, and worksheets, Luke used five principal strategies: 1) he wrote the answer from memory, 2) he recalled information from the text or the teacher, 3) he used the text to look for the answer, 4) he asked for assistance, or 5) he quit.

For the questions posed by the text at the end of the stories, Luke alternated between writing the answer from memory and looking in the text. Whether he looked in the text or wrote what he remembered seemed to depend on how recently he had read the story. If he remembered the information from the text, he would write it down without looking back to see if he was correct. If, however, it had been some time since he had read the story, then he would look back in an attempt to find it. Each time he read the story in class and then later in the day had to answer questions about it, he would look back in the text to locate those answers. The one time he read the story
and then immediately answered the questions, he wrote from memory. In these instances, he recalled what had been covered in the story and his memory for that was relatively accurate. For instance, one question after the story "Shell Treasures" asked "What is a sea shell?" Luke wrote, "I'll say, a house ... for a soft-bodied ... animal." He did not look back at the text which had defined a sea shell as, "the house of a soft-bodied animal called a mollusk."

For most questions posed by the workbooks and worksheets he looked back at the text—the articles, the sample parts of books, or sample library cards. He said he "skimmed" the text. This strategy of examining the text for the answer to a question proved the most persistent and the most helpful for Luke in working through the seatwork tasks. He would read a question and then look at the text to locate an answer. For example, in answering the question "If you want to know when Franklin D. Roosevelt was elected president, what pages should you turn to?" Luke looked in the sample index, located Franklin Roosevelt and wrote the corresponding page numbers.

The strategy of looking back in the text was only helpful, and only used by Luke, when he understood what was being asked of him. When he did not understand what
the question was asking him to do or how to do it, he would not even attempt to go back and examine the text. When this occurred he sometimes reread the question or tried to remember what the directions or the teacher had said. Frequently he asked for help. And, occasionally, when he could not generate a solution to the problem, he quit.

Occasionally when Luke did not know what to do with a question he would reread the question or the instructions. This strategy was sometimes helpful. Once, for example, he was attempting to answer some workbook questions and was erroneously using the multiple choice items from the last question as answers to the previous questions. He completed the first four questions and then commented he did not think he was doing it right. He went back and read the directions twice, finally commenting to himself, "See. I knew it!" He was, at that point, able to complete the questions.

Sometimes rereading the question or instructions did not help him at all, as once when he was answering the "Applying the Skills" questions after having read the story "Shell Treasures." He read the question "Below is a list of the topics of some paragraphs covered in this selection. In what order did the topics appear?" Six topics were listed, a-f.
a. how to collect shells  
b. what shells are  
c. what you can make with shells  
d. how shells are named  
e. bivalves and univalves  
f. how to glue shells

Luke read the directions twice. Then he read the first two topics and said he thought it must want him to tell which topic was the most important or the order of their importance. He decided to put "lots of 'em down" as important, writing "a-f," and then wrote "important to unimportant," saying later that he was not sure which answer was correct so he put them both down.

More often, however, Luke did not go back to read the directions or the question when he encountered difficulties. Usually he relied on his memory of what he knew—either from having read the directions or from something he remembered Mrs. Williams saying during recitation. He, for example, attempted to answer the question, "If you want to know about wars in Russia, what topic should you look up?" by looking in the sample index and noting that there were no page numbers. He said "I'm just gonna put Soviet Union there, I guess." Later he explained that he had remembered that the question had asked for "what part would you look under." Another time when trying to figure out what he was supposed to do on a worksheet, where he was to complete the fill-in-the-blanks to create an outline of the article he had just read, he
acknowledged that he did not know what to do. He read the first topic of the outline twice and then asked for help. When the researcher said she would not be able to help him, he looked at it for a moment and said he knew what to do. Later he explained that he had just "looked at it hard," and "remembered what the teacher had said to do."

He was not always accurate in his memory of class discussions. Sometimes he behaved as if he had paid attention and remembered what had been said. Other times he did not appear to remember what had happened during class at all. Once he appeared to recall the confused implication Mrs. Williams had made about call letters during recitation. In talking with another child in the classroom, she had referred to call letters as "the call numbers, call letters, whatever you want to call 'em."

Then, a little later, she asked Luke what the "call letters" were for a sample catalogue card in the textbook. Luke said, "The call letters? J, F, and then LAW." The teacher accepted this response, continuing on to ask what "LAW" stood for. Luke appeared to have interpreted this acceptance as an indication that "call letters" were letters and that there was a difference between "call letters" and "call numbers," even though Mrs. Williams had indicated that there was no difference. Later when the workbook question asked for the "call
number of the book," Luke wrote only the numbers "793.8," not the letters.

Other times Luke did not remember class discussions even though he had been involved in them. An example of this occurred when he encountered the abbreviation "illus." on a workbook page. The teacher had asked Luke in class what "illustrated" meant and Luke had answered, "Drawings. Drawing or taken pictures of..." Later in class she asked "What does 'ill' mean? Is the book ill?" The children chorused, "No, it's illustrated." The teacher explained, "It's illustrated. That helps you too. If you're a person that likes a short book and you like one with pictures in it, that's your book." Luke commented in an aside, "That's mine!" Yet when working on the subsequent assignment, he came to the abbreviation "illus." in an article and wondered aloud what it meant.

Luke often asked for help when he did not understand what to do, how to pronounce a word, or what a question was asking of him. He was persistent in requesting help. He asked Mrs. Williams when he was in the classroom and he asked the researcher when he was working with her during data collection. He did not ask the other children for help, however.

During the protocol phase of data collection, he regularly asked the researcher for help. Once he could
not remember the pages for the assignment and said, plaintively, "Come on. Tell me. I know you know."

Another time he wondered if he had to do a particular page. "You don't do this, do ya?" he asked. When there was no response, he demanded, "Just tell me!" Once he asked for help with the word "identification," which he did not know. He said if he did not get help that he would get the answer wrong and then he threatened, "Gonna tell Mrs. Williams on you!" One time he even offered the researcher money if she would help, "I'll give you 15 cents."

Sometimes when help was not immediately forthcoming, he continued on to try to solve the problem himself. One time he was reading some directions aloud and did not know the word "article." He asked, but the researcher declined to offer assistance. Luke returned to the instructions, reread them from the beginning, figured out the word, and then went on to answer the questions. Another time he read the phrase "gluing the shells," as "gulling the shells." He acknowledged that that was not right and asked for help. When help was refused, he tried again and was able to figure it out.

Most often when help was not forthcoming, however, Luke would quit. For example, when he was trying to answer the comprehension question, "How can a shell-
identification guidebook be helpful?" he did not know the word, "identification." He asked first for help. Then he tried to sound it out, but still could not figure it out. He said, "I guess I'll have to skip it because I don't know that word." When asked what he would do if he were in the classroom, he replied that he would ask the teacher. Asked if he wanted to do so then, he replied, yes, and went upstairs to the classroom to ask Mrs. Williams. She was busy so he came back and said he thought he would, "skip it."

Another time he looked at a workbook page and said he did not remember what the teacher told him to do and insisted he "[didn't] know how to do this." He went on and read the directions to the next page, but said he didn't know how to do that either. He went upstairs to ask the teacher but she was busy. He came back and repeated that he did not know how to do it and that he would just tell her he did not know how. He wrote the page number on the paper and skipped lines "so I can have room when I figure out how to do it."

He frequently threatened to quit when he encountered difficulties working through tasks, though on occasion he then figured out what it was he was supposed to do. He said once, "I don't know that one. Can I just skip it? That's what I'd do." He finally remembered what to put,
but later explained, "I wanted to skip it because I didn't know it at first."

Luke had a sense that it was acceptable to not know some of the information and therefore not to be able to produce every answer. He did not want to leave too many questions unanswered, but it was all right to have a few that were too difficult for him. He often said that he would skip a question voicing an intent to "come back to 'em later." He admitted that if he didn't get back to them he would "just miss 'em . . . [I'd] get one wrong." He calculated the effect of skipping them though and explained, "Well, if I got a lot wrong, it'd bother me, but not just one. . . . It don't bother me."

Luke often wrote down an answer that he was not at all sure was correct. For instance, in trying to answer the question, "The first paragraph is an ____ paragraph," Luke said he "didn't know a word for a paragraph." He reread the question twice and considered the word, "information." He wrote it in the space on the line, but said, "Oh, boy!" as he wrote. Another time he was answering an "Applying the Skills" question which read:

Find a paragraph in the selection that introduces the topics that will be covered. Find a paragraph that summarizes or ties together all the topics.

He could not pronounce the words "introduces" and "summarizes" when he first read the question. He
commented, "Now, how's a fifth grader gonna read all these big words when they don't know how. They shouldn't of put the things in the book. Just use simple words." He went back and reread, but was still unsure of the words and of what to do. He thought that maybe he was to use the topics listed in number two, an unrelated question. He decided on "b." He indicated his uncertainty, however, by saying, "hope this is right, but you won't tell me." He often said as he wrote his answers, "I'll put . . ." or "I guess it's . . ." or "I'll try . . ." and he explained other answers by saying, "they just sounded good," or "I thought something up to do." One time he wrote down his answer to a question and was explicit about his uncertainty, "I put down 'subject.' I just don't understand it. . . . I might get it wrong. I don't know."

When Luke was unsure of what response was required by a question and the format did not clearly specify, he would typically give more than one answer to the question. When responding orally to questions Mrs. Williams asked he gave everything he could think of as the answer, as when the teacher asked him which chapter he would look in to find out about plants that do not carry seeds. Luke said, "Number 11. Plants Without Seeds. And page 133." Many seatwork questions were fill-in-the-blank type questions whose format precluded multiple answers.
For those questions which were both perplexing to Luke and whose formats allowed multiple responses, Luke did give more than one answer, perhaps, in the hope of including a correct one. On one question, for example, where he did not understand what he was supposed to do with the list of items following the question (he was supposed to select the items that appeared on the catalogue card at the top of the page) he put down "a-g, important to unimportant," because he wasn't sure if they wanted the order of the items or which ones were important, "I'll just put lots of 'em down. Can I?" For another question with multiple items to select from, he was unsure what to include and decided on "E and B. I'll put 'em both down."

Luke had some knowledge of procedures that he used to help him work through seatwork activities. He reported knowing what to do when they looked up vocabulary words because they had been doing it forever. He counted lines on the workbook page outline so that he would know how many subtopics he needed to write down. But he evidenced, at times, a startling misapplication of procedural strategies. Once when they were asked to fill-in-the-blank from a list and there were six items on the list and six blanks, Luke considered using some items more than once.
Another time he used a convoluted procedure in an attempt to figure out an answer. He was asked to examine a list of topics and cross out the ones that were not included in the short article he had just read. He was then to put the remaining topics in the order in which they appeared in the article. Luke crossed out those in the list he did not remember reading about (crossing out too many) and then he numbered the paragraphs in the article. Next to the remaining topics, he wrote the paragraph number in which he thought each topic had been discussed. There were too many paragraphs and too few topics for the lines. Luke was eventually able to identify the appropriate number of topics for the lines, but they were not in the correct order and he got them all wrong. Another time when attempting to figure out what to do in a workbook exercise, Luke read part of an article about "Popular Sports" and when he got to the bottom of the page and the article stopped abruptly in mid sentence, he did not turn the page to see if there was more to the article on the back side of the page.

Luke also did not seem to be aware of the need to produce answers in a form that a task audience (i.e. the teacher correcting the work) would understand. When working through the article on "Popular Sports," he did finally figure out what he was supposed to do, but only
after he had written several sentences on his paper which reflected his previous misunderstanding. He wrote the correct answers on his paper, but he did not go back and erase what he had written initially and now knew was wrong.

There are other indicators that Luke lacked an awareness that his work would be evaluated by others. For several workbook pages that asked him to fill-in-the-blank on an outline form, he wrote the answers down on his paper but failed to transfer the outline form, leaving out the letters or Roman numerals used to identify the parts as well as the topics and subtopics that had been provided. He wrote a list of the correct answers. He assumed that all that was needed was the answer and that the form did not matter. To Mrs. Williams, however, the answer was just part of the demonstration of his understanding. When Luke just wrote the answer, but did not put it in the correct form, she commented that,

He was supposed to put [page 48] in outline order and . . . he has the right answers, but he just has them kind of listed on the paper. . . . And then he really didn't do page 52 in an outline order. He has the things and has them down correctly, but he doesn't have 'em in an outline order. . . . He did the same thing for [page] 53. He doesn't understand outlining.

There was some information that Luke did not know or misinformation that he had which hindered his successful completion of the seatwork tasks. For example, he did
not understand which word to use as the key word in alphabetizing a book by its title. For *When Clay Sings* he used "C" for "Clay," and for *A Young Person's Guide to Ballet* he used "B" for "Ballet."

Sometimes he was able to generate a correct answer, but for the wrong reason, giving evidence of a lack of content knowledge. He said the card at the top of the page was the "author card," because "the author's name is on it," when in fact the author's name was on all three types of cards. He knew to use "Cu" or "Cl" as guides to identifying which came first in alphabetical order, "Beverly Cleary" or "Jane Curry." Then, however, he went on to explain that "B" also came before "J." He said that he could not use the middle names because that information was not given. In this case, he may have misunderstood the intent of the teacher who had said in class, "You always go to the last name and then if you have to you use the first name or even the middle name, sometimes, to put them in alphabetical order."

Luke approached reading as a comprehension task. He evaluated the text, commenting that "this was sorta stupid," or responding to a picture with, "Oh, neat!" He read the article on the worksheet about snails and oysters, interrupting his reading to tell about how oysters were made and how his grandfather had found one
once. And another time as he was reading the story "Shell Treasures," he stopped reading and turned back to look at the first picture in the story. It was a picture of several children on the beach, looking at shells they had found. When asked why he had stopped to look back at the picture, Luke explained, "See, it says you should wear sneakers or beach shoes 'cause you could cut your foot on a piece of broken shell or glass. [And it says to] wear hats and thin shirts." He had looked back to see if the children in the picture were wearing shoes, thin shirts, and hats.

Protocol collection required that the children read aloud while completing the assignment. This required the focal students to do something they would not otherwise have had to do. Luke had, in this situation, considerable difficulty pronouncing words. When he got to words he could not pronounce, if he thought the word was not important, he tried to sound it out, mumbling or hesitating, but he would continue on reading. "Cellar spider," "barracuda," and "clavichord," are all examples of words that were identifiable within the context of the sentence but difficult for Luke to pronounce. For words that he judged as important, however, words that were necessary to understand what a question was asking him to do, Luke would stop and try to figure them out. He would
attempt to sound such words out, ask the researcher, or go back to the room and ask the teacher. Words like "bureau," "article," "introduces," or "summarizes," are examples of words that he puzzled over.

In summary, Luke used the text and his memory of the text as principle strategies to work through answers to seatwork tasks until he encountered problems. For problematic tasks he would rely somewhat on the text, rereading questions or directions; he would ask for assistance; but his primary strategy when he was very unsure was to write down the first response he thought of or to skip it.

Goals

Luke's goal for classroom reading tasks was to produce answers—as many answers as possible. His strategies were designed to produce answers. He said as much once when he was asked why he had put down a particular response. He replied, "I don't know. I just needed an answer."

For Luke, the purpose of seatwork was to provide answers. When it was time to correct those answers, he did not notice the items he marked nor did he attend to the explanations which would have clarified his errors. The written work had been completed earlier. During class correction his job was to provide an answer when asked a
question and to volunteer information about a topic under discussion. If something on his paper was wrong, he marked it wrong and continued on.

Luke did not persevere or use strategies designed to produce correct answers. He also did not check his answers against any source. He wrote down answers that he was unsure of, saying, "I guess it's . . . " or "I'll try . . . " and at times he put down any answer in order to provide a response. He calculated the effect of incorrect answers, saying that if he did not miss a lot it was all right. What he needed, then, were answers on his paper.

Task Definition

For Luke, then, the focus of his attention in working through most reading tasks was to provide an answer. In some activity systems within the classroom he was successful in doing so, for others he was not.

During recitation Luke was, for the most part, able to appropriately define the tasks and to provide, therefore, many satisfactory responses. He defined recitation activities primarily as memory with some procedural tasks.

He was accurate in his perception that many recitation activities were memory tasks. This perception allowed him to actively participate when the classroom discussion focused on areas he knew something about. He
volunteered stories about things he had done and information about words they were discussing. He defined his active participation in the class discussion as requiring him to recall information and he did so enthusiastically.

He also understood the procedural matching tasks which were part of the recitation activity. He followed along, for the most part, in the text as the discussion proceeded and he was able to respond to the teacher's questions with answers from the text.

In defining recitation tasks as memory tasks, he failed to attend in many cases when the activity was listening and the task was one of comprehending. When the discussion focused on areas with which he was unfamiliar, his attention often lapsed. This left the possibility that he only partially understood some of the information presented in class.

Luke defined his seat work as primarily procedural tasks. He perceived the questions at the end of the stories as either memory or procedural tasks. He discriminated between questions he remembered well enough and questions he needed to look up because he could not recall the information. He answered, for example, the question "When is the best time to collect shells at the beach? Why?" The text's explanation said,
While it is fun to look for shells at any time, it is best when the tides are at their highest and lowest. This happens when the moon is either crescent or full. High tides bring in more shells. Low tides show greater areas of beach.

Immediately after he had finished reading the story, Luke wrote without looking back at the text, "When the moon is full and the tide comes in high." Though not complete, this was an accurate memory of the text. Another time Luke had read the story "Starting Your Own Theater" earlier in the day during class recitation. He answered the question "What are some of the jobs of the producer?" by turning back to the text and locating where the story had talked about the producer, not, in this case, relying on his memory of what the text had said.

Luke was also able, on occasion, to correctly identify comprehension tasks as such. One such occasion occurred when he was asked to write two short pieces extending and elaborating the story "The Book That Saved The Earth." Luke's answer to the questions showed he clearly understood the nature of the task. In fact, he had been so interested in the activity that he had answered both parts to each question even though he was only required to answer one.

Luke was inflexible in his perceptions of workbook and worksheet tasks, however. He defined most workbook or worksheet questions as simple procedural matching tasks.
He examined the text—the sample parts of books, the short articles, or the sample library information—and selected his answer.

When he encountered difficulties because he did not understand what the question or the instructions were asking him to do, he first tried to remember what the directions or the teacher had said about the task. If that failed, he defined the task as procedural and used strategies designed to help him locate an answer in the text.

He would inaccurately define a task as procedural even though it was not, essentially, that kind of a task. He would look for an answer in the text and when he found one he would write it on his paper even if he was not sure that the answer was correct or even if it did not make sense. For instance, when asked in an "Applying the Skills" question to find the paragraph that introduced and the paragraph that summarized the selection he had just read, Luke looked at the next skills question which was unrelated to the first. The second question provided a list of topics from the selection to be put in order. He said, "I guess they mean that, don't they, down there?" He read the list of topics and selected the one he thought best described the selection he had read, "That was the closest thing that told about the whole shell and stuff."
He later explained, "I wasn't sure . . . about the whole thing. . . . I didn't understand it. . . . I just decided that it meant down here, these a-b-c-d-e-f questions."

Luke defined workbook tasks as procedural matching even if they were procedurally much more complex. For instance, he located the index entry for "sea wasps" in answer to the question "Where can sea wasps be found?" He was to indicate on what page in the index he would look to locate the answer to the question. Sea wasps was cross referenced with jellyfish. Luke, however, located sea wasps, noticed the "where found, 10" directly above that entry and reported "10" as his answer. The "where found," in this instance, was a subtopic for another index entry, "sea cucumbers."

On another occasion, Luke attempted to respond to the "Applying the Skills" question which asked him to outline the story he had just read, "Starting Your Own Theater." He read the directions, looked back at page 214, and then copied down, in no apparent order, some of the different theater jobs listed in the story. He said later he had "thought up something to do." What he thought up was to find some terms in the text that he could write down for an answer.

Other times he correctly identified procedural matching tasks, but looked in the wrong place to locate
the information he sought. For example, one time he read
the workbook instructions for a practice exercise which
told him that, in order to answer the questions, he needed
to refer to the catalogue cards on the preceding page.
Luke began to read the questions, such as "What is the
title of the book by Walter Brown Gibson?" but rather
than looking at the preceding page, he looked at the last
question, located in the top right-hand corner of the page
he was on. The last question read:

Which of these items do you know the book
has from reading the catalogue cards?
Circle the letters of these items.
  a. a bibliography
  b. an index
  c. illustrations
  d. a chapter on Houdini and Hardeen
  e. instructions on how to do magic tricks

He read down the list and selected items from the list as
answers to the questions. He completed four questions
before he looked back at the directions and realized he
was to use the previous page to locate the information.

Luke's inability, for the most part, to see seatwork
tasks as other than simple procedural or at times, memory
tasks, meant that for most complex procedural tasks and
some comprehension tasks, he used procedural strategies
that led to inaccurate responses. Combined with his
willingness to put down responses, in spite of his
intuition that they might be incorrect, meant that Luke
had a greater likelihood of getting many answers wrong.
Those tasks whose instructions were ambiguous or unclear further complicated Luke's ability to respond successfully. When the directions were ambiguous Luke relied on the task to be procedural and he would look back in the text in an effort to produce an answer. For instance, he was to answer the inferential question "What are two things the author suggests you can do if you want to learn more about the theater?" This question was part comprehension task and part procedural matching. Luke defined this immediately as a procedural matching task, but used the wrong strategy. He searched the story, "Starting Your Own Theater," to locate where it had talked about the author. Luke was unable to find the key word "author" in the text. He finally wrote his answer from memory.

In another instance Luke was asked to identify the pages in the sample index where he would locate the answer to the question, "Where are sea cucumbers found?" The index entry for sea cucumbers was,

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Sea cucumbers, 9, 56
  description, 9
  habits, 9-10
  where found, 10.
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As a procedural task, Luke should have located "sea cucumbers," looked down the subtopics to "where found," and provided the correct answer as "10." Luke located the
index entry and listed every page in the entire entry where sea cucumbers might be found, "9, 56, 10."

His response to ambiguous questions was to attempt to first define them as procedural matching tasks and to locate some term in the text which would suffice as an answer, to put down multiple answers when possible, to insistently ask for help, and, when still puzzled, to quit.

Luke's response to the risk factor in the classroom was to ask repeatedly for help from an adult. He explained that if he did not know something he would ask Mrs. Williams for help and "she'll say, 'Is it important, Luke?' ... I'll say, 'Yeah.' She'll usually tell me 'cause she's nice." When he could not figure out an answer or her help was not available, he would just skip it and trust the generosity of her understanding, "[I'll] just tell her I couldn't do it."

Rena

Strategies and Resources

Mrs. Williams saw Rena as an unsuccessful student in the reading classroom. "I don't think she's paying attention like she should. ... She frequently doesn't have her work. And it's not always complete." Later she acknowledged, "Well, she's smart, too. She just ..."
overlooks whole assignments and whole parts of it." In thinking about Rena's erratic achievement, Mrs. Williams commented, "Some days she does just excellent work and the next day she'll fail something. . . . [I] can't quite get a handle on what's typical for her."

Rena's grades on her written work varied. She got a ninety-five, an "A," on the Periodic Test on Monday and the following Wednesday she got a sixty-eight, an "F," on some comprehension questions and a worksheet assignment. At other times she received a grade of "C" for a comprehension/skills question and worksheet assignment and a "C" for a series of workbook pages. On the last series of workbook pages, however, she only missed one item and got an "A." A close examination of Rena's strategies, the resources she used, and the purposes she set for herself in completing classroom tasks, will make clear the reasons for some of these grade discrepancies.

Recitation. Rena, though reticent and quiet, was an actively participated in class recitation periods. She attended to class discussions. She evaluated, predicted, and made associations—all active and powerful learning strategies.

Rena reported attending to class discussions and following along while others read parts of the text aloud. She was also observed looking up words in the
glossary and looking intently at her text while others read. She knew when, in the course of rotating around the room, it was her turn to read, without being told. Her regular attention to the text as an instructional cue was highlighted by her concern when she lost her place in the text. She reported listening to what other children or the teacher were talking about, looking at the other children's books open on their desks, or searching her book to find a reference, such as "page xvi," in order to locate herself if she got lost.

Rena evaluated the text, commenting that the story, "The Book That Saved The World," was "funny," as well as evaluating a series of questions or a particular task as "easy." Occasionally she was observed evaluating a response of another child or the teacher, as when Mrs. Williams was trying to get Sarah to provide the antonym of "create" and gave, as an example, "you go into the kitchen to create, no, that wouldn't work 'cause some of you might destroy the kitchen while you're trying [to make a meal]." Sarah still looked perplexed and Rena commented to her in an exasperated tone, "She just told you the answer!" Rena also evaluated her own reading performance against the performance of others. She told how in social studies,
I was trying to test myself to see how fast I could read or how slow. And like Robert was reading and he was reading kind of slow which I don't read super fast, but I was like a couple of sentences before him except . . . we started at the same time.

Rena also used prediction strategies during recitation. She reported wondering about the end of the story they were reading aloud in class called "The Book That Saved the World." "I was thinking about what was going to happen at the end because it says something about the book that saved the world and I was thinking about how was a book going to save the world." She predicted that it might be some sort of a special book, like a He-Man or something. She predicted answers to questions asked of the other children in the class and then checked her prediction with the ones they gave. For instance, in completing a fill-in-the-blank vocabulary exercise in class, Rena said, "I just read the sentences to see if I could fill in the word before they could." She also predicted the meanings of unfamiliar words in the text. She said she thought "Marsopolis" "was just a city 'cause it said in the sentence, 'The city of Marsopolis.'" She predicted that "zoology" was not a real word, "I mean, I didn't know what that meant, but . . . it was [probably] just a nonsense word."

Rena also used association strategies to help her remember information. In one lesson Mrs. Williams,
explaining a "subtopic," said it was similar to a "submarine" that went underwater. She explained that "sub" meant "under" and a subtopic was one that went under a main topic. The next day when Mrs. Williams, in the course of the recitation lesson, asked Rena what a subtopic was, Rena replied, "on the bottom."

Though Rena actively processed information about the reading lesson during recitation time, she reported thinking about other things as well. She reported that, during a class in which there was considerable discussion, "I read along with 'em and I followed along when other people were reading. And if Mrs. Williams asked us some question I would try to raise my hand on the ones that I knew any way." She went on to admit, however, that

I played with my necklace a lot. ... I was thinking about break ... I was thinking about what I had for snack. I brought some powdered donuts. And I was thinking about what I watched on TV this morning. ... I watched Inspector Gadget and Fat Albert.

Rena's greatest difficulty during recitation occurred when she encountered words she was unsure of that she needed to read aloud, such as "frequency," "lieutenant," "ancient," or "encyclopedia." She reported that she first attempted to sound such words out. All that was observable in class, however, was that she stopped and stared at the book or paper she was reading from. Once when called on to complete a fill-in-the-blank sentence
using a vocabulary word from the list, Rena sat silent. At Mrs. Williams' insistence, she finally read the sentence and provided the answer with ease. But in reading the sentence, she mumbled her way through the word "cruel," the word whose pronunciation may have caused her long hesitation. Another time she reported not volunteering to read a definition of a word she had looked up in the glossary because she did not know how to pronounce a word in the definition. Instead, she chose another word, looked up that definition and volunteered to read it aloud because she could pronounce all the words. Yet another time when she was asked to read the word "clavichord" aloud she would not attempt to say it. When Mrs. Williams pressed her to try to pronounce it, all Rena would say was "and that word."

She was observed rehearsing words that were unfamiliar to her, such as "bibliography," over and over again. Yet later she still had difficulties pronouncing the word "bibliography" when she encountered it again as she was working to complete an assignment. She mumbled a few different attempts to sound it out and finally settled on "bib-lee-o-gee."

Often when correcting work together in class, Rena did not have her work or part of her assignment. This gave credence to Mrs. Williams' perception that Rena was
not task oriented. During one lesson Rena realized that she had put her completed papers in the teacher's box the previous afternoon and that now they could not be found. Rena began to cry as the teacher asked her questions about what kind of paper she had used and exactly where she had put it and when she had put it there. In suggesting that Rena might have just forgotten where she put it, Mrs. Williams said to the class, "I find that kids frequently think they do something and they don't." Mrs. Williams reassured Rena saying, "It's no big deal, honey. We just have to find it." Rena later explained that she was crying because she did not want to do all six workbook pages over again. When the papers did not turn up in the box, or Mrs. Williams' bag of unmarked papers, or on the aide's desk next door, or in any of Rena's books or notebooks, Rena resigned herself to begin again. Mrs. Williams asked if she was doing it over again and when Rena nodded, yes, she commented, "Good girl." Rena added, "I don't want to get a zero." Privately in an interview Mrs. Williams expressed doubt as to whether Rena had actually done the work or not. Rena, however, insisted she had completed it and put it in the box. She explained in an interview, "'Cause I thought she said, 'Turn it in the box 'cause you can't take your workbooks home and it has to be turned in by the end of the day.' And I turned
"It's probably in the trash somewhere or something. Or maybe it's gone. Or maybe she just can't find it. I don't know."

Another time when Mrs. Williams was calling out each child's name and asking them to tell her how many they had missed on the assignment, Rena reported that she had missed twenty-two items. Mrs. Williams assumed that Rena had not finished her work and asked why. Rena said that she did not have enough time and was not allowed to take her workbook home. Mrs. Williams chided her for not finishing—"It's stupid to count 'em wrong just because you didn't do 'em."—and said Rena needed to finish the assignment "before the day is over or you're gonna be in here after school." Rena spent the rest of the class period working on them while the teacher and the other children discussed the vocabulary words and that day's seatwork assignment.

There are two reasons why Rena did not complete her work: 1) she worked very slowly and 2) when she did not understand what a question was asking her to do, she would quit. Rena took half again as long, sometimes twice as long, as the other focal students to complete her written assignments during the protocol collection. At the end of several workbook pages she often said that she was tired.
She would yawn and stretch and once she skipped reading an article because she was so tired. Given the amount of written work assigned and the effort and time Rena took to complete such tasks, it is not surprising that she, on occasion, did not complete her assignments before dismissal. During protocol collection with the researcher all the children completed their work so the only work that was incomplete were items they could not understand and chose to skip. Once during the protocol collection Rena did not complete her work. That occurred when she did not understand an "Applying the Skills" question which asked her to outline the story, "Starting Your Own Theater." Rena, in that case, said she did not understand what she was to do. She closed her book, folded her paper, and turned in her work incomplete.

On occasion, Rena marked her work, as she corrected it, differently than the teacher expected her to. Once when she had misinterpreted a question and created an outline of clothes and games rather than musical instruments, which the question had asked for, Rena marked it as one error, even though the outline had fifteen different topics and subtopics. When called on in class to say part of that outline, Rena tried to explain, "I done this [other] one. Didn't know about musical things." Mrs. Williams remembered that she had done it
incorrectly and when Rena said at the end, as they reported their grades, that she had missed one, Mrs. Williams said, no, she had the entire part incorrect and needed to take off one point for each part of the outline.

Another time when correcting workbook pages in class, Rena changed three incorrect items on her paper and marked them as correct. She added the answers to two short questions she had skipped and added a single letter to a list representing items to be included. These were additions which could be easily made and were unlikely to be noticed. She left one item unchanged that was marked incorrect. In going over the corrected work, later, Mrs. Williams did not notice the discrepancies.

*Seatwork.* Occasionally Rena would write answers to seatwork questions from memory, but most often she would use text-based strategies to determine the answer to a question. She would either look in the text for the answer or she would predict an answer and then check it against the information presented in the text.

Typically, after she read a question, Rena would look back in the text for the answer. Once when asked what she was doing, she said she was "just scanning" the story, looking for the answer. She knew approximately where in the story to look for the information. She might, when she found the part she was looking for, reread several
paragraphs in order to locate the answer she needed. This occurred when she reread the two paragraphs about the theater "producer" in attempting to answer the question, "What are some of the jobs of the producer?" It occurred another time when she went back and reread the Martians' reactions to the Mother Goose rhymes in the story so she could write a possible reaction to a different rhyme herself in answer to the question at the end of the story. Most often, though, she would read the question, glance back at some part of the text—the sample table of contents, the introductory paragraph, etc.—and locate the answer to the question.

Another text-based strategy that Rena frequently used was to predict an answer and then verify it with the actual text. One time she did this for three out of four questions at the end of a story. Another time, in order to complete an outline, she posited some outdoor sports that had been mentioned in the article she had read and then went back and checked the article to verify her memory. Once she commented that she knew what a "donation" was but "I just looked up there to make sure I was putting down the right thing. I know what it is really, but I was just making sure." Another time when asked at the end of the story, "What is a royalty?" she said, "I know . . . I think, but I'll find out." In this
instance she first looked in the glossary at the back of the book. When it was not there, she looked in the text of the story and found it there.

On occasion Rena would write answers without first predicting what those answers would be. Sometimes she would check those answers by looking back at the text or rereading the question to verify her response. For example, she put "subject card" as the answer to where she would look to find a book about water snakes. After she had written her answer, she reread the question, "I was just making sure it was right... I read the question over again." Another time she filled in part of an outline and then "look[ed] back to see if there was any other ones [items to be included from that section]." She also asked herself questions to verify a possible answer with her own knowledge, such as when she asked herself, "Is marbles a game?" decided it was and included it as a subtopic under "Games." Another time she looked in the text to see if "basketball" had been included in the category of indoor and outdoor sports. When she could not find it in the text, she remembered her own experience and answered on the basis of that: "I just remembered that, that I could play that. I could do that inside and out."

Frequently Rena gave a reason for selecting an answer when she had to make a choice between two alternatives.
For instance, she said that she picked the "title card" for "Screamer, Last of the Eastern Panthers" because it "sounded like . . . [a] title," and she picked the "author card" for "Madeline L'Engle" because it "sounds . . . like somebody's name. Like the name of the author, or something." Another time she was asked, "Would the author card for this book [The Daybreakers by Jane Louise Curry] come before or after that of Ramona and Her Father by Beverly Cleary?" Rena considered the alternatives saying, "It'd come before. Oh, it'd have to come after . . . or would it come before?" Finally she settled on, "after . . . 'cause the last name. 'Cause Cleary comes before Curry." On occasion her reasoning proved faulty, as when she looked at the index entry, "Russia, see Soviet Union," and in answer to the question, "If you want to know about wars in Russia, what topic would you look up?" she put "Russia" explaining, "because it was first."

Often she expressed uncertainty in the answers she put down. She said of one answer, "But it's probably wrong." Another time she put down an answer and commented, "if it's not [right], I don't know what it is." Still another time she said of an answer she had written that "it could be something else." And on another occasion she explained about an answer, "It might be wrong. I don't know."
Rena used some evaluation strategies as she worked through seatwork tasks. She evaluated the text she read, saying a picture was "neat," or that it "seemed funny for a shell to have a nickname." She said, "Yuck!" emphatically when she read about how people enjoy eating snails. She noticed another time that a picture reminded her of *The Wizard of Oz*. Occasionally she evaluated tasks, commenting especially if they seemed "easy" to her.

Rena used procedural knowledge to help her complete tasks. Once she counted the items left in a list of parts of a book that were to be used for a fill-in-the-blank activity. She only used the items she had not already used to answer the questions. In this particular instance, she did not read the last question at all. She simply wrote the remaining word from the list on the blank as the answer, saying, "It has to be . . . " as she wrote. Occasionally her assumptions of what procedures should be used caused some confusion for her. This occurred once when she was asked to look back to a previous workbook page to answer some questions. She looked first at the short article on the previous page and assumed that the information would be there. The information needed to answer the questions, however, was located on the sample catalogue cards at the top of the page, not in the informational paragraph. Rena was unable to understand
what she was supposed to do until she went back and reread the directions. For the most part, however, Rena's use of procedural strategies enabled her to more easily respond to seatwork activities.

Rena regularly used a combination of strategies to help her complete a task. She might reread directions, check the text, write from memory, predict an answer and check it, use a procedural based strategy, and justify her choice all to generate an answer for a complex activity. In one instance, while working through an "Applying the Skills" question she was asked to reorder the list of six topics to reflect the order in which they had appeared in the story. She selected the first topic from memory and then predicted what the second topic would be, but went back to the text to verify that prediction. Then she selected from memory the third topic. She went back to the list and reread all the topics before writing the last three in order. She got them all correct.

Using multiple strategies while processing complex tasks such as the one illustrated above, was typical for Rena. The following example, which shows Rena working through a task similar to the one above, illustrates the sophistication of her use of strategies and the high level of processing she employed. It also shows, however, how vulnerable her responses were to error.
On a ditto sheet, Duplicating Master 22, she was given the following task:

B. Below is a list of topics. Cross out the topics that are not covered in the article. On the lines, write the topics in the order they appear in the article.

the oyster's body
uses of oysters
where snails are found
how oysters move
where oysters are found
snails as food
the snail's body
how snails move
how pearls are formed

An article about snails and oysters was printed at the top of the page. After reading the article and the directions, Rena crossed out four topics that she thought were not in the text. She did not look back at the article, simply crossing them out from what she remembered from the text. The topics she crossed out were:

how oysters move
snails as food
how snails move
how pearls are formed

The only incorrect response here was, "snails as food."

The text of the article had a short paragraph which read,

In many parts of the world, people enjoy eating snails. They taste something like salty mushrooms.

Though Rena had said in disgust, "Yuck!" as she read that section of the text, she did not remember it when she crossed off the topics. She then wrote her first two
topics on the lines, again not referring to the text. They were:

1. the snail's body
2. where snails are found

At this point she looked back at the article to see, "if there's anything else about snails in here." She did not see, nor did she remember, the paragraph about eating snails. Since she did not see any additional information about snails, she went ahead and listed the next two topics, about oysters, which she did remember. They were:

3. the oyster's body
4. where oysters are found

She then counted the lines left (she had two) and the topics left (she had one). She realized she had crossed out a topic she would need so she reread and reconsidered each of the topics she had crossed out. She asked herself if it said anything about how pearls are formed or about snails as food. She said no to snails as food and she could not decide on the other one so she put down the last item she was sure of:

5. uses of oysters

She went back to the article and read the line, "Of course, oysters also make pearls." She decided to erase the line through the topic, "how pearls are formed," and wrote it on the last line:

6. how pearls are formed
commenting, "I guess that could be counted as how they was made." She was still unsure, however, saying, "But if it's not, I don't know what it is."

In this instance, Rena attempted to complete the task correctly and to make it make sense. She understood the topical organization of the article and she used multiple strategies in responding to the worksheet tasks. Her only error in answering this question was in not recognizing "snails as food" as a topic for the paragraph about eating snails.

Though Rena made errors on questions she did not recognize as problems, such as the ones examined above, she also recognized that other tasks were problematic for her. These questions were even more vulnerable to error. She had four strategies for answering questions she recognized as problems: 1) she would reread the question or the instructions; 2) she would attempt one or two items and then reread the instructions; 3) she would write an answer that she remembered and that seemed to her related to the question; or 4) she would skip it.

The first two strategies were consistently helpful for Rena. She regularly reread the question or instructions or both when she did not understand what she was being asked to do. Sometimes when the instructions to a series of questions were unclear, she would attempt one
or two questions and then reread the instructions. Often this clarified the point of the exercise for her.

There were times, though, when she did not understand the question and rereading did not seem to help. On those occasions she could sometimes figure out an answer that was related to the task even if she was unsure if it was the correct answer. One example of this occurred when she read the article about snails and oysters, referred to above. A question below the article read, "The first paragraph is an ____________ paragraph." Rena reread the question four times. She considered and finally wrote "snails" as her answer, but admitted it "could be something else."

Another time she read the directions to page 50 in her workbook. The directions read:

Using the completed chart that you filled in on page 49, put the topics and subtopics into outline form. Remember to use Roman numerals and capital letters and to give a title to your outline.

First Rena looked at the sample outline on page 50, instead of the chart on page 49, apparently missing the point of the instructions that she was to outline the content of the chart on page 49. She said that she was unsure of what it was that she was being asked to do. She reread the directions, but was still unsure. "Good grief! I don't know what I'm supposed to do," she said. So she reread the directions again. She looked again at
the outline on page fifty and decided to copy it substituting her own subtopics. "I'll just figure the same one." Later she explained, "I put in things that . . . I wanted to put in . . . You're just supposed to make 'em up and put 'em in there."

When Rena tried rereading and still could not figure out what a question or set of instructions were asking her to do and could not figure a possible solution, she became very frustrated and quit. Though this happened only two times during the period of analysis, she was visibly upset by the experience. Both occasions centered around the "Applying the Skills" questions following stories in the textbook. One time she just looked at the section and had not even read the directions when she said, "I guess I'm supposed to do [it]. I don't know." She went ahead and read the first part of the instructions and looked at a page in the story which was referenced in the question. But she was still uncertain about what to do. She said, "Good grief!" and in response to the question, "What are you considering?" she said, "[I'm considering] doing what I'm supposed to do, whatever that is." She wrote a few items on her paper that appeared to be the beginning of an outline, looked through the text of the story, and finally said again, "Good grief!" She erased all that she had written and said, "I don't know what I'm supposed to do
except make an outline and I don't know how to." She folded her paper up and slid it in her book. When asked what she was going to do next she mumbled that she did not know. When pressed, she said, "I might ask Mrs. Williams. I don't know . . . [or] I might turn it in like this." This particular time she turned the paper in incomplete.

The other time she decided to skip a question she did not understand, she did seek the help of the teacher. This, too, was an "Applying the Skills" question at the end of the story. It read, "Find a paragraph in the selection that introduces the topics that will be covered. Find a paragraph that summarizes or ties together all the topics." Rena had difficulty pronouncing the word "summarize," but finally got a close approximation. She looked back in the text, at the beginning of the story and said she was "trying to figure out which paragraph." She read the beginning of the first paragraph and then commented, "I don't know what to do when I find it." She went back to reread the directions. She still seemed unsure, "I don't know what I'm supposed to do. [I am] supposed to find one that introduces . . . the topics that will be covered, but I don't know what I'm supposed to do after I find it." She said that she was "considering skipping it . . . or I could get help from
Mrs. Williams when I go back to the classroom." She thought for a moment and said, "I'll just skip it and get help from Mrs. Williams."

Later, on the way back to the classroom, Rena saw Mrs. Williams and, at the suggestion of the researcher, did ask her about the question. Rena's statement of the problem, however, was vague. "I don't know what I'm supposed to do here. It says find the paragraph and that's it, I guess." Mrs. Williams did not understand that Rena's problem was in understanding what to do with the introductory paragraph once she had found it. So Mrs. Williams gave Rena a quick definition of the meanings of "introduction" and "summary" rather than a clarification of the assignment instructions. She explained that "introduces" means to "introduce you to what you are going to read," and that "to summarize . . . tells you what all you've read and pulls it all together so you get a review of what you just read . . . And probably it would come toward the end of it." Back in the classroom, Rena said she was "gonna find the sentence that tells me what everything was about." Apparently remembering Mrs. Williams' suggestion that "it would come toward the end," she said she was still uncertain but, wrote down the last sentence in the story and turned it in to the teacher. Her answer was incorrect.
In the protocol phase of the data collection Rena was asked to read aloud what she would ordinarily have read silently in the classroom. She tended to be less concerned with pronunciation during data collection, with just the researcher present, than during class with the whole class listening. Rather than sitting silent for long periods, she would attempt to pronounce words she was unsure of. She commented on a word she encountered in a story, "I just tried to pronounce it the best . . . way I could and went on." But she still could not pronounce some words. Rena typically attempted to determine if the word was important or not. If it did not seem important to her, she would mumble an approximation and continue on. For instance, when she encountered the word "barracuda," she said, "I figured out that that word wasn't really important." If she decided the word was important, she would figure a way to find out what the word might be. Sometimes her strategies worked, as when she looked back in the story for the meaning of the word "technician." Other times, as with the word "bureau," she tried a variety of strategies—sounding it out, reading the subsequent sentence, rereading the the sentence with the word "bureau"—but she could not figure out what it meant so she finally had to skip it and go on. Many times, as with most proper names, she was able to decide
what the word meant (e.g., "[it] sounds like . . . an author.") and continue on. She explained that when she worked on seatwork in class and she encountered a word she did not know, "I try to sound 'em out and if I can't understand 'em I just skip 'em or ask Mrs. Williams."

Goals

Rena's goal in completing classroom reading tasks was one of successful task completion.

In classroom recitation Mrs. Williams saw Rena as not appearing to listen, in a world of her own, very slow to participate, if she did at all, and decidedly unsure of her responses. Rena actively participated in the classroom instruction, though, by following along, listening, asking herself questions, competing silently with other children and checking her responses against the ones they gave.

Mrs. Williams was also conscious that Rena frequently had unfinished work. She lost it, brought it incomplete for correction, or turned it in with a section missing. Though this behavior made her appear uninterested in completion, her strategies in actually working through tasks belie that appearance. She used task completion strategies and ones geared toward successful completion at that. She self-checked, monitored her responses, provided justification for a choice when in doubt, and she used.
successfully, procedural knowledge and strategies to help her toward completion.

Task Definition

Rena, then, attempted to complete her classroom reading tasks successfully. The strategies she employed are a measure of the active nature of her involvement in the classroom. Rena, however, was not flexible in her use of strategies and not confident in her ability to apply those strategies successfully; she had encountered failure and had grown to accept it. She used strategies that were designed to ensure success, but used them, for the most part, without confidence and accepted answers she generated without pursuing other possibilities or optional task definitions.

During recitation activities, Rena defined most tasks as either procedural or memory. She followed along and was ready to read from the text as a question was posed. She recognized and used textual resources to assist her in responding to such simple procedural matching tasks.

Some tasks which appeared to be procedural such as vocabulary fill-in-the-blank questions, Rena redefined in part as memory, testing herself to see if she could recall an answer before the other students who were called on to answer aloud. Rena then tested her answers against those offered by the other students. When asked, on one
occasion, about the accuracy of her predictions, she said she had gotten some of them correct, but "most of 'em, no."

Though Rena did define, with some accuracy, the tasks required during recitation, the teacher did not perceive her as having done so. Mrs. Williams commented on more than one occasion that Rena did not appear to have been listening or paying attention. Rena was very slow to respond with an answer when she was asked a question; she stopped and sat silent when she encountered an unfamiliar word; and, on occasion, she would answer one way and then quickly change her answer. In addition she rarely volunteered to answer a question. All of these combined to make her appear to be inattentive and non-involved. In fact, on most occasions, she was just the opposite.

During seatwork activities, Rena was less accurate in her ability to define tasks appropriately. Occasionally Rena would define a seatwork question as a memory task, as when she recalled that "the author's purpose in writing the book" would be located in the "introduction." She said, "I just knew because we had went over this thing in class and stuff."

Most often, however, Rena defined seatwork tasks as simple procedural matching tasks and attempted to use the text to locate the answers to the questions. She
consistently referred back to the text to answer the
questions at the end of each story. For instance, in
answering the question, "What is a sea shell?" she paused
and said she was "thinking about which page that I saw [it
on]. On the first page, I guess." She scanned the first
page until she found where the information occurred and
wrote that word-for-word. Another time she explained that
she had completed an outline on a worksheet by looking at
the top of the page at the article to be outlined, "I
found the answer . . . up there. . . . I just looked back
up there." Another time in explaining what she had done
on a worksheet, she said, "I just read the questions and I
looked up in the table of contents . . . and then I just
found my answers." And again later, explaining another
section, she reported, "I did the questions and I looked
up there."

Rena was so confident that the responses she was
asked to give represented procedural matching tasks that
on one workbook page where she was to read a short article
about "Spiders" and complete the outline which followed,
she did not even read the article. She explained that she
"was getting tired," and so "didn't read the article. I
just read the directions and I looked back in the article
and I found the answers."
On occasion Rena would redefine a procedural task, in part, as a memory task, much as she did during recitation. This occurred when she posited or predicted an answer to a question and then verified that answer with the text. For instance, in answering the question "When is the best time to collect shells at the beach? Why?" Rena asked herself "was it high tide or low tide?" She flipped back to the story, "Shell Treasures," and located in the text where it referred to collecting shells. "Oh, here it is," she said and wrote her answer.

Rena had difficulty accurately defining comprehension tasks. She defined some comprehension tasks as procedural and located information in the text in order to provide a response. For example, she answered the question, "What was unexpected and funny about the Martians' understanding of the Mother Goose rhymes?" with phrases from the text. In this case she wrote, "The Great and Mighty Think Tank thought we could combine farming with mining." This was an accurate textual statement of the Martians' understanding of one of the three Mother Goose rhymes in the text, but did not explain what was humorous or surprising about the Martians' interpretation.

When she was unsure of a question, Rena defined a task as procedural. For more complex procedural tasks, however, she did not know what to do. For example, she
filled in the answer to "If you want to know about wars in Russia, what topic should you look up?" with "Russia." The index entry read, "Russia. See Soviet Union." Later she said that she did not know which she should have put down, "Russia," or "Soviet Union." She put down "Russia" because it was first. As a recognition task the answer would have been one of the two and Rena thought that "Soviet Union" might have been a "subtopic" so she did not use it.

Ambiguous questions were the most troubling for Rena. When she was able to, she would try to define an ambiguous question as a procedural matching task. For instance, when she was given the statement, "The first paragraph is an ______ paragraph," referring to an article about snails and oysters, Rena was puzzled and looked back at the first paragraph. The question was a memory task as the teacher had discussed "introductory" paragraphs the previous day. Rena, consistent in her definition of it as a procedural matching task, located an answer in the paragraph that might suffice. She explained later, "I didn't know so I just put snails."

On occasion she was able to recognize the procedural elements in what appeared to her to be an ambiguous task and that recognition clarified for her what she was to do. Once she read a short article on a worksheet and
looked at the incomplete outline following it. She began by saying, "I can look back," and located one item that seemed to fit in a blank. She then began to construct the form of the outline by filling in the missing letters. She suddenly realized what she was supposed to do. "Oh, it's easy," she commented and went on to look back at the article and locate items to complete the outline.

When Rena was unable to define ambiguous questions as procedural, she became very puzzled about what to do. When asked to find a paragraph that introduced and a paragraph that summarized the story she had read, Rena located what she considered to be an introductory paragraph, but was unsure what to do. She said, "It just says to find it, but ... it doesn't say to do anything but to find it." She decided to skip it until later when she could ask the teacher. Another time she was asked to make an outline of the selection she had just read, "Starting Your Own Theater." She said, "I don't know what I'm supposed to do except make an outline and I don't know how to." Again she decided to skip it and thought that maybe she would ask Mrs. Williams later.

Sometimes when she encountered a question she did not understand, Rena said she would ask Mrs. Williams. One time she did ask, but the sense was that she only asked because she was reminded by the researcher as they
encountered Mrs. Williams in the hallway on their way back to class. Rena's inability to articulate her problem that particular time and her reluctance at other times to get help from Mrs. Williams suggest that she viewed Mrs. Williams, not as a helping agent toward getting tasks done, but rather as an evaluating agent for whom the task needed to be complete and accurate. Though she said she would ask for help, she did not.

Only once did she attempt to redefine an ambiguous task as other than procedural matching. When she did, she decided the question was a memory task and she responded incorrectly. In this case, she was asked to turn a chart she had completed on the previous page into outline form. She understood the procedural elements of the task, purposefully creating the form of an outline, but she misunderstood the directions. She decided that she was to include in the outline "things . . . that I wanted to put in . . . you're supposed to make 'em up and put 'em in there." She recalled items she had at home and listed those in the outline.

Rena's response to the risk level in the classroom was to assume a passive attitude toward the reading activities. She waited to be called on and, when she was, waited to give a response until she was sure of her answer. Rena did not want to contribute incorrect
responses in a classroom in which correct responses were what was expected. As a result, she would not respond rather than respond incorrectly. She would sit silent when faced with a word she could not pronounce and she would turn in incomplete work when she did not understand what she was being asked to do.

Completion was a salient enough goal for Rena that during the completion of written work, she would accept answers that she was unsure of, answers that might be incorrect. She would put them down because she did not know, or could not imagine, what else the answer could be. Then when given the opportunity during class correction, Rena would change answers to make it appear that she had the correct answer when, in fact, she had not.

Rena set her purpose as one of successful task completion and then worked long and hard toward achieving that goal. Most of her strategies were successful. However, when she came up against something she did not understand, when the problem seemed insoluble, Rena had no resources. She could not or would not ask the teacher; she had no apparent peer support; and her own resources did not appear, to her anyway, to be sufficient.
Comparison of Focal Students With Each Other

Having examined each of the four focal students individually, it is now important to see how they compare with each other in terms of task definitions, strategies, resources, and goals. The four focal students were selected on the basis of their differences in task orientation and success in classroom reading. It is possible that such differences affected the ways in which students defined and worked through tasks. Before examining the students' task definitions, then, it is necessary to understand how the focal students differed in terms of their task orientation and success in classroom reading. Then it can be determined if these differences impacted on the students' definitions of the task and how they did so.

Comparison of Task Orientation

The orientation of the four focal students toward reading tasks did vary. Two of the students exhibited behaviors which indicated a strong and positive task orientation. Such a task orientation was demonstrated by the fact that the students got right to work when an assignment was made, completed their work and turned it in on time. Two other children behaved in ways that suggested a weak or negative task orientation. They often
did not complete their work and they handed in work late or not at all.

Anne and Luke both were considered by the teacher to exhibit strong task orientation traits. Anne tended to begin her work immediately after it was assigned. She knew what her assignments were. She worked through them until they were complete and she asked questions of the teacher only when help was not forthcoming from other sources. Mrs. Williams rated Anne as very high on task orientation. Luke was considered to be highly task oriented as well. He completed much of his work, rarely handing in work late or incomplete. He frequently got to work right away.

David and Rena both exhibited behaviors that led Mrs. Williams to categorize them as having weak task orientations. David did not begin his work right away. He required frequent reminders to focus his attention on the task and he regularly handed in incomplete assignments. Mrs. Williams considered David very low in task orientation and indicated that she thought that his success in school reading was directly related to his task orientation behaviors. Rena was judged by Mrs. Williams to be low on task orientation because she turned in unfinished work, lost her papers, and would skip parts she did not understand.
Though judged by the teacher as low on task orientation, Rena, however, exhibited some positive task orientation traits which Mrs. Williams appeared not to recognize. Rena frequently got right to work on an assignment; she knew what the assignment was; she kept her notebooks, books, and papers carefully organized; and she often spent considerable time working through her written work. Luke, considered by Mrs. Williams as highly task oriented, exhibited some behaviors, in addition, that were inconsistent with that judgement. He asked numerous questions of the teacher; he handed in work that was finished, but regularly left questions he did not understand unanswered; and he often did not remember what the assignment was and needed to be reminded where to look to find out what it was he needed to do.

Comparison of Reading Ability

The four focal students varied considerably in their success in the academic subject of reading. Anne was the only student of the four who consistently received high grades in reading and who the teacher considered unqualifiedly successful as a reading student. David, though acknowledged by Mrs. Williams as the most skilled reader in the class, was not particularly successful as a school reader. He admitted as much, saying, "I'm not a good reader. I mean I can read, but the questions are
hard for me." His reading report card grades were average and reflected the mediocre grades he received on his daily written work. Luke had difficulty decoding unfamiliar words. His oral reading was not particularly fluent. Mrs. Williams rated Luke as "unsuccessful" in school reading because he made frequent errors on his written reading assignments. Rena also had considerable difficulty decoding new or unfamiliar words. She, too, was rated as "unsuccessful" by Mrs. Williams but primarily because of her response to her written work.

All four students were asked by the researcher to read a 5.5 (fifth grade) Informal Reading Inventory (Spache, 1981) passage. Their oral reading confirmed that Anne and David were the most fluent readers of the four. David and Anne made only one error each that changed the meaning of the text. They also made only a few self-corrections, repetitions, and non-meaning change substitutions. Luke made two errors that changed the meaning of the text and Rena made eight. Both Luke and Rena made many self-corrections, repetitions of words and phrases, and substitutions of words which did not affect meaning.

In terms of comprehension, the four students did not differ as dramatically as they did on the fluency measure. Rena did not miss any comprehension questions on
the 5.5 passage. David missed only one. Anne missed three and Luke missed four.

In addition to the informal inventory, as each of the students worked through recitation and seatwork assignments, they were required to read aloud orally and differences in their fluency were again able to be noted. David continued to be the most fluent reader of the four. He had a sizable reading vocabulary and was able to decode with relative ease those unfamiliar words he did encounter. Anne was a fluent reader as well. Her sight vocabulary was less extensive than David's and, as a result, she encountered more unfamiliar words. Those she did encounter she attempted to decode. She was, however, often unable to do so successfully. On occasion she was unwittingly successful (e.g., she got the word "clavichord," but did not know it and thus did not recognize her success). Luke and Rena both continued to evidence a lack of fluency in their oral reading. There were many words they did not know and were not able to sound out. Both frequently skipped words they could not pronounce, mumbling something incoherent as they went on to the next sentence. They both read garbled phrases, repeated phrases and words, and even, on occasion, skipped entire words or phrases or lines of text.
Most of what the students were asked to do orally during data collection would have been done silently if they had completed the work in the classroom. Some of the oral fluency difficulties may not have arisen if they had read the instructions, articles, and questions silently. It is possible, however, to see how their skill in reading did affect some of the students' task completion.

They were assigned one silent reading task during the data collection. The analysis of this activity suggests that the discrepancies in reading skill were negligible in terms of understanding the story. For the silent reading of the story "Shell Treasures," there was a star at the end of each paragraph or series of short related paragraphs. The children were asked to read to a star, stop reading, and report aloud what they had been thinking as they read. All of the students had difficulties with some words, such as "bivalves," "univalves," and "anomia," but none of the children reported these difficulties as they read through the text. Their difficulties only became apparent later as they worked through the assignment and were required to say those words aloud.

While completing their written reading assignments, there was one word which none of the students could pronounce. This was the word "bureau." It was used in the context of the sentence, "You could organize your
things by putting them in different drawers of your bureau." On the workbook page was a picture of a chest of drawers with the drawers labeled in an outline format. Each of the four children responded differently to the unknown word. Rena first tried to sound it out and when that did not succeed, she read the next sentence in an attempt, as she explained it, "to use context clues in the sentence." She then went back and reread the sentence with the word "bureau." She was still not able to figure out the word so she skipped it and continued on.

Luke came to the word "bureau," stopped and asked immediately, "What's that word?" When the researcher indicated she was not able to tell him, he began to try to sound it out, "br . . ." He then reread the phrase "drawers of your . . ." and admitted, "I probably won't get it right." He reread the phrase "drawers of your," inserted the nonsense placeholder "blaugh-blaugh," and went on.

Anne tried to sound it out, "buroo, or whatever, beret, beret, buroo," but then went on when she could not get it right away. David gave one attempt to sound it out, "baroo," and then asked, "Huh? What's that word?" when did not receive an answer, he sighed and continued on.
In this instance, all four students skipped the unknown word before continuing on. However, what they did before deciding to skip it is indicative of their typical ways of solving problems. Rena tried to sound it out and then diligently worked at using context clues to be able to recognize the word. Luke asked first and then tried to sound it out. He was not very optimistic about his chances of getting it so he used a place holder and went on. Anne tried several times to sound it out while David tried only once. However, David did ask as well. Neither David nor Anne seemed concerned about not being able to pronounce the word. Luke and Rena appeared more concerned.

The children had difficulties dealing with names used in the questions as well. Names such as "Madeline L'Engle," "Chung Ling Soo," "Yoshiko Uchida," or "Roald Dahl" were problematic for Anne, Luke, and Rena. They were all able to recognize that such words were names and to treat them as such. David did not encounter most of these words because he used the Answer Key and did not read the questions. There were two other words that caused problems for all three students, Anne, Luke, and Rena. They were "clavichord," and "technician." "Bureau" was the only word besides "usher" that David had difficulty with.
Anne knew most of the other words with the exception of some of the names mentioned above. Luke and Rena had some other difficulties with words that Anne and David did not have. Neither Luke nor Rena could pronounce "Magellan," "barracuda," "summarizes," "introduces," "triangular," or "cellar." Rena also had difficulty with "producer," "mechanical," and the phrase, "feed or groom a horse." (She read it twice as "feed a groom a horse," finally shook her head in puzzlement and went on reading.) Luke had problems with "identification," "article," "railroad," and "donations."

The difficulty of not knowing how to pronounce or what some words meant only affected the way the children worked through the task when they encountered unfamiliar words in the context of instructions on how to complete a task. This did occur a few times during the data collection for Luke and once for Rena.

Rena could not pronounce the word "summarize," though she was able to generate a close approximation of it. For that particular question, she did locate what she thought was the introductory paragraph, but she did not even attempt to locate the summary paragraph. She apparently did not know what to look for since she did not know what the word was.
Luke also had difficulty pronouncing the word "summarizes." In addition he could not pronounce the word "introduces" in the same question. Not being able to understand key words in the instructions meant that he did not understand what the question was asking him to do. He puzzled over the question and finally decided to use some topics in an unrelated question for his answer. His inability in this instance to pronounce the key words was directly responsible for his confusion in understanding what the task was asking him to do. On another occasion Luke did not know what the word "identification" was in the instructions and so he decided not to answer the question. Luke and Rena both responded to these tasks based on their inability to decode key words and therefore to understand what the questions were asking them to do. For all other questions, however, Rena and Luke and Anne and David all tended to encounter similar difficulties—difficulties which were not related to their skill or fluency in reading.

Comparison of Problems Encountered

Ambiguous questions and instructions posed difficulties for all four students as they worked to complete classroom reading tasks. Sometimes the ambiguity was inherent in the teacher's instructions and sometimes
in the written materials the students received—the questions or directions or the type of task.

No matter how attentive they were to information presented by the teacher, all four students expressed, at times, confusion about something Mrs. Williams said or explained. One time, for example, some of the children were confused about the scope of their assignment. Mrs. Williams had said during class that in addition to the questions following the story "The Book That Saved The Earth,"

I would like you to read pages 129 to 133 about Robert McCloskey. He is the author of the story that we're gonna read . . . which is part of a larger book, Nothing New Under the Sun (Hardly). It's a real funny story, too. It's very long. We're gonna take two days to read it. Probably Wednesday and Friday since you go to the library on Thursday. But it's interesting to know a little bit about the author before you get started. It makes the book better.

Mrs. Williams wrote the assignment on the corner of the chalkboard and said, "All right. Page 129 to 133. Does everyone understand now? One-twenty-eight and then read the other ones."

During the interview following that lesson, three of the four children appeared confused about the assignment. David said that they had to read it, "just read it," but was not sure when, "Tomorrow . . . we'll read it tomorrow." Anne admitted that she "wasn't sure if we had to just read about the author or go on and read the
story." She looked at what some of the other children in the class did and decided ultimately that they only had to read about McCloskey. Rena began to read the piece about Robert McCloskey, but did not finish it. When asked if she would finish it that day she admitted "probably not," and then went on to say that she thought she would finish it sometime that week, explaining, "since we have two days to do it . . . because it's a long story." When asked what she was supposed to read for the next day Rena said with some hesitation, "I think . . . we just had to read this little page [the first page—page 129] about him . . . Then we have to read the story that he wrote . . . It goes all the way. It's a long story." When asked again to explain which part she had two days to read, Rena became flustered, "I think we have to, wait a minute. All's I remember is, no we don't have to do this page, or do we?" She finally said, "Maybe we just have to read this until we get to another Your Understanding [questions at the end of the story]." Luke was the only focal student who was sure that they were supposed to read the story, but admitted he "hadn't got to read it yet." Anne was, in fact, the only one of the four focal students who finally did read the story.

All four students encountered difficulties with ambiguously worded written questions and instructions.
When asked questions that looked like questions but were to be responded to with a location where the answer might be found, all four children at times responded with answers rather than locations. Anne admitted responding "yes" to the question "Does the book have a glossary?" rather than identifying the part of the book she would look in first to answer the question. She explained, "I didn't think. I thought they meant this book [her textbook]. Sounds stupid, but I did." In the same exercise she answered the question "What are some names of some other authors who write about sea life?" by writing the names of some authors she had found in the sample bibliography on a previous page. She explained, "I thought that it said, 'Write the names of other authors that write about sea life,' . . . I thought that they did meant that."

Luke, for the same exercise, wrote the answer "yes" for the question "Does the book have a glossary?" He also answered the question "How do you pronounce algae?" by writing "algae." as his answer. He looked back at the sample table of contents and wrote the page number on which the chapter on jellyfish began for the question "On what page does the chapter on jellyfish begin?" Later, when asked why he put those answers instead of the place
in a book where he would locate the answers to such questions, Luke replied that he did not know.

David also wrote "yes" for the question "Does the book have a glossary?" In fact, there were only two questions of the ten on that page that David answered with the part of a book he would look in to locate the answer to the question. For all the rest he answered the questions as they were written. He wrote "algae" as the answer to the question "How do you pronounce algae?" and "45" as his response to the question, "On what page or pages can I find something about sand crabs?" When going over the corrected work in an interview, David continued to be confused by the question/location format. He had written the answer, "no," to the question "Does the book have a chapter on snails?" and then marked it as incorrect in class. Later he said he did not remember why he had marked that one wrong, insisting that the book did not have such a chapter. "No. Well, I don't think so. I don't remember about snails. It doesn't. Why did I put a X up there?"

Though Rena's work for that particular assignment was lost, she reported that she, too, was confused by the wording of the questions. In reflecting on the question, "What does saline mean?" she said, "I was unsure before I read the directions 'cause I thought that you had to
really, you had to look up in the dictionary to see what the answer was."

Ambiguously worded directions were problematic for all four students as well. The directions for one of the "Applying the Skills" questions, for example, gave the children some concern. The instructions read:

Make an outline of the selection you have just read. Your outline should show three major topics. (Hint: See the skills note at the top of page 214.) The subtopics are the different jobs mentioned in the selection. Remember to give your outline a title that states the general topic of the selection.

Each of the students was initially perplexed by the directions. David finished reading and stated, "I don't understand . . . I just don't understand the whole thing." Anne read the instructions and commented, "Oh, foot!" Rena responded saying, "Good grief!" Luke turned to the skills note on page 214 and said, "Uh, I can't, oh . . ."

Another time all four students had problems understanding the instructions to a workbook page exercise. The directions read,

Using the completed chart that you filled in on page 49, put the topics and subtopics into outline form. Remember to use Roman numerals and capital letters and to give a title to your outline.

The placement of the exercise on the page, the fact that they were to work with a previous exercise they had already completed, and the memory of the teacher's
explanation for that particular workbook page made this exercise ambiguous for them. Mrs. Williams' explanation did not clarify the exercise for the children. She explained the exercise for page 51 when she went over page 49, saying,

Now this is a little bit confusing, but page 51 . . . is gonna use page 49. It's gonna use this chart that you just do on the instruments to fill in the outline that's on page 51. So I want you to really pay attention when they tell you to turn back to page 49 and whatever and use that page.

When the children got to page 51, though, they were obviously still confused. Rena said, "Good grief. I don't know what I'm supposed to do." Luke said, "I don't know how to do this . . . Do I have to do it? I don't know how." David, after reading the instructions commented that he was "probably gonna be here all day because I can't remember what to do here." And Anne read the instructions aloud, but continued on to read the next section, skipping that exercise entirely.

Besides exhibiting similarities in dealing with ambiguity in classroom reading tasks, the four focal students exhibited striking similarities in the knowledge-base problems they encountered. Three of the students had difficulty with one exercise where they were asked to select the card catalogue drawer where the card for particular books might be located. The drawers were represented by the following illustration:
For one item, "a book *A Young Person's Guide to Ballet,*" Anne, Luke, and David had problems. They all knew that the item represented the title of a book. David and Anne knew that it would be located by looking in a drawer under the letter "Y" for the word "Young" in the title, but there was no drawer labeled "Y" in the picture. Both Anne and David decided to use the first letter in the title and to select drawer 1 for "A." Luke was unsure of what letter to use in alphabetizing a book title. In this instance he selected drawer 1 for the "B" in "Ballet."

For another item on that page, "a book by Laurence Yep," all three of the children knew it was an author and that the author's first letter of his last name would be where they should look to locate the information. Luke
explained that he was "looking for the Y," and finally located it by reading the labels on all the drawers in the picture, "A through B, H through J, N through P, J, C through E, K through L . . . 12, that's W to Z." David, apparently remembering that he could not find the "Y" drawer put it in drawer "L" without comment, but Anne continued to be perplexed. She said, "Oh, foot! I can't find the Y's. I couldn't find them last time. I can't find them this time." She considered drawer 12, but ended up putting down drawer 5. Anne expressed some uncertainty in her choice, however, "I doubt it's right though."

Luke was the only student who was consistently confused about which letter to use in alphabetizing titles of books. All three children--Luke, Anne, and David--did not know which word to use to find "a book about funny riddles." They knew it was the subject, but all three chose the word "funny" and its initial letter "f" as what they would look under to locate such a book. Anne expressed some uncertainty, "Ok. Guess it's F . . . Foot! I think." David read the question and made a hissing sound between this teeth. He said, " . . . of funny riddles. It'd probably be in F to G." Luke also indicated some uncertainty, "I'll try . . . [drawer] three." Rena did not have such problems. She was able to
correctly identify the drawer, the letter to be used, and identify that "W-Z" was the drawer in which a "Y" would be located.

Though the four focal students tended to encounter the same or very similar problems, the goals they set and the ways they worked through those problems differed considerably.

Comparison of Goals

Luke and David both set task completion as a high priority goal. For each of them completing the task and having something to turn in to the teacher was important. There was a difference between them, though. David's goal was motivated both by his desire to avoid teacher sanctions and by his desire to avoid doing the assigned work. He did not want Mrs. Williams to "get mad" at him or to "yell" at him. He also did not want to, really, do the work. He said at one point, "I don't like writing . . . I don't like school." He attempted to achieve both goals by doing as little as possible to get as much work done as he could. As a result, he would only do those activities that required a response; he would put down whatever he first thought of as his answer; and he would copy answers from the Answer Key whenever he could.

Luke, on the other hand, perceived his job as one of handing in complete work. Though he regularly
contemplated quitting as his first response to a problematic question, he calculated that effect, leaving no more than one section incomplete per assignment. Luke perceived his job as one of producing answers. He appeared to have no confidence in his ability to understand all of the questions asked or to produce correct answers. Often, if the format of the response permitted, he would put down several answers in hopes that one would be correct. Luke did not knowingly copy answers or eliminate aspects of assignments that did not require answers. One time he commented as he began to read a short article on a worksheet, "I don't want to read this... but I got to probably. I'll just read it fast. Can I?" He often, however, put down his first response even though he was unsure if he understood the question or if the response was correct.

Anne and Rena both set successful task completion as their priority goals. They differed in their establishment of that goal, though. Anne viewed success as attainable for her. She was rarely unsure of her responses and worked very hard to verify most of those responses with her understanding of the question, the text, the information the teacher had indicated would be important, or what other children said or did with the task. Anne had her success reinforced regularly by
responding accurately to teacher posed questions, by receiving mostly A's or B's on her report card and written reading assignments, and by positing answers and having those verified as correct.

Rena, on the other hand, though she used strategies focused on successful task completion, did not expect to succeed. Regularly she responded that she probably would not get an answer right or she did not know what grade she would get on some work. Once in answer to a question about what grade she might get on an assignment, Rena said, "Probably an 'F'. . . . No, I won't [get] that. I won't if she counts one point off [for each one]. I'll probably get a . . . 'B' or not an 'A+,' but an 'A' or a 'C' or a 'D' or a 'F.'" Though she did self-checking and verification of responses for some answers, she often wrote down answers she was unsure of without checking. Rena had her sense that she would not succeed regularly confirmed. One time she worked an hour and a half on a assignment. During this time she read a seven page story, wrote the answers to three comprehension questions, two "Applying the Skills" questions about the story, and provided answers to all nine items on the accompanying Duplicating Master; yet she got 6 and one-half items
counted wrong. Since there were five points off for each incorrect item, this meant that she got a 68, an "F," for the assignment.

Comparison of Resources

Anne was the most flexible in her use of resources to solve problems posed by the tasks she was working through. She used the textual materials, other students, and information from the teacher as resources she would draw upon as she worked through tasks.

Rena and Luke used the textual materials and information presented by the teacher as well. Though they referred to the textbook often, neither of them pursued information in the textbook with any sense of confidence that the answer would indeed be there and would be recognizable by them. Rena's lack of confidence carried over in her use of the teacher as a resource. Rena was passive, letting what happened happen. If the teacher gave her helpful information she would receive and record it. If not, she would not pursue that as an informational source. Luke, on the other hand, felt that the teacher had the information he needed and he would pursue that resource actively. He felt that if he asked, Mrs. Williams would help him understand how to solve a problem. She would give him a word, restate an instruction, or provide a hint of where in the text to
look. Neither Rena nor Luke used the other students in
the class as a resource.

David used only the text and himself. He did not
listen to the teacher during recitation, deliberately
choosing not to pay attention. He occasionally asked the
teacher or the researcher questions designed to clarify a
problem. But he did not use his peers as he had alienated
himself from the other students, creating barriers of
antagonism and frustration between him and them.

Comparison of Strategies

All four of the focal children used text-based
strategies to some degree to solve problems and work
through tasks. The most typical strategy was to look back
through the text to locate an answer. This was Luke's
principle strategy. David used the text somewhat but
often he would rely on his own memory resources to produce
an answer. Rena and Anne also used the text to both
locate answers and to verify answers that they predicted.
Anne also went back to the text to check answers she had
produced. Rena verified responses as well, but less
often.

When they encountered problems, all four students
relied on the text to help them solve that problem. They
would reread questions, reread segments of text, and
reread instructions. If they could not locate an answer,
their strategies varied depending on the task, but often, David would cheat, Luke would beg for help, Rena would quit, and Anne would continue working in an attempt to generate a correct answer.

A comparison of the strategies they used as they worked through problematic tasks will illustrate these differences. One example occurred after reading the story "Starting Your Own Theater." The story was read during the class period earlier in the day. The third comprehension question asked, "What are two things the author suggests you can do if you want to learn more about the theater?" The teacher's manual, and the teacher when correcting the question, wanted the response that "the author suggests starting your own theater or becoming an apprentice at a professional or community theater." The second part of the answer was stated explicitly in the final paragraph of the text. It said,

What if you don't have enough interested friends to put on your own plays? You can go to your nearest professional or community theater. Ask if you can be an apprentice. You will work very hard, but it's a good way to learn about theater.

This suggests that the second part of the answer was a procedural matching task, requiring the students to locate the answer in the text. The first part of the answer was a comprehension task as the correct response was implied.
in the title of the story, "Starting Your Own Theater," and in the first line of the final paragraph.

The four students worked through this difficult question differently. Luke looked back at the text of the story trying to locate where it might have talked about the "author." He was able to locate other people important to theater production, but not the author. He sighed and said, "I don't know that one. Can I just skip it? That's what I'd do [if I were in the classroom]." He explained that he had been looking in the text at the titles of all the theater jobs discussed in the story "producer, director . . . stage manager, set designer, technician." He closed his book then and said, "I'll just try to do it." He went back, reread the question and said, "Oh, I remember that." He wrote then from memory, "Put on plays or get a job as an aprentor [sic] at a theater."

David, in answering the same question said after a pause, "I'm trying to think . . . up something of what an author might suggest you do if you want to learn more about the theater." He said, "you might want to do something with the theater. You might want to learn how to pull the curtains or something . . . read books." He wrote his answer, "read about theaters you can ask someone who works in one."
Anne read the question and turned back to the text of the story. She said she was looking for "something that . . . tells the answer." She skimmed the text of the last paragraph and wrote her answer, "go to the library, or be an apprentice." She copied the spelling of the word "apprentice" from the final paragraph, but said she just remembered the part about the library from reading the story that morning.

Rena read the question and wrote her response directly from the final paragraph, "to go to a professional or community theater and ask to be an apprentice."

In this instance, David wrote entirely from memory, approaching both parts of the answer as memory tasks, recalling and writing from his own understanding of how he would go about learning more about theaters. Rena and Anne both went back to the text and wrote from that for the second part of the question. Rena did not appear to recognize that she had not provided a two-part response. Anne, however, did appear to realize that more was needed than what was listed in the last paragraph. She recalled her memory of the text, remembering accurately that it had suggested, "Go to the library and get several books of plays. Pick out one that you like." Anne apparently considered this as a suggestion to the reader and decided
that it was an appropriate response to the question asking for the author's suggestions. Luke tried to use the text and was unable to do so successfully because he had misinterpreted the term "author" in the question. Once he reinterpreted that term, he wrote from memory for both parts of the answer.

Some of the students were able to use procedural strategies to some extent to help them complete classroom reading tasks. Anne and Rena were regularly able to use such strategies effectively. They would cross out items used, count lines or items, and were able to represent a general procedural awareness of how to negotiate the tasks. David was able to use procedural strategies on a limited basis, crossing out and checking off. Luke, on the other hand, exhibited a surprising lack of procedural awareness. He was, on several occasions, unable to use such strategies to help him negotiate the requirements of the tasks and once his misapplication of procedures meant that he missed every item in a six-part question.

Luke and David also did not appear to have an awareness of a "task audience" for their work. Both Luke and David would respond in such a way on their papers to suggest that what was important for them was that they put down the answer. The form of the answer, or any consideration that another person would be judging that
answer, was lacking. Rena and Anne, on the other hand, both had a strong sense of "task audience." Rena reproduced forms, including information that was in the text, drew arrows to indicate inclusion of additional information in a question, and produced papers that prompted Mrs. Williams to comment that she had done a nice job, "very neat." Anne wrote notes to the teacher to indicate that she had put an answer on the back of the paper for a question she had overlooked. She also had put checks next to some items on a worksheet list as she used them. She erased the checks and commented as did so, "Don't want to confuse Mrs. Williams."

Comparison of Task Definitions

The way the children defined the task, the flexibility then envisioned they had in defining the task, and the ways they were able, then, to generate successful strategies for that task definition varied.

All four of the students defined most recitation activities as procedural tasks. The children used the text as a resource during recitation, but in different ways. Anne had her book open, followed along, and was ready to respond from it at any moment she might be called upon to recite. David, on the other hand, had his book open, but only referred to it when he was asked a question. He then searched through the open pages,
looking for the answer. Rena and Luke both followed along and were able to respond from the text when called on. Rena seemed inattentive at times, but much of that was a feature of her disinclination to respond unless she was sure of all the words she had to read aloud.

Luke also defined some recitation activities as memory tasks. He listened and was an enthusiastic participant in telling stories about things that had happened to him or things he knew about. Rena and Anne were reticent to participate in recall activities, but appeared to recognize them and did on occasion share stories. David was inattentive and failed to recognize activities that signaled memory tasks.

David's inattention meant that he was unable, as well, to recognize listening activities and participated only minimally in those. Rena and Luke's attention for listening activities seemed erratic. There were times when they both reported, or appeared to be listening to class discussions. There were other times when they reported thinking of other things or were observed staring or playing with something. Anne reported that she paid attention in class. Observation of her behaviors suggest that she was accurate in that assessment.

For seatwork activities, all of the children recognized that the majority of the seatwork activities
were simple procedural tasks. They knew that in most cases they were required to examine the text and to provide a response. All of the children were able to accurately define such tasks and, for the most part, successfully complete them. When the children encountered workbook/worksheet questions that were memory, or complex procedural tasks, they found such tasks to be problematic. Anne was able to identify complex procedural tasks as such and to correctly work through them. David, Rena, and Luke, however, tended to continue to define procedural tasks as simple matching tasks and look for responses in the text that would assist them in locating an answer.

When the children worked through questions at the end of the stories, they varied in their task definitions for such activities. David defined all the "Understanding What You Read" questions as memory tasks and relied on his own recall of the text or understanding of the world to provide an answer. Luke was able to differentiate between those questions for which he thought he remembered answers and those for which he needed to return to the text to locate answers. He recognized, though, that the text was the basis for the information he needed. Rena used the text as her sole source of information and defined all the questions as procedural matching tasks. Anne was able to
recognize comprehension tasks as well as simple procedural tasks in the questions posed at the end of the stories. She varied her strategies accordingly. Both Anne and Rena redefined some procedural questions, in part, as memory tasks and predicted answers before looking the information up in the text.

When the children encountered ambiguous tasks, Anne was the only one who successfully redefined tasks to generate correct responses. Luke, David, and Rena all attempted to define ambiguous tasks as procedural. Persisting with a procedural task definition often lead to erroneous responses to ambiguous questions. This meant that, often, these three children were forced by their inflexible task definition to provide answers they were unsure of. All three of the children would regularly accept such responses and go on. Rena would often justify her answers even when they were incorrect. David would look to a reliable source to provide his answers, such as the Answer Key. Luke would put down as an answer a response he was clearly unsure of, but as producing an answer was primary for him, he would accept it and continue on.
Summary

In Mrs. Williams' reading classroom the students defined most classroom tasks as procedural. This was not surprising since many of the tasks presented to them were procedural. Many simple procedural tasks were quickly and easily completed by the children. Some tasks, however, were problematic for them. The students had the most difficulty with complex procedural and ambiguous tasks. Nearly all of the students perceived the same tasks as problematic. The students tended not to be flexible in their task definitions when they encountered such problematic tasks. Once they had defined a task one way, they did not vary that definition. Anne proved to be the only exception to this rule.
CHAPTER V

Results: Match of Task Definitions

The teacher, using the basal materials, set the task for the children within the framework of her assignments. The children mediated those tasks, completed them or not, and submitted their final response to the assignments back to the teacher for evaluation. Their success in school reading depended on their ability to complete those tasks accurately—to produce responses which matched those expected by the teacher and the text.

How children define the task, their expectations of the cognitive requirements necessary to complete the task, combined with the strategies they use to work through the task, determine what they learn (Doyle, 1979b, 1983). To understand better the dimensions of that learning, it is necessary to see how the students' task definitions relate to the expected final product which is evaluated as successful by the teacher and the text. Successful evaluation implies for the teacher that the student has learned and does indeed understand the content of the lesson.

There were four ways in which task completion, successful or not as determined by the teacher, related to student task definitions. Figure 3 illustrates the
<table>
<thead>
<tr>
<th>Successful Completion of Task</th>
<th>Unsuccessful Completion of Task</th>
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<tr>
<td>Successful Match of Task Definitions</td>
<td>A</td>
</tr>
<tr>
<td>Unsuccessful Match of Task Definitions</td>
<td>C</td>
</tr>
</tbody>
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**Figure 3.** Relationship Between Successful and Unsuccessful Match on Task Definition and Successful and Unsuccessful Task Completion
relationship of task definitions which matched the dimensions set by the teacher and text, and task definitions which did not, with successful or unsuccessful task completion. There were occasions in Mrs. Williams' classroom when students' task definitions matched the expectations of the teacher and text and the task was completed successfully (Cell A). There were also times (Cell B) when the student defined the task much as the teacher and text expected, but failed to produce a successful final product. Students in Mrs. Williams' class also defined tasks differently than the teacher or text expected, but were still able to complete the task successfully (Cell C). Cell D represents those occasions where students defined the tasks differently from the expectations set by the teacher and produced inaccurate final products, judged as unsuccessful by the classroom teacher. Within Mrs. Williams' classroom all four relationships occurred.

Successful match/successful completion. For the majority of the reading tasks in Mrs. Williams' class the students were able to determine what was being asked of them and they were able to complete the task accurately. Unambiguous and relatively simple procedural tasks were most likely to be defined as the teacher and text expected and performed with accuracy. For example, when asked to
complete the statement, "In Part II there are chapters," all four focal students recognized the procedural elements of the task, looked at Part II in the sample table of contents on the preceding page and correctly reported the answer "3" on their papers.

**Successful match/unsuccessful completion.** It was possible, however, to correctly define a task but to produce a response judged as inaccurate by the teacher. There were three reasons why students in Mrs. Williams' class produced such errors when they had correctly identified the cognitive requirements necessary to complete the task: 1) the child misapplied the appropriate strategies, 2) the child made errors in their recall of textual information, and 3) the child lacked the content knowledge necessary to complete the task successfully.

David provides an example of misapplication of strategies when he attempted to complete a worksheet activity that asked him to cross out the topics on the list that did not appear in the article he had just read and then to put the remaining topics in the order they appeared in the article. David, relying on his memory of the article, correctly identified and crossed out each item which did not appear in the text. Then, as he worked to place the remaining topics in order, he crossed out each one as he used it, obliterating his response to the
first part of the question. In this particular situation, David understood the cognitive dimensions of the task, what it was asking him to do, and he was able to successfully complete the assignment. However, the strategies he used to complete the remaining part of the question, though appropriate, disguised that understanding. His answer was marked incorrect.

Rena's performance on the same worksheet activity illustrates how an error in her recall of textual information led her from an appropriate task definition to an erroneous response. Rena failed to recall that the article had mentioned that snails were considered edible in many parts of the world. As a result, she crossed off the topic "snails as food" and then needed to identify another topic on the list that was included in the article. Her subsequent response was judged to be incorrect. As with David, Rena's performance indicated that she understood the requirements of the task and was able to complete the assignment demonstrating that understanding. However, her inability to recall information from the text led her to an inaccurate response.

Luke provides an example of how a lack of content knowledge can lead to an erroneous response even if the student understands the requirements of the task. Luke
was asked in one workbook activity to read a phrase providing some information about a book. He was to identify which type of library catalogue card he would look on to locate the book in the library. He was also asked to identify the card catalogue drawer in which he would find the card. Luke was consistently able to identify the card type (title, author, or subject) and he was able to locate the drawers for most cards. He did not, however, know what word to use when looking up the title of a book. He suggested that the card for the book "A Young Person's Guide to Ballet" would be located in the "B" drawer. He said that the card for the book "Fifty Favorite Songs" would be located in the "S" drawer. And he put down drawer "C" to look in for the book title "When Clay Sings."

In all three instances the students understood the requirements of the task and demonstrated through their performance that they could have successfully completed the task. David misapplied the procedures, Rena misremembered information, and Luke did not know how to alphabetize book titles. Their errors suggested to the teacher that they understood little of what was required of them. In fact, they understood completely what to do and how to do it. Their inaccurate responses did not reflect errors in understanding the elements of the task.
Unsuccessful match/successful completion. There were occasions when the students defined a task differently than anticipated by the teacher or the text yet were able to produce a correct response to the question. Anne, recognizing that the worksheet item, "The first paragraph is an _______ paragraph," was a memory task, first attempted to recall a word that might adequately complete the sentence. She attempted the word "topic," but rejected that on the grounds that it did not begin with a vowel. When she could not produce an answer from memory, she redefined it as a matching task and began to look for a word that would fit and might make sense. She was able, in this way, to produce a correct response. It was clear, though, through her definition of the task and the strategies she used to complete the task that she did not understand the concept of introductory paragraphs as her accurate response to the task might have implied.

The teacher, in this instance, expected the students to have understood her explanation of introduction and summary paragraphs the previous day and to have remembered that. None of the other children had been able to successfully complete that sentence on the worksheet. When Mrs. Williams corrected Anne's sheet and saw that she had it correct she assumed that Anne did understand and
had remembered. "Maybe I didn't fail yesterday after all," she commented.

David's performance on a different reading task provides another illustration of an inappropriate task definition which still led to a correct answer. David read the question, "If you want to know about wars in Russia, what topic should you look up?" The sample index above the question had Russia cross-indexed with the Soviet Union. David defined the task as a matching task, similar to others that had come before, and though slightly perplexed at first, soon noticed that the question asked for the "topic." David wrote the correct answer, Soviet Union, without understanding the complex procedural elements of cross-referencing.

In both of these situations, the students, Anne and David, produced the correct responses but their performances as they worked through the tasks demonstrated that they did not understand the tasks as the teacher had hoped they would and judged they did based on their responses.

Unsuccessful match/unsuccessful response. It was most likely when the students inaccurately defined a task, that the subsequent related strategies they employed would lead to incorrect answers. An example of this was David's defining all the teacher questions during recitation as
procedural matching tasks and looking in the text for an answer. Many of Mrs. Williams' questions were procedural so this task definition and subsequent strategy worked often enough for David. But when she asked a question which required the recall of previous information (e.g., "What does miscellaneous mean?" or "What almanac would you look in to learn about 1986?") David was unable to complete the task accurately because he defined it as a matching task and looked in the text for an answer that was not there.

David regularly misdefined some seatwork tasks and, subsequently produced inaccurate answers. When asked a question following a story where the answer was located directly in the text, David would often define it as a memory task and write a response based on his personal experience. For instance, when answering the question "When is the best time to collect shells at the beach? Why?" David wrote "Summer. because that is the usul [sic] place to go during the year." Either a procedural matching definition or a text-based memory recall definition might have produced an accurate response. His task definition, however, lead to associational strategies that produced an incorrect answer according to both the teacher and the text.
Summary

Thus, in response to the third research question, it was most likely that students who completed classroom reading tasks correctly did understand what they were being asked to do and how to go about doing it. Though there were occasions when students misdefined tasks and still produced correct answers, they were infrequent. When students were not successful in completing classroom reading tasks, however, it was for a number of reasons. They most often did not know what they were being asked to do and consequently misdefined the task. On occasion their inability to define ambiguous tasks led them to not respond at all, guaranteeing failure. On several occasions, however, students defined tasks appropriately to the task environment and would have produced correct responses but they misapplied a strategy, or misremembered, or did not know, an important piece of information necessary to complete the task successfully.

Correct answers, then, often represented an appropriate match of a task environment with a task definition. Incorrect answers, though sometimes wrong for a variety of reasons, most often represented an inappropriate match.
CHAPTER VI

Conclusions

The general question being asked in this study is how, given the same instruction, some students are successful while others are unsuccessful in completing reading tasks in school. In order to answer this question, three related questions will be answered in turn.

1. What classroom reading tasks are students asked to complete?

The students in Mrs. Williams class were asked to perform reading tasks which were sometimes comprehension, sometimes procedural, sometimes memory tasks, and sometimes a combination of these. The focus for most tasks was on materials from the basal text. Those tasks which required an oral response from the students were, for the most part, procedural or rote memory tasks. The assignments which required a written response from the students were predominantly procedural tasks.

2. What do students do as they work to complete school reading tasks?

When children in Mrs. Williams' class were presented with reading tasks, they both a) attempted to understand what the task was calling for, that is, create a problem
space for the task, and b) attempted to achieve their own purpose goals as students in the classroom.

The tasks which were most problematic for students were those that were ambiguous or those that were procedurally complex, requiring for completion a series of steps not explicitly stated in the directions. In either case the product goal of the tasks was obscured. All children, regardless of their success as school readers, found the same tasks to be problematic.

When the task environments for reading tasks were unclear, the tasks were difficult for the children to understand. Such tasks therefore added to the risk level of the classroom.

3. How do task definitions and task completion for children of differing success compare with the expectations of the teacher?

The correspondence between the children's and the teacher's definitions of reading tasks was characterized by four patterns. Sometimes the children's and the teacher's definitions matched and the children completed the task successfully; sometimes, in spite of their match, the children were unsuccessful in performing the task. Sometimes the children's and the teacher's task definitions did not match, and the children failed; other times, in spite of the mismatch, the children succeeded. Often, when the students' and the teacher's task
definitions did not correspond, it was because of the ambiguity inherent in the task.

The Focus of the Study

The answer to the principal question of this study arises from the answers to all of these questions. The reasons that some children succeeded and others failed in performing the same reading tasks after having received the same instruction in the same classroom are different and more complicated than the reasons imagined by Mrs. Williams. She was frustrated by the apparently inexplicable failure of some of her students. She imagined that they must have been careless or disinterested. What she did not consider was that they often did not know what it was that they were being asked to do. Sometimes the children in her classroom failed to succeed in performing the reading tasks she had set for them even after they had analyzed those tasks with great sophistication. She did not recognize the ambiguity in the tasks she set or in the textbook and worksheets she used. As a result, in the explanations she gave as she made assignments she did not help the children understand what they were being asked to do. Nor did she appreciate the cognitive achievement of her students, regardless of the results of their performance, as they attempted to interpret the tasks. And finally she did not realize the
level of risk she created for the students in her classroom by her public manner of praising and sanctioning their performances. As a result, she did not appreciate the ways that this level of risk affected her children's attempts to interpret and perform reading tasks.

The students in Mrs. Williams' classroom, therefore, achieved far more success than she knew. And their failure was far more complex than she imagined.

Discussion

Winne (1983) said that to profit from instruction students must perform three steps. First, they must notice instructional stimuli and understand their cognitive intent. Secondly, the students need to operate on the content using the intended cognitive processes. Finally, the students must store the newly learned content in a cognitive structure for later retrieval. Winne (1982) identifies two types of stimuli presented to students in an instructional setting: 1) the content to be learned, the focus of instruction; and 2) the instructional stimuli, other than the focal content, intended to control or direct the students' cognitive processing of the focal content. When a response is required of the students, students may fail to respond appropriately to such instructional stimuli in four ways:
-- the student may not attend to the cue;
-- the student may choose not to respond;
-- the student may lack the curricular information necessary to respond appropriately;
-- the student may not understand what kind of an answer is required (Winne, 1985a; see also Winne & Marx, 1982).

The four focal students in this study all failed to respond appropriately to instructional stimuli at one time or another. Though the reasons for their inappropriate responses varied, a pattern did emerge. Winne's (1985a) catalogue helps define the pattern.

**Non-attention to instructional cues.** Most of the time, the students in this study did attend to instructional cues. They listened in class and read the directions and questions contained in the written assignments.

David was the least attentive of the four. He claimed that he did not listen in class and he was frequently observed staring off into space or engaged in other activities during instruction. Often, however, his behavior belied his own assertions of inattention and he would attend carefully enough to the lesson to be able to participate at a level which he seemed to hope would convince the teacher that he was listening.

The other three children reported that they did listen to the classroom instruction. Luke, though he
occasionally appeared inattentive, reported only disinterest; he regularly stated that he had been listening. Rena's behaviors were directed toward the textual materials during most lessons. She appeared to be following along in the text and, in fact, reported doing so. Anne, like Rena, would look at the text, but was also observed looking at the teacher. Anne reported that she regularly attended to the instruction.

Peterson and Swing (1982), asking children to report on their attention and understanding during lessons, found that the students' self-reports correlated more closely with their actual achievement on post-lesson measures than the researchers' observations of the same students' attentional-type behaviors. This finding supports the assertions of the children in the present study that they were attending to instructional cues. It is likely, therefore, that inattention accounts for only a small amount of their failure to respond appropriately to instructional stimuli.

Choosing not to respond. Luke and Rena both failed to respond to questions on occasion, but David was the only student who regularly chose not to respond. Though there were parts of the instructional program in which David did actively participate (notably oral reading), he chose to respond at only the most minimal level for most
reading tasks. The reasons for David's non-participatory choices are not entirely clear from the data of this study. The data, however, indicate that David possessed a reservoir of knowledge and information about many things. He often commented that he already knew about what they were learning and, on occasion, provided information that elaborated or corrected what the teacher was telling the class.

Csikszentmihayli (1979) describes a feature of adult play, termed "flow," which he describes as most likely to occur when the challenge of an activity matches the skills of the participant. He notes that when the challenge of the activity surpasses the capabilities of the participant, worry and anxiety are created. In situations, on the other hand, in which the skills of the participants exceed the challenge of the activity, the participants may become bored and, in cases of clear mismatches, anxious. Such a description may explain, in part, David's choices in responding to instructional activities. The knowledge and skills David possessed may have far exceeded the challenges presented in those instructional activities so that he became bored and, at times, anxious. His responses to questions seemed motivated only by his desire to avoid teacher sanctions, yet he clearly was the most fluent reader, possessing a
keen sense of curiosity about the world and a powerful reservoir of experiences and knowledge from which to draw.

Luke's and Rena's reasons for occasionally choosing not to respond seemed motivated less by a sense of actual mis-match between ability and the challenge of the activity than by their perceptions of their ability. Luke and Rena had a failure orientation toward learning (Covington, 1984). Neither child, when faced with a problematic situation, had confidence that he or she would be able to solve the problem. Weiner (1983) claims that "individuals search for understanding, seeking to discover why an event has occurred" (p. 166). In searching for a cause for their failure to respond to an instructional task, therefore, Rena and Luke may have seen themselves as lacking in ability.

Nicholls (1984) states that "individuals are goal directed and . . . their behavior represents a rational or economic attempt to gain their goal" (p. 40). Dweck and Bempechat (1983) note that children's theories of intelligence influence the goals that they seek to pursue and the persistence they display in their pursuit. According to Dweck and Bempechat (1983), children have either one or the other of two theories of ability or intelligence: 1) that intelligence is an entity or trait
that can be judged or 2) that intelligence is a quality that is increased through one's own effort.

Luke and Rena appeared to believe that intelligence and ability are traits which they did not possess. They may have thought so for any one of several reasons: 1) because of comments inadvertently made by the teacher; 2) because they were at a developmental point where they began to attribute their success or failure to ability rather than effort; 3) because the competitive setting of the classroom promoted a sense of low self-esteem; or 4) because the type of tasks they were asked to perform contributed to their sense of themselves as lacking in ability rather than effort.

Like most teachers, Mrs. Williams communicated to the children her sense of why some were successful and others unsuccessful in completing tasks (Weiner, 1983). She explained repeatedly to all the children that the reason they were making errors was that they were not reading their instructions or were not listening to or reading the questions carefully enough. Such explanations may have convinced children, such as Rena and Luke, that they were lacking in ability rather than effort precisely because they had listened and had carefully read the instructions and questions, and yet were unable to respond appropriately.
Nicholls (1984; see also Covington, 1984) sees the awareness of the dichotomy between ability and effort as developmental. He asserts that young children perceive ability and effort as synonymous; they believe that the harder they try the more able they are to solve a problem. Older children and young adults, on the other hand, have a more differentiated conception of ability. Older persons recognize that though more effort produces more learning, a greater effort can also imply a lower ability if other persons expend less effort for similarly successful results or if the effort results in failure.

For Luke and Rena, the developmental growth which prompted a more adult-like reasoning (Covington, 1984), combined with the teacher's confirmation that effort is necessary for success, may have led them to perceive the source of their failure to respond adequately to some instructional tasks as a lack of ability rather than a lack of appropriately guided effort.

The competitive setting of the classroom may have also contributed to Rena's and Luke's sense of themselves as inadequate. Ames (1984) notes that in competitively structured classrooms the rewards are reserved for students who are able to generate the correct answers or the most correct answers. Competitive settings which produce failure also produce in children who fail
expressions of low self-concept—they express low levels of self-esteem and they have increased levels of self-criticism—compared with students who fail at similar tasks in non-competitive settings (Ames, 1984). Covington (1983) suggests that competitive settings add pressure to the student, making satisfaction dependent on doing better than others rather than on bettering one's own performance. In competitive settings one's sense of competency shifts from attempting success to avoiding failure (Covington, 1983). Failure avoiding strategies include non-participatory strategies (Covington, 1984), such as those demonstrated on occasion by Rena and Luke.

It may also be that the type of tasks the children were asked to perform influenced their low sense of themselves as learners. Covington (1984) suggests that what one is asked to learn is important to one's perception of ability as either a static or a developing trait. He notes that tasks which require students to learn facts and information by rote, emphasizing the speed and efficiency of the learning, favor the static aspects of ability. On the other hand, broad learning-to-learn skills may enhance the students' view of "acquired knowledge as a tool that provides an ever greater capacity to learn" (Covington, 1984, p. 17). A task which emphasizes the static view of ability coupled with a
failure to be able to respond may suggest to the students that the failure is a result of their lack of ability.

Thus, Luke and Rena, on occasion, did not respond to questions posed either by the teacher or by the text. Their decisions not to answer seem to have stemmed, in part, from their view of ability as a static internal trait.

Anne responded to all instructional stimuli requiring a response. Anne appeared, judging by her behaviors and the comments she made, to have a success orientation (Covington, 1984) toward learning. She saw her success as resulting from a combination of ability and effort. Perseverence was a strong behavioral trait in Anne's task orientation. She seemed to believe that if she put forth enough effort, she would indeed be successful in most school tasks.

Lack of content knowledge. There are two types of knowledge necessary to learn, declarative and procedural knowledge (e.g. Gagné, 1985; Winne, 1985a). Gagné (1985) explains the difference stating that declarative knowledge is represented by propositions—facts held in long-term memory—whereas procedural knowledge is represented by productions—a transformation of information.

"Declarative knowledge is knowledge that something is the case, whereas procedural knowledge is knowledge of how to
do something" (Gagné, 1985, p. 48). Together these two types of knowledge constitute the content to be learned (Winne, 1985a). For many tasks, the knowledge required for success is both declarative and procedural (Gagné, 1985).

The students in Mrs. Williams class for the most part appeared to have access to the declarative aspect of the content. Though they differed in reading skill and prior success as school readers, they either knew much of the factual content covered in reading instruction or they acquired the information necessary during the lesson. There was, in the protocol analysis data, a surprising lack of discrepancy between the successful readers and the less successful readers in declarative knowledge. Luke did not know, on one occasion, which word in a title to use in alphabetizing the book. Anne and David were unaware that the symbol "W-Z" on a card included the letters "X" and "Y". Luke and Rena had the greatest difficulty recognizing words, but few that they did not know were key words in working through the tasks they were being asked to complete. The most perplexing content information for all four children occurred in the attempts on the part of the basal text to include real-life and multi-ethnic references in instructional tasks. The students uniformly were unsure if "Roald Dahl," "Jamake
Highwater," or "Chung Ling Soo" were the names of individual people or were references to something else. In each case the children needed to rely on syntactic cues such as "... is a good writer," or "a book by ...," or "the magician ..." in order to determine what the words meant.

Procedural knowledge was more difficult to assess. The students in this study were regularly perplexed by the procedures required to manipulate and display information. This confusion appeared to stem, not from the unavailability of procedural knowledge but, rather, from a lack of clarity about what was expected. If they knew what was being asked of them, even if it was procedurally complex, then they knew what to do. Most often their inability to respond correctly came not from knowing what to do and not being able to do it, but rather from not knowing what was being asked of them in the first place.

Not understanding the question. The principal reason why the students studied were unable to respond appropriately to instructional stimuli was that they did not understand what was being asked of them. In Winne's (1982) identification of the two types of instructional stimuli, the content and the stimulus intended to direct the acquisition of the content, it was the latter which
caused the most difficulty for the students. The students in Mrs. Williams' class regularly attended to the instructional cues, but were often unable to understand their cognitive intent. Each of the students demonstrated, at one time or another, the resources necessary to operate successfully on the content using appropriate cognitive strategies. The students also were, when they understood the question, able to store learned information for later retrieval. The major problem for the students in Mrs. Williams' classroom became, then, understanding what they were being asked to do. Winne (1985a) suggests that students may not understand the product goal of the task, the kind of answer being required. This seemed true for Mrs. Williams' students in some situations. Even when the product goal appeared to be clearly defined as, for example, in a simple fill-in-the-blank task, it was not always understood by the students.

In most cases, the students were unable to determine the goal of the task because the task itself was ambiguously phrased, with vague referents or confusing instructions, or the task's ambiguity was accentuated by the supplemental explanations made by the teacher as she provided confusing, misleading, or even, at times, inaccurate information for the children. Mehan (1974)
observed a similar phenomenon in teachers directing oral recitation activities with young children. The ambiguity in the task directions set by the text and the confusing task explanations delivered by the teacher explain many instances when children in Mrs. Williams' class were unable to define the tasks appropriately for themselves.

When the tasks were ambiguous and the students' task definitions did not lead to what seemed to them to be an appropriate response, the children faced a problem. Anne was the most persistent in figuring out ways to solve the problem; she was also the most flexible in redefining the task in an attempt to reach a successful completion.

Ambiguous tasks may produce an unintended result for some students. Tasks which would require simple, low-level processing if the product goal of the task were clearly defined, in fact prompted both Anne and Rena, at times, to use cognitive problem solving strategies that were more complex and demanding than required by the task. They did so in order to understand what it was they were being asked to do.

David, perhaps for reasons suggested earlier, would find other ways to solve the problem—cheating, if that was possible, or just making up an answer, if cheating was not an option. Rena, demonstrating on several occasions that her knowledge and use of strategies was as
sophisticated as Anne's, would not persist as Anne would in the face of a problem. Rena, like Luke, seemed weighted down in her attempts to redefine the problem by her sense of her own lack of ability. Luke, in many respects a classic case of learned helplessness (Johnston & Winograd, 1985), failed, not because he lacked the ability to complete a task, but because he did not flexibly and efficiently employ the goal-oriented strategies necessary to complete the task successfully. Luke's attitude may have stemmed from prior school task associations (Johnston, 1984). Both Rena and Luke had been in remedial reading programs for three or more years. Identification as a remedial student and placement in such programs has been shown to result in differential treatment for the remedial students in the regular classroom (Johnston & Winograd, 1985). The differential treatment Luke had received in such programs may have contributed to his helplessness in the face of classroom reading tasks.

A major finding of this study, then, is that the students' greatest difficulty in completing the task accurately was in their attempts to understand what it was that some tasks were asking them to do. Though some of the children were at times inattentive, though some of the children at times chose not to complete a task, and though
at times some of the children lacked the content knowledge necessary to complete the task accurately, the most pervasive problem in solving school reading tasks accurately and as the teacher expected was, for these children, in their attempts to define the task appropriately.

The reasons for their mis-definition of the tasks appeared to come, in part, from their prior conceptions of themselves as readers. David appeared to see himself as a skilled reader and was, perhaps, bored with the mundane tasks embedded within the reading instruction. Luke perceived himself as incapable of deliberately generating success in any instructional task and thus searched for any response which would satisfy a purpose-goal of responding.

The major reason for the students' mis-definition of instructional reading tasks, however, appeared to stem from the ambiguity inherent in the task environment—in the way the tasks were structured and orchestrated by the instruction, the phrasing of the questions, and the explanations of the teacher. This finding questions the inclusiveness of Doyle's (1983) assertion that the level of ambiguity is simply inherent in the structure of the task itself. It may be true, as Doyle (1983) argues, that some tasks are inherently more ambiguous than others.
Essay questions are, for example, more ill-defined than fill-in-the-blank questions and thus more susceptible to ambiguous interpretation. But even tasks which are apparently clearly defined and have an unambiguous product goal may be made ambiguous by the task environment in which they are presented to the students. In Mrs. Williams' classroom, the ambiguity of instructional reading tasks was often due to her own presentation of the tasks to the children. And the ambiguity which resulted from her instructions and explanations was also compounded on many occasions by the high risk level in her classroom. In her room, all evaluations were public and she focused on correct responses, both oral and written. The students' persistence in working through tasks, their flexibility in defining and redefining problematic tasks, and their perceptions of themselves as able and intelligent learners capable of expending effort and solving problems—all were diminished, even in the most successful students, by the very public accountability structure of this classroom.

The Theoretical Framework

The theoretical framework of classroom learning presented in Chapter I was based on three perspectives: 1) of students as the mediators of their own learning, 2) of academic tasks as the central focus for cognition in the
classroom, and 3) of classroom ecologies as dynamic forces which impact on both the task environment and the problem space created by the learners. The results of this study indicate that the structure of this model is both too linear and too lean.

The students in Mrs. Williams' classroom were cognitive mediators who did attend to and focus on the academic tasks presented within the classroom. However, the levels of ambiguity inherent in the tasks, the public and social roles assumed by each student within the classroom, the risk levels for certain activities, and the purpose goals each student brought to the experience interacted in varying degrees to influence the ways in which they completed those tasks.

The interactions when overlaid on the model, disrupt the tidy compartments, forcing them to overlap each other, and send the arrows shooting upwards and downwards in loops and arcs—all of which make it messy and make it real.

Learning, especially learning in complex environments such as classrooms, appears not to be neat and orderly, but to be responsive to many factors which slip and slide, together and apart, into different patterns. The model in Chapter I, then, represents a skeletal framework that is not refuted by the reality of the classroom, but which
does not do justice to it. New models, flexible and complex enough in their own right, need to be developed to account for and reflect the complexity of the reality of the classroom.

Implications for Instruction and Future Research

Data from this study suggest several considerations for future research on classroom learning.

1. From the data of this study it is clear that the risk level in a classroom will influence the cognitive processes students use as they work to solve instructional tasks. To ignore such an influence is to fail to understand what students do in school as they attempt to learn from instruction.

Besides influencing cognition directly, the risk level in a classroom may exert a strong influence on a student's task orientation. Students who do not begin promptly, complete assignments, or turn assignments in on time may view tasks differently because of the ways in which their performance had been judged within the accountability structure of the classroom.

Classroom teachers need to recognize factors which raise the level of risk for classroom tasks and identify the elements in their own instructional program which may accentuate such risks, such as ambiguously phrased tasks,
imprecise explanations, or public accountability for error. Tasks assigned within classroom environments are set within an accountability system that is a well-accepted structure in schools. How the students are held accountable, publically or privately, and what they are held accountable for, a predetermined "correct" answer or a way of thinking about a solution, all influence the risk level inherent in the evaluation of classroom tasks. Becoming aware of how risk impacts on the cognitive aspect of task completion, will help teachers see that raising the risk level in a classroom may reduce what the students are able to learn from academic tasks.

The results of this study suggest that researchers need to 1) recognize and account for risk as a factor as they work to understand students learning, and 2) examine further the impact that varying risk levels have on student task completion. This study emphasizes the importance, for researchers interested in classroom learning, of taking an ecological perspective and examining the impact the environment of the classroom has on the ways in which students complete and learn from tasks.

2. This study also suggests that the support offered by peers may be an important factor for students as they work through tasks. Bossert (1979) suggests that the
classroom task structure may strongly influence peer relationships. He studied classrooms with different task structures and found that children varied in how they related to their peers in differently structured classrooms. In classrooms with traditional task structures, academically successful students tended to socialize and interact with other academically successful students and academically less-successful students related principally to children who were also less-successful.

In Mrs. Williams' classroom, the academically more successful students formed a vital support network for themselves. This network provided the participating students with declarative and procedural information which permitted them to reduce the ambiguity of the tasks and also reduce the risk the students felt in the instructional situation.

The academically less-successful students in this classroom, however, had no such support even among their other academically less-successful peers. They neither received nor gave information to each other which might have reduced task ambiguity. They also, and perhaps most importantly, worked alone to solve the classroom tasks they were presented with. This meant that the risk level in the classroom was higher for them than for the more academically successful students in the class.
Classroom teachers, such as Mrs. Williams, discourage cooperation and mutual assistance among students. In so doing, however, they may eliminate an important resource for their students' learning, especially for their less-successful students. Teachers may find that creating tasks and opportunities for social interaction which promote cooperation will affect the ways that students complete and learn from academic work.

Peer support, as a resource used by students, will only be observed within the structure of the classroom. In this study peer support was noted during participant observation and the interview aspects of data collection. The students working through protocols, with just the researcher present, had no opportunity to elicit or use peer support. To learn more about the phenomenon of peer support and to more clearly understand its impact on task completion and learning, future research needs to be focused on naturalistic data collection within the classroom.

3. A further implication of this study is that future research on student cognition needs to address the effects of student attribution on motivation and cognition in natural classroom settings. The question needs to be addressed as to how students' own perceptions of themselves as learners affect what they do as they work to
complete instructional tasks. Within this study no formal measures of attribution were taken, but statements made by students during interviews and protocols suggested that what they thought about themselves as problem solvers profoundly affected the ways in which they defined problematic tasks. Peterson and Swing (1982) controlled for attributions, student ability and aptitudes toward mathematics as well as measuring locus of control, but their study was conducted in an artificial learning situation which did not contain the very real accountability structures inherent in a natural classroom setting.

4. The data from this study, particularly in reference to David, Luke, and Rena, suggest that future studies of student cognition should not only be set within the context of the naturally evolving classroom environment, but also attempt to account for the past learning history of the students within the school and the home. Johnston and Winograd (1985) suggest that aptitudes are formed early and lastingly by the home and parental influences. The children in this study had, by the time they had entered the fifth grade, a history of learning that may have had a profound influence on them as learners. In-depth longitudinal studies of students might emphasize the learning history of children in school.
Observations of students' and parents' interactions, combined with interviews with parents, previous teachers, and the students themselves focusing on prior school experiences, might elicit information that would help researchers understand the force of cumulative experience on the cognitive processing a student uses to solve school tasks.

Teachers need to understand the learning history of children, as well. Teachers, recognizing that students who have had, in the past, a predominance of certain types of academic tasks may have come to expect almost all school tasks to be similar, may be able to help direct the task definitions of their students as they work to understand new or novel tasks.

5. This study indicates that understanding task completion in terms of the match or mismatch between the response produced by the student and the expectation of the teacher or text, may be a helpful distinction for future researchers. The match between teacher intention and student task definition has been examined by Winne and Marx (1982). They found that students did perceive some of the instructional intentions of the teacher. Their study of elementary classrooms, however, focused on recitation tasks and did not deal with the successful or unsuccessful completion of assigned written tasks.
Understanding what the student thought the task was asking and how the student went about completing the task in relation to the intent of the teacher, provides a possible framework for understanding how learning occurs in the classroom environment.

6. A number of researchers have suggested (e.g., Gagné, 1985; Johnston, 1984; Marx, 1983; Peterson & Swing, 1982; Winne, 1985b) that teaching students to use appropriate strategies as they work to solve instructional problems may be helpful. In fact, teaching such strategies appears to improve performance on some well-defined tasks, but transfer to other tasks has been shown to be discouragingly low (Gagné, 1987; Frederiksen, 1985). The data from this study suggest possible reasons for such a finding. Classrooms are complex environments (Doyle, 1977a, 1977b), and students' cognitive responses to classroom tasks seem to be affected by a complex and interconnected series of factors. This examination of fifth-grade students' task definitions suggests that it is not one, or two, or even three factors, but multiple, interrelated factors which influence students' learning in classrooms. As a result, teaching students specific strategies may only have a localized effect on their learning.
An important consideration for future research would be to teach strategies to students who are working under a variety of classroom instructional conditions. It might be that students who are taught to use specific strategies in classrooms in which peer support and cooperation is encouraged, the risk level is reduced, or the tasks are made both explicit and clear, would use such strategies for other, similar tasks.

This study suggests that students know or could easily acquire sophisticated strategies. What they need to know first, however, is what a task is asking them to do and then have the confidence instilled by prior positive learning experiences that the problem is definable and that flexibility of definitions will generate flexible use of strategies. Teachers who attempt to teach specific strategies without taking other interrelated aspects of the learning environment into account, will encourage their students to fail and neither the teacher nor the student will understand why such a failure has occurred.

Summary

The present study adds to our understanding of student responses to instructional stimuli, student task definitions, and the associated learning that students
achieve in school. It will be important now to examine more children working through a greater variety of classroom tasks under varying degrees of ambiguity and risk in order to understand more completely how children learn in school.

Students work hard to make sense of their world and the world of school is particularly perplexing for them. Students' responses to tasks can be understood if we take into account the widely diverse influences acting upon student cognition.

Though researchers have suggested that teaching students general problem-solving strategies will assist students in solving classroom tasks, this study suggests that, though such instruction may be helpful, just one type of intervention will not generally be successful. In order to help students learn better, we need to focus on clarifying the tasks students are asked to perform, reducing the ambiguity of instructional stimuli presented to students, and reducing the risk level in the classroom. If we want to change the way children learn in school then it will be necessary to change the ways in which academic tasks are orchestrated in the classroom.
References


Appendix A

General Observation Guide

1. Describe all reading activities (e.g., class discussions, teacher and student questions, seatwork assignments, in-class correction of previous work);

2. Describe all reading materials (e.g., books, stories, workbooks, overheads, etc.);

3. Describe printed directions for reading assignments (e.g., what the book, workbook, etc. tells them to do);

4. Describe the teacher's instructions for reading activities (e.g., what she says to do; how she suggests they do it; what, if any, reasons she gives for doing it);

5. Describe the interactions between the teacher and the students (e.g., questions, discussions, initiation of conversations, sanctions, feedback, etc.);
6. Describe the interactions between students (e.g., questions, comments, jokes, etc.);

7. Describe what the students do as they work to complete the assignments.
Appendix B

Focused Observation Guide

1. Describe all reading activities (e.g., class discussions, teacher and student questions, seatwork assignments, in-class correction of previous work);

2. Describe all reading materials (e.g., books, stories, workbooks, overheads, etc.);

3. Describe printed directions for reading assignments (e.g., what the book, workbook, etc. tells them to do);

4. Describe the teacher's instructions for reading activities (e.g., what she says to do, how she suggests they do it, what, if any, reasons she gives for doing it);

5. Describe the interactions between the teacher and the focal students (e.g., questions, discussions, initiations of conversations, sanctions, comments, jokes, etc.).
6. Describe the interactions between the focal students and other students in the classroom (e.g., questions, comments, jokes, etc.);

7. Describe what the focal students do as they work to complete the assignments.
Appendix C

Background Interview With Teacher

_Purpose_: This interview was designed to familiarize the teacher with the interview process, put her at ease with the tape recorders and researcher, and obtain important background information.

_Set purpose_: As you know I am here to learn about how children understand reading tasks. This will be the first of several interviews I will have with you during which you will be helping me think about the reading lessons in your classroom and the children's responses to those lessons. Today, however, I would like to have you talk about yourself in general, as a teacher, and as a reading teacher.

First I'd like to talk with you about where you were born, where you lived as you were growing up, your family as you grew up, and your family now.

How long have you lived in _______?

Were you born here?

Where did your grandparents live?

How many brothers and sisters do you have?

Are they older or younger?

Do they live in this area?

Tell me about your family, your husband and children.

Where is your husband employed?
How old are your children?
How long do you expect to live in ________?
Have you ever considered moving?
Do you expect your children to live here?

Now I'd like to talk with you about teaching. I'd like to know more about when and where you got your teacher training, why you decided to go into education, and some of your teaching experiences.

Where did you do your teacher training?
Where did you do your student teaching?
What made you decide to be a teacher?
You have a masters degree in education, is that correct?

When did you get that degree?
What made you decide to get a masters degree?
How long have you been teaching?
What other grades have you taught, besides fifth?
What do you like about teaching fifth grade?

Now I'd like to talk with you about your reading program. I'd like you to talk about the focus of the reading program, how you decide what to do with the children in reading, how you grade the children in reading, and your feelings about the reading program and the teaching of reading.
What are some of the different types of activities you have children do in reading?

How do you decide which activities to use?

Which reading activities are graded?

Do you give a daily reading grade or a grade for independent reading?

How do you decide which activities to grade?

What do you like best about the reading program in your classroom?
Appendix D

Background Interview With Students

Purpose: This interview was designed to familiarize the focal students with the interview process, put them at ease with the tape recorders and researcher, and obtain important background information.

Set purpose: I will be working with you and several other children over the next few weeks. You will be helping me learn about how students understand reading work. Today, however, I just want to ask you some questions about yourself and about school. Ok?

First I would like to have you talk to me about yourself, your family and things that you especially enjoy doing or thinking about.

How old are you?

When is your birthday?

Where were you born?

How long have you lived in _________?

Did your mom or dad go to school here in _________?

Where do your grandparents live?

Do you have brothers or sisters?

How many?

Are they older or younger?

What are some of your favorite things to do?
At home, after school and on weekends, what are the kinds of things you do?

Do you play mostly by yourself, with a friend, or with a bunch of kids?

Now I'd like you to talk with me about school. I'd like you to talk about your school experiences, what you like best and least about school, and what you would change about school, if you could.

Have you gone to other schools beside ___________

Which schools? In what grades?

Have you ever repeated a grade? Which?

If you could have a special day for just what you wanted to do in school, what would you choose to do?

What other things do you like to do in school?

What things don't you like about school?

If you could be principal, what would you change?

Now I'd like to talk with you about reading. I'd like you to talk about what is interesting for you about reading in school, what you find difficult, and what you think of your own reading skills.

Do you like to do reading in school?

What do you like best about reading in school?

What don't you like about reading in school?

What is easy for you in reading?
What is hard?
Are you a good reader?
Have you been reading books for the Touchdown reading chart?
What books have you read?
Which ones did you like best?
What about them did you like?
Were there some that you thought about reading, but chose not to?
What made you decide not to read them?
Who do you think are the very best readers in the room?
What makes you think this?
Can you name some children you think are having difficulty in reading this year?
What makes you think this?
Do you think you are a good reader?
Why do you think this?
Appendix E

Retrospective Interview Guide (Student)

Set purpose: I want to learn more about how children understand reading assignments. I am going to ask you some questions about today's reading lesson. I will not tell Mrs. Williams what you tell me. I am taping this so that I can go back over it later and think about what we have talked about.

I was there in the classroom today during reading, but I would like to know about what you remember and can tell me in your own words.

First I'd like to have you tell me what you did in reading today. If you can tell me, generally, what you did, then we can go back and talk about each part later.

What was the first thing you did?
What did you do next?
(Keep asking until student stops.)

You said that the first thing you did was to ... . Let's talk about that for a moment. I need to understand ... . Tell me more about it.

I want to learn about how you knew what to do when you were ... Everybody learns differently, pays attention to different things, and uses different information to help them know what to do. I would like you to think
about when you were ... and tell me what helped you know what to do.

How did you know what to do when you were ...?

Did Mrs. Williams tell you what to do?

What did she tell you to do?

Did the (workbook, textbook, worksheet, etc.) tell you what to do?

What did it tell you to do?

Was there anything (or anybody) else who helped you know what to do?

How did it (they) help you?

What did it (they) tell you to do?

I will learn more about what you were thinking about while you were ... if you can tell me about any time(s) when you were not sure what to do. When we aren't sure of something we usually think about a lot of things before we decide what to do. It would be helpful to me to know about the time(s) when you were unsure of what to do and what you thought about when that happened.

Were you ever unsure of what to do while you were...?

Tell me about what you were unsure of.

What did you think about doing?

What did you try?

What did you finally decide to do?
What made you decide to do this?
Were you unsure of any of your answers?
What made you unsure?
Tell me more.
What other things do you remember thinking about as you ...?

Another way for us to know what to do is to listen to, talk to, and watch other people who are trying to do the same thing. I'd like you to think about the other children in the class. I'd like you to tell me about the times you heard other children talking about ... (either to each other or to the teacher), about the times you talked to other children about ..., and about the times you watched them as they ... Anything you can remember—questions, comments, jokes, answers to questions—all of these will help me.

What did you hear other children saying about ...?
What did you see other children doing while they ...?
Did you talk to other children about ...?
What did you say to each other?

The teacher can be important in helping children know what to do. I'd like you to think about the times you talked to the teacher about ... or the teacher talked to you about it.
Did you talk to the teacher about ...?
What did you say to her?
Did you ask her any questions?
Did Mrs. Williams talk to you about ...?
What did she say to you?
Did you answer any questions she asked?

AT THIS POINT, GO BACK TO THE NEXT THING THE CHILD SAID HE/SHE DID OR, IF APPROPRIATE, GO ON TO A CONSIDERATION OF THE LAST QUESTIONS.

Now I'd like to ask you about grades for reading.
What things will be graded in reading today?
What would someone have to do to get a good grade on this?
What grade do you think you will get?

I've asked you lots of questions about today's reading lesson. Is there anything else I might have forgotten that you can tell me about?

IF YOU SAW SOMETHING DURING THAT LESSON THAT THE STUDENT DID NOT MENTION, BUT MIGHT BE SIGNIFICANT, ASK PROBING QUESTIONS SUCH AS:

Can you tell me more about ...?
Can you tell me about...?
This was used as a guide to the types of questions asked in the interviews. The specific wording was changed for each individual interview based on the types of activities which occurred during each lesson.
Appendix F

Retrospective Interview Guide (Teacher)¹

Set purpose: I am interested in learning more about how children understand and work to complete reading assignments. It will be helpful to me if you can answer some questions about today's reading lesson. I am taping this conversation so that I can go over it later and think about the things that we talked about.

I was there in the classroom today during reading, but I would like to understand your perceptions of the lesson, what you can tell me in your own words.

First I'd like to understand the lesson as a whole. It will help if you can give me a general overview of the lesson. Then we can talk about each of the parts of the lesson in greater detail.

So, tell me first of all, what you did first in reading today?

What did you do next?

(Keep asking until the teacher stops.)

You said that the first thing you did was to ... Let's talk about that for a moment.

As we talk about the lesson it will be helpful if you can remember what any of the children did or said, but it will be particularly helpful if you remember anything
about the responses of the four focal students I'm observing and will be interviewing (Rena, David, Luke, and Anne).

It will help me to understand the lesson if you can talk to me about the process you went through in planning this lesson.

What made you decide to do this lesson with the children?

Was there another lesson or other activities you considered doing today? (If yes,) Tell me about them.

What were your reasons for selecting this lesson rather than one of the others you considered?

How do you think this lesson will help the children in the class?

Your expectations are an important element in understanding school reading lessons. I'd like to know what you think the children needed to do in order to successfully, what you expected them to do, and what you saw them actually doing as they ...

Tell me step-by-step what the children needed to do in order to successfully complete the assignment?

Tell me what you expected the children to do as they worked to complete each step of the assignment.
What did you see the children actually doing as they worked to complete the assignment?

Were there other things that they might have done to successfully complete the assignment?

Children understand what to do by talking to, listening to, and watching each other as they participate in a lesson. I'd like you to talk to me about what you noticed about children helping each other understand what to do.

Did the children talk to each other about ...?

What did they say to each other?

Did the children watch each other as they worked through the lesson?

Did the children listen to each other as they asked questions about the lesson?

Your interactions with the children are also important in helping them understand what to do. I'd like you to think about the times you talked to the children or they spoke to you about ...

Did the children ask you questions about ...?

What did they ask?

What did you say in response to those questions?

Did you talk to the children after they had begun to work to clarify or explain anything they didn't seem to understand?
What did you say?

What prompted you to do this?

AT THIS POINT, GO BACK TO THE NEXT THING THE TEACHER SAID
OR, IF APPROPRIATE, GO ON TO A CONSIDERATION OF THE LAST
QUESTIONS.

Grading is one way of helping me to understand parts
of the reading lesson.

What parts of this lesson will you grade?

Tell me how you expect to correct and grade this
assignment.

What grades do you expect the focal students (i.e.,
Rena, Luke, David, and Anne) will get for this
assignment?

I've asked you a lot of questions about today's
reading lesson. Is there anything else I might have
forgotten that you can tell me about this lesson?

IF YOU SAW SOMETHING DURING THAT LESSON THAT THE TEACHER
DID NOT MENTION, BUT MIGHT BE SIGNIFICANT, ASK PROBING
QUESTIONS SUCH AS:

Can you tell me more about ...?

Can you tell me about ...?
This was used as a guide to the types of questions asked in the interviews. The specific wording was changed for each individual interview based on the types of activities which occurred during each lesson.
Appendix G

Protocol Instructions (Students)

Today I would like to have you do the reading assignment given to you by Mrs. Williams. You should do it the same way you would do it if you were working in the classroom. But you need to talk out loud while you are doing it. You need to say aloud what you are thinking and what you are doing.

When you read the story you should read it silently to yourself, but when you come to a "star" you should stop and talk about what you were thinking while you were reading that section.

For the rest of the assignment, everything you read, you need to read it aloud. If you write anything, you need to say what you are writing. The most important thing is for you to say aloud what you are thinking.

I will not help you as you do your work. I will remind you to talk about what you are thinking if it is necessary. If you are unsure of something you need to talk about that.

1This represents a sample instruction sheet. The wording was changed slightly on other days to accommodate different assignments.
Appendix H

Protocol Instructions (Teacher)

Yesterday you had the children do a reading assignment and turn it into you to be graded. You have the assignments completed by the four children I am working with in front of you now. I'd like to have you correct them one at a time, thinking about and marking them as you did the work of the other children in the room. However, I would like you to talk out loud while you are doing this.

You need to say aloud what you are thinking and what you are doing while you grade these four papers. Everything you read you need to read aloud. If you write anything, you need to say what you are writing. The most important thing is for you to say aloud what you are thinking.

I will not comment on the children's work. I will, however, remind you to talk about what you are thinking or doing if that is necessary. Do you have any questions?

1This represents a sample instruction sheet. The wording was changed slightly on other days to accommodate different assignments.
Appendix I

Sample Domain List: "Kinds of Reading Tasks"

Protocol 1

FN 11/11/2.2 Tchr. said to turn to p. 179

FN 11/11/2.6 Tchr. told them to look at p. 179
   Asked for general topic of Unit I
   Reminded to raise hands

FN 11/11/2.8 Tchr. ask Martha what was
   gen.topic

FN 11/11/3.2 Tchr. ask what page find chapter
   about inside earth
   Tchr. ask how know ending page
   Tchr. ask Sarah for another

FN 11/11/3.3 Tchr. ask about number of
   chapters in each unit (3 quest.)
   Tchr. read questions at bottom of
   p. 180

FN 11/11/4.1 Tchr. said to look at p. 181
   Asked where would find index
   Asked what wds called (entry)

FN 11/11/4.2 Tchr. asked what called in
dictionary
FN 11/11/4.4  Tchr. asked Jason question—yellow in text p. 181

FN 11/11/4.5  Tchr. asked number of subtopics under "equat..."

FN 11/11/5.1  Tchr. asked number of subtopics under another topic

FN 11/11/5.2  Tchr. asked question—yellow in text p. 181

FN 11/11/5.3  Tchr. ask what "Check Yourself" was

Ask what "see also" meant

Ask what is called in yellow in text

Ask again yellow part called

FN 11/11/5.4  Tchr. ask question at bottom of p. 181

Ask what pages to look under

Ask next question at bottom of p. 181

FN 11/11/6.5  Tchr. ask what antonym meant

FN 11/11/6.6  Tchr. rd. sent. & asked for antonym of wd. underlined

Did same for 2nd

FN 11/11/7.1  Tchr. rd. 4th sent

Called on child
FN 11/11/7.2  Tchr. rd list of wds (from text) and asked for opposite

FN 11/11/7.3  Tchr. rd. next set of wds. Called on child

FN 11/11/7.4  Tchr. rd. next set of wds. Called on child

FN 11/11/7.6  Tchr rd. next set of wds. Called on child

FN 11/11/7.7  Tchr. rd. next set of wds. Called on child Ask if heard of erector sets

FN 11/11/7.9  Tchr. rd. next set Called on child

FN 11/11/8.1  Tchr. rd. next set Called on child

FN 11/11/8.3  Tchr. said to look at T of C in book. "Street Games" story

FN 11/11/8.4  Tchr. ask, "Shell Treasures"

FN 11/11/8.7  Called on child

FN 11/11/8.8  Tchr. rd. last one Child gave answer

FN 11/11/8.9  Tchr. rd. directions last part Called out "first" "second" etc. Children chorused answers
Tchr. rd. directions top of pg. 1
Asked number parts in T of C

Tchr. ask questions about T of C
Children chorused answers

Tchr. ask Howard what pg.
Jamestown chapter ends
Howard gave answer
Tchr. said Noooo
Tchr. said to listen and explained

Tchr. rd. directions top of p. 2
Asked questions — index
Asked questions — entry wds.
Asked questions — cross ref.

Tchr. rd. 1st. one as example

Tchr. reread instructions, pg. 1

Told look at number 6
Tchr rd. it
Said wanted to know "which chapter"
Asked which
Chorused answers
FN 11/12/2.1  
Asked bottom of p. 2 what find in bibliography
Ask what find in glossary
Ask for difference between index & glossary
Explain

FN 11/12/2.2  
Tchr. rd. number 1
Called on child
Explain

FN 11/12/2.3  
Tchr. rd. number 2
Called on child

FN 11/12/2.4  
Tchr. rd. number 3
Called on child

FN 11/12/2.5  
Ask what difference between 2 & 3
Called on child

FN 11/12/2.7  
Tchr. rd. number 5
Called on child

FN 11/12/2.8  
Tchr. ask always have intro, glossary, index
Children chorused answers
Teacher explain

FN 11/12/3.1  
Ask if Banannas Chew Gum has

FN 11/12/3.2  
Ask if anyone has questions
AN/P1/4.6 I just read the questions answered the questions from the T of C up here.

AN/P1/4.7 Up here I had to read this index...and I had to answer these questions about it. And down here...you had to put whether you got it from the bibliography, glossary, index, intro, or T of C.

TCHR/P1/1.2 They should have capitalized "The First Colonies" in the 2nd question.

TCHR/P1/1.3 On number 4 he put down pg. number and should have been chapter two.

TCHR/P1/1.5 On number 5 should be pg. on which it ends.

TCHR/P1/2.1 Number 3 at bottom, you are supposed to say what part of the book it's from. He has T of C. It should be index.

TCHR/P1/2.4 Should have capitalized "First Colonies."
TCHR/P1/2.5 Should have had where chapter on Maryland ends.

TCHR/P1/2.6 Should have had glossary
Should have looked in glossary, not index.

TCHR/P1/2.9 It's neat.

TCHR/P1/2.10 It should be to 300, but she has to 30.

TCHR/P1/2.11 Should have had Soviet Union instead of Russia because it was a cross-reference. "And we did talk about that a lot yesterday."

TCHR/P1/3.1 "She's not reading carefully"
Should be Chapter 2 (not name of chapter).
"They don't read their instructions. They don't read the questions."

TCHR/P1/3.2 Should have put chapter number not name.

TCHR/P1/3.3 Should have been Soviet Union

TCHR/P1/5.1 Said would probably "go back over" parts of the test that gave them problems.
Page titled "Textbook Study"

2 paragraphs under
"Understanding the Parts of a Textbook"

Sample T of C in science question: what is the general topic of Unit 1?

Rest of sample T of C question: on which pages will you find a chapter about the inside of the earth?

Building Skills directions to answer questions using T of C begins on p. 179

Three questions

Sample index - Math text

Building Skills

Two questions

Dittoed sheet - instead of overhead

1-4 sentences with wd. underlined
7 wds. underlined with 3 across
List following games in order would be found in index - 8 games
Small box: 3 stories to give pg. number from T of C

D 11/11/5 Periodic Test — page 1
Sample T of C
6 questions

D 11/11/6 Periodic Test — page 2
Sample index
5 questions
Identifying Parts of a Book
5 questions — choose from list of 5 parts of book

TD/LP/21 8:50-9:35 Reading
p. 179-181
T.p. 146 (use overhead)
Periodic Test 2, Part 1,
Form A

TM/T144 – T147 Textbook Study: Understanding The Parts of A Textbook

Applying the Skill
The T of C in Science
A Math Index
Providing for Individual Differences

Additional Practice

Challenge Activity

Identifying parts of a book which specific information can be found

Additional Practice

Evaluation
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