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Interactive writing and the literacy development of first-grade children

Compton, Constance Anne, Ph.D.
The Ohio State University, 1994
INTERACTIVE WRITING AND THE LITERACY DEVELOPMENT
OF FIRST-GRADE CHILDREN

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the
Graduate School of The Ohio State University

By

Constance A. Compton, B. A., M. A.

The Ohio State University
1994

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Dr. Janet Hickman
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Janet Hickman
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Copyright

by

Constance A. Compton

1994
To Melanie
and
My Parents
ACKNOWLEDGMENTS

I wish to express my appreciation to a number of individuals who helped make this study possible.

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Finally, my love and thanks to my family for their continuous support, understanding, and patience throughout this journey.
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CHAPTER I

THE NATURE OF THE PROBLEM

INTRODUCTION

The commonly accepted views of how children acquire knowledge about print may be placed in two polarized positions (Adams, Allington, Chaney, Goodman, Kapinus, McGee, Richgels, Schwartz, Shannon, Smitten, & Williams, 1991; Carbo, 1988; Chall, 1989). In one view reading and writing are perceived as processes that children continually acquire from a very early age (Clay, 1991; Teale & Sulzby, 1986) and in which they find meaningful ways to put print to use (Hansen & Graves, 1991). Within the social context, and without explicit teaching, most children come to recognize that print is both a symbol system different from other symbol systems (Y. Goodman, 1986; Teale & Sulzby, 1986) and a unique form of communication (Dyson, 1982). Evidence from studies of young children's behavior suggests that learning how to read and write is a constructive and active process (Bissex, 1980; Clay, 1991; Ferreiro & Teberosky, 1982; Harste, Woodward, & Burke, 1984). By immersing children in an environment that is rich in print and allowing opportunities for use, adults can facilitate children's print awareness and beginning reading and writing.

In the second view, "real" reading ultimately involves decoding and recognizing words. Researchers (Adams, 1990; Beck, 1981; Chall, 1989; Ehri,
recognize that much incidental learning takes place during preschoolers' home and common experiences and that reading aloud provides a real advantage, but knowing the alphabetic principle and using that knowledge to attack and solve new words are, among others, essential skills that must be mastered early. If children cannot read words, and most cannot, they must be taught at school. Inherent in this view is the assumption that children must be explicitly taught how to break the code of print as they progress through various stages of development (Chall, 1967). The learner depends on receiving knowledge from the teacher. Influenced by the work of Piaget, Chall (1967) developed a schema for understanding how young children learn to read. She described developmental stages that children proceed through in their process of understanding how print operates. How well or how fast children progress through these stages depends upon the interaction of individuals and environmental factors (Chall, 1989).

In many educational settings, educators have interpreted these theories in ways that have resulted in contrasting methods of reading and writing instruction. One interpretation has led to an emphasis on a "phonics first" approach to instruction and the teaching of isolated skills (Anderson, et al., 1985). Skills are taught in a sequential order, usually beginning with letter recognition, sounds that letters represent, and words in isolation, with little account for semantic or syntactic information until later development and after mastery of the earlier stages (Adams, 1990; Chall; 1989). In some cases, extreme interpretations may lead to programs that do not provide experience in reading and writing whole texts.

A contrasting method of instruction is an integrated language approach (Cochran-Smith, 1985; Holdaway, 1979; McKenzie, 1988) that operates under
the assumptions that children learn the whole before attending to its parts (Clay, 1991; Y. Goodman, 1984). In this model, children are immersed in a print-rich environment, and exposed to meaningful and purposeful literacy activities. They have numerous opportunities to engage with print through reading, writing, speaking, and listening. As children encounter and use language for different purposes, they develop new knowledge and the ability to use new forms of language (Pinnell, 1989). Children taught through this model are expected to extract the features of printed language and relate these features to reading and writing much the same way as they learned oral language during infancy (Reutzel, Oda, & Moore, 1989). Extreme interpretations of this model may lead to programs in which knowledge of how print works is left to chance.

A third model of instruction combines the two opposing perspectives and provides a balance of direct instruction and engagement with meaningful, purposeful activities. In this model, sometimes referred to as the Interactive Model (Tharp & Gallimore, 1988), teachers create an environment conducive to literacy learning, and play the role of facilitator that assists children’s performance within these literacy events.

Clay (1991) refers to this type of instruction as a responsive model of teaching. It is based on the teacher’s effectiveness to provide the clearest, most memorable examples for the child, in response to the learner’s needs at that particular moment.

Teachers who are steeped in the theoretical assumptions of early literacy and the early detection of reading problems, can learn to hold an incomplete personal theory, and, on systematic observation and reflective practice, learn to check their theory against the observations of the child and then make the most powerful decision at the moment (Lyons, Pinnell, & DeFord, 1993, p. 149).
Most children, despite their teachers' theoretical perceptions or the method of instruction, will grasp the concepts of reading and writing. Clay (1982) indicates that children who fail to understand print concepts and the reading and writing instructional methods used by teachers may become confused and even disabled very early in the process of learning to read and write (Reutzel, Oda, & Moore; 1989). Approximately 15-20% of these children are considered to be at-risk because they do not grasp print concepts and need more explicit methods of instruction (Clay, 1982; Pinnell, DeFord, & Lyons, 1988).

STATEMENT OF THE PROBLEM

Funded by the John T. and Catherine MacArthur Foundation, researchers at The Ohio State University collaborated with classroom teachers to develop and implement the Early Literacy Initiative, which was grounded in theoretical perspectives constructed to explain how children use a range of information while reading and writing extended text (Clay, 1993, 1991; Pinnell & McCarrier, 1993). The purpose of this project was to improve literacy education for young children who were considered to be at risk of failure due to economic disadvantage or inexperience in reading and writing (Pinnell & McCarrier, 1989). The central focus was the development of teachers' ability to transfer their knowledge of the reading and writing processes and use it in new ways to make decisions about instruction for the children with whom they worked.

For three years before the study began, school districts and The Ohio State University had been involved in the Reading Recovery project. Reading Recovery is an early intervention program that places emphasis on involving
young children in extensive and holistic reading and writing activities (Pinnell & McCarrier, 1993). It is designed for the lowest achieving first graders who are having difficulty in learning to read and write. A specially trained teacher works individually with a student for one half hour each day. During each lesson, the child reads books and composes messages with the help of the teacher.

Reading Recovery contributed to the Early Literacy Initiative in several ways. The five initial teachers in the project were trained Reading Recovery teachers. These teachers had an opportunity to learn how to closely examine young children's paths to literacy and to examine their own teaching. They learned how to vary instruction to meet the specific needs of an individual child. In addition, the teachers and researchers closely examined the theoretical foundation from which Reading Recovery developed, in order to draw information that would assist them in designing instruction in working with small groups of children.

Teachers and researchers collaborated to develop and test a lesson framework for small group instruction that drew from the teachers' collective experiences of teaching; research in learning theory (Bruner, 1978; Vygotsky, 1978); models of reading and writing (Chall, 1983; K. S. Goodman, & Y. Goodman, 1979; Holdaway, 1979; McKenzie, 1988; Smith, 1978); emergent literacy and learning to read (Ferreiro & Teberosky, 1982; McKenzie, 1988; Teale & Sulzby, 1986); writing development (Bissex, 1980; Clay, 1982; DeFord, 1980; King & Rentel, 1981); written language awareness (Y. Goodman, 1984; Harste, Woodward, & Burke, 1984; Sulzby, 1986); and social and cultural contexts for literacy development (Durkin, 1966; Heath, 1983; Snow & Ninio, 1986; Taylor, 1983; Wells, 1986). The framework of lessons
provided opportunities for children to actively interact with print within the social context of learning about language. The framework included eight recommended components: hearing stories read aloud, familiar reading, guided reading, shared reading, interactive writing, independent writing, story extensions, and monitoring student progress (Glasbrenner, 1989). The order of the components was not specified.

One component, interactive writing, was developed as a result of the teachers' knowledge of and experience with the writing component in Reading Recovery (Clay, 1982). In the one-to-one instructional setting of Reading Recovery, the teacher and child jointly compose a brief story or message every day in the lesson. The teacher helps the child to construct the message in a variety of ways: prompting or supporting independent attempts, writing for the child, or helping the child to analyze the sounds of words being written (Pinnell, 1989). These writing activities focus on meaning and the child's own language and allow for the visual details of print to be attended to within a meaningful context. The role of the teacher is important in that she is knowledgeable not only about the reading and writing processes, but also about the strengths and needs of the individual child.

Interactive writing is specifically designed to provide opportunities for children to attend to the visual details of print with the support of an expert, the teacher, and other group members. It is similar to the writing component in Reading Recovery in that the teacher and children collaborate to construct a written text. The process grows out of oral language as children write down important messages and information (Pinnell & McCarrier, 1989). Because a teacher is able to work with a group of children, this method of instruction is better suited to the classroom environment than individual instruction.
The term interactive writing was used to depict the interaction between both the teacher and the child and to distinguish it from other methods of writing that may be more familiar to teachers: Language Experience Approach and Shared Writing (McKenzie, 1988). The theoretical perspective supporting all three of these methods of writing instruction is that within a social context children are active constructors of their knowledge (Vygotsky, 1978). In addition, a teacher who is knowledgeable in the reading and writing processes is there to assist children's learning.

In shared writing, the teacher models the writing process for the students while they are actively engaged in composition of their text, negotiating with the teacher what they want to include in their writing. As she writes for the children, the teacher discusses various concepts about print, such as letter/sound relationships or directionality, and the students observe the writing and listen to the discussion.

Interactive writing adds several dimensions to shared writing. Interactive writing is a method of writing instruction that is especially helpful for young children who have had few opportunities to interact with or to notice the details of print. It differs from shared writing in that both the students and the teacher share the pen and are involved in: negotiating the composition of texts; constructing words through analysis; using the conventions of print; reading and rereading texts; and searching, checking and confirming while reading and writing (Pinnell & McCarrier, 1993). After taking a walk around the school building, a group of first-grade children collaborated with their teacher to create an alternative text for Sue Williams's *I Went Walking* (1989). The message the group decided on was: I see a pumpkin. The teacher called on the children to supply the information necessary to write the text. One child came to the chart
to show the others where to begin writing. Another wrote the word /I. A third child checked for spacing between each word. Yet a fourth child supplied the beginning letter for the word see. The text was written as follows: \textit{I see a pumpkin}. (The underlined letters refer to the those the children contributed. The remaining letters are the ones the teacher supplied.) Both the children and the teacher were actively engaged in the composition and transcription of the text.

Since the beginning of The Early Literacy Initiative, this researcher has incorporated interactive writing in her own classroom instruction. Recently, the researcher conducted (1992) a pilot study in a first-grade classroom, in which a teacher's use of interactive writing in reading and writing instruction was closely examined. Observations were made of a teacher using interactive writing with a group of at-risk first grade children. Results from the pilot study indicated that students began to attend to the visual details of print, such as letter knowledge and letter/sound relationships, both in reading and writing. These program evaluation results, as well as observations by teachers and other researchers (Pinnell & McCarrer, 1993) suggest that the instruction within interactive writing is highly effective in helping young children learn to attend to the details of print within a meaningful context.

The Ohio State University Early Literacy Initiative has led to several studies: literacy instruction for at-risk first graders (Strong, 1988); multiple readings of stories to kindergarten students (McCarrier, 1992); and teacher change (Button, 1992). Each study involves students either in a special, pull-out program or an intensive kindergarten program. There has not been a study within the context of a regular first-grade classroom, in which the component, interactive writing, has been carefully examined. A concentrated study of
teacher and student behaviors within the context of interactive writing is needed in order to make the instructional process explicit. This descriptive study is designed to examine the possible relationships between reading and writing, and to reveal ways children transfer knowledge and skills learned in the supported interactive writing context to the independent use in the regular classroom setting.

PURPOSE OF THE STUDY

There is a tendency to measure children's progress while operating independently, but there is also need to know what at-risk students do when they have the opportunity to experience effective instruction, high support, and immersion in the processes of reading and writing. Interactive writing promotes a context within which to observe student responses. This study, therefore, provides two kinds of observations: what children can do with support and what children can do alone. The purpose of this study was to describe and interpret the behaviors of a first-grade teacher and a small group of at-risk students while engaged in literacy activities centered around interactive writing. Specifically, the researcher examined the relationship between teacher behaviors and students' literacy behaviors. The purpose of this study was to contribute to the body of knowledge about young children's literacy development when they have the opportunity to participate in this highly supported process of socially constructing text.

SIGNIFICANCE OF THE PROBLEM

As teachers continue to interpret theoretical perceptions about reading and writing, more information is needed concerning how instructional methods...
facilitate young children's learning about print. Research sought to provide detailed descriptions of one teacher and a group of at-risk children during implementation of a particular instructional model. The researcher discovered significant teacher student interactions that promote writing behaviors. Specifically, the descriptions of instructional interactions during interactive writing provide insights that can be used to refine interactive writing as an approach and to generally inform teaching practices in reading and writing, especially for at-risk students as they acquire literacy.

RESEARCH QUESTIONS

The following questions were examined during this study:

1. What takes place during interactive writing within the context of the literacy lesson?

2. How are student and teacher behaviors reciprocal of each other during interactive writing?

3. How do children use what they have learned during interactive writing in their own independent writing?

DEFINITION OF TERMS

*Analogy* is a writing strategy in which the child works out writing a new word from two words already known (Clay, 1991; Goswami & Bryant, 1990).

*Interactive writing* is a form of shared writing that supports young children's interaction with and attention to the details of print. A teacher and small group of children collaborate to construct a written text. The teacher and students are involved in: negotiating the text; hearing and recording sounds in words; using the conventions of print; reading and rereading texts; searching,
checking, and confirming while reading and writing (Pinnell & McCarrier, 1993).

Linking is a method of relating information from one setting to another in order to make sense of the learning situation. In this study, linking refers to: personal experiences, literature, students' names, and other sources of print.

Literacy lesson framework is a framework for small group instruction, from The Ohio State University Early Literacy Initiative (1989) that included eight recommended components: reading stories aloud, familiar reading, guided reading, shared reading, interactive writing, independent writing, story extensions, and monitoring progress.

Monitoring is a highly skilled process that enables readers/writers to check on themselves to determine whether what they have read/written is correct or incorrect.

Observation Survey is a series of six assessment tasks used to determine students' performance over a period of time. The tasks enable teachers to observe children at work, noting all their responses. The six tasks include: letter identification, word test, concepts about print, writing vocabulary, hearing and recording sounds, and text reading.

Onset is the opening unit of a word which consists of letter(s) that precede the vowel (Goswami & Bryant, 1990).

Prompt is a signal (verbal or nonverbal) from the teacher that suggests or reminds students to attend to certain features, such as spacing, hearing and recording sounds in words, letter sequence, and word analogies.

Rhyme is used in this study for words that have ending sounds in common.
Rime is the ending unit of a word that includes the vowel and all letters following the vowel (Goswami & Bryant, 1990). In this study it is used for words that share a common spelling pattern.

Scaffolding is the interactional support, often in the form of adult/child dialogue, and shared activity structured by the adult "to maximize the growth of the child's intrapsychological functioning" (Clay & Cazden, 1990, p. 24).

Self-correction is a process in which readers/writers are not only able to detect errors, but are also able to independently correct their errors.

Strategies are mental activities initiated by the child to get messages from a text. The child gains control over the reading and writing processes as he actively engages in problem solving. The child works on two theories: a theory of the world and what will make sense, and a theory of how written language is created (Smith, 1978). In this study, writing strategies are specifically examined: saying words slowly, hearing and recording sounds, concept of word, analogies, letter clusters, searching and monitoring.

Zone of proximal development refers to instruction that proceeds ahead of development (Tharp & Gallimore, 1988). Vygotsky (1978) defined the zone of proximal development as "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (p. 86).

ASSUMPTIONS

Some assumptions were made at the onset of the study. One significant assumption was that the observed behaviors of the teacher and students provided evidence of their thought processes. A second assumption was that
interactive writing was an effective method of writing instruction for children not attending to print.

LIMITATIONS

The site for the study was a first-grade classroom, specifically chosen to allow the maximum opportunity for observing the method of Interactive writing. The study is limited in the extent to which results can be generalized to other classroom settings. Although the observed classroom may have similarities with other contexts, each context is unique and differences do exist. Although generalizability ultimately remains with the reader, the findings will be most useful in applications to instructional settings similar to the setting described here.

A second limitation of the study would be the investigator's presence as a participant observer. Any researcher's presence would no doubt influence the context, even if strictly an observer, but the fact that this researcher instructed the classroom teacher in a university course may have influenced how the teacher incorporated interactive writing into her classroom.

A third limitation that must be considered was the dependence on video equipment as the primary source of observational data for analysis. The camera can capture only that which the researcher selects to photograph. In order to compensate for this limitation, audio equipment was set up in order to capture conversational interactions with the children and teacher. Field notes were taken from the video equipment and transcriptions were made of the audio tapes for analysis.
SUMMARY

Interpretations of commonly accepted views of how children acquire knowledge about print have resulted in contrasting methods of teaching. Despite teachers' theoretical perspectives, most young children learn to read and write; however, some children become confused in learning about how print works and need more explicit methods of instruction. Reading Recovery (Clay, 1982) was developed to support the lowest achieving first graders having difficulty in learning to read and write. Following the implementation of Reading Recovery in the schools, The Early Literacy Initiative was established to support Reading Recovery. The teachers and university personnel involved in the initiative worked to develop a lesson framework for small group instruction that consisted of eight components. One component, interactive writing, has been found to be effective in helping young children learn to attend to the details of print within a meaningful context. A study of student and teacher behaviors within the context of interactive writing is needed in order to make this instructional method more explicit.

In this chapter, the rationale and purpose were given for a study involving interactive writing with small group instruction. Research questions, assumptions, and limitations were stated. A discussion of the related theories and research will be presented in Chapter II, and details of the methods and procedures by which the investigation was conducted are found in Chapter III. An analysis of student and teacher behaviors during interactive writing is presented in Chapter IV. Chapter V summarizes the findings and suggests their implications for literacy instruction. In addition, directions for further research are also proposed.
CHAPTER II
REVIEW OF RELATED LITERATURE

INTRODUCTION

Research related to the ways young children become literate provide the foundation for this study. It is essential to review what is known about both learning to read and learning to write as well as instruction, since teaching and learning cannot be separated when thinking about young children becoming literate. The review of the related literature is presented in six sections, one for each topic listed here, plus a summary: (1) emergent literacy and young children's writing, (2) phonological awareness and early writing, (3) early writing within the instructional context, (4) relationships between reading and writing, and (5) the concept of instruction as assisted learning. This study examined the reciprocal behaviors of a small group of first-grade students and a teacher during an instructional practice that integrated the reading and writing processes.

EMERGENT LITERACY AND YOUNG CHILDREN'S WRITING

Prior to formal schooling, most children have a wide variety of meaningful literacy experiences in which they are actively engaged (Hall, 1987). Many re-enact their favorite stories (Teale & Sulzby, 1986), hear stories read to them by a family member or caregiver (Heath, 1983; Snow &
Ninio, 1986), or begin writing as a way to communicate with others (Baghban, 1984; Bissex, 1980; Strickland & Morrow, 1989). Children's early literacy experiences are embedded in the real-life experiences of family and community membership (Heath, 1983; Morrow, 1989; Taylor, 1983). Many activities that family members participate in involve literacy. Literacy is influenced largely by social institutions such as family events. Taylor (1983) observed that many of these literacy events were so natural that the reading and writing experiences passed unnoticed by the parents until pointed out to them by researchers. In her research, Taylor (1983) described showing mothers scraps of paper of their children's "writings" which had been collected from their homes. The mothers were uncertain to whom they belonged, or even when these "writings" had been produced.

Research suggests that children are innately disposed to becoming literate if the adult provides an environment rich in literacy artifacts, meaningful activities, and pleasurable experiences (Clark, 1976; Goodman & Goodman, 1979; Smith, 1982; Wells, 1986). Regardless of their ethnicity and socioeconomic background, children are included in some kinds of literacy events in which literacy plays an integral part within the family environment, such as writing thank you notes to relatives or Christmas gift tags and cards. The events are functional and recurring, yet Heath's (1983) work reveals that rarely do these activities focus upon literacy for the sake of learning. Still, within these natural literacy events learning does occur.

Only relatively recently has there been a strong interest in young children's development in written language during the time of birth to school (Teale & Sulzby, 1986). Although Clay (1979, 1982, 1991) is credited with the term "emergent," others (Teale & Sulzby, 1986) use the term "emergent" to
connote development rather than stasis, signifying something in the process of becoming. The first years of the child's life represent a period when reading and writing development are continuously taking place. The behaviors and knowledges are not preliterate as a term such as "prereading" suggests (Teale & Sulzby, 1986); therefore, it is not reasonable to look to a particular point in time in a child's life when literacy begins. Instead, whatever point is examined, children are viewed as in the process of becoming literate.

**Functions and Forms**

Research in the area of emergent writing can be divided into two categories: functions of writing and forms of writing. Children learn the functions of language before they learn about its form (Hall, 1987). They seem to know what writing is for before they know much about how to write in correct forms. Letters and other writings of young children hardly resemble the conventional forms, yet children seem impelled by an understanding of the function of written texts (Graves, 1983). In Bissex's study (1980), her son, Paul, demonstrated that he knew more than just the context of writing. He also knew the function of writing. Paul wrote messages for a specific purpose, whether it was to make declarations (DO NOT DSTRB GNYS AT WRK—Do not disturb, genius at work), to indicate prohibitions (DO NOT KAM.IN.ANE.MOR.JST.LETL.KES—Do not come in any more. Just little kids.), or to signify achievement (THA.BEG.EST HOS.EN.TH.WRALD—The biggest house in the world). His earliest writings were used to convey feelings and to communicate rather than to experiment.

The range of purposes understood by children may well be less than those used by adults (Goodman, 1980), but it still represents a wide spectrum of
events. There is little doubt that many children are familiar with the when and why of written communication, and the emergence of these understandings plays a central role in contextualizing the whole activity of being instructed in reading and writing in school (Hall, 1987). Teale (1986) states, "The functions of literacy are as much a part of learning to read and write as are the formal aspects of written language" (p. 9).

Much of the research on early writing has focused on forms of writing. Sulzby and Teale (1991) report two major findings of the research in emergent writing: (1) children write in preconventional or emergent forms (such as scribbling, drawing, nonphonetic letterings, phonetic spellings) long before they write conventionally, and (2) children develop into conventional writers. As a process, a child's early writing development is characterized by the child's moving from playfully making marks on paper, through communicating messages on paper, to making texts on artifacts (Clay, 1979; Gibson, 1970; Harste, Woodward, & Burke, 1984; Morrow, 1989; Sulzby, 1986). Gibson (1970) found that children as young as 12 months can and will make marks on paper if given the materials. By 14 months, they can make a definite scribble in progressive, continuous tracing. By 18 months, they will initiate scribbling on their own and at 30 months, a child can draw a line as distinct from a circle. Gibson (1970) reports that for children, making marks was an enjoyable experience and they were eager for the experimenter to look at these marks. The children demanded that the researchers do so.

At some point in the child's development, differentiation occurs and scribbling is separated from drawing, and writing from both of them; but for some children, certain elements of the distinctive properties of these three mark-making systems are learned more easily than others (Hall, 1987; Harste,
Woodward, & Burke, 1984). Baghban (1984) wrote an extensive account of her daughter's emergent writing as she interacted with certain kinds of print experiences over a period from birth to three years. Prior to 17 months of age, Giti observed her parents writing messages (such as grocery lists, thank-you notes, cards, and checks). At 17 months, she grabbed pens and paper and scribbled on her own, so much so that her parents created a drawer of paper and pens for Giti to store her supplies. Around 27 months, Giti dictated stories to her parents and composed her own letters. By the age of three, Giti was writing with correct orientation, returning to the beginning of the line and moving down the page. She distinguished between drawing and writing and clearly understood that writing conveyed messages and was composed of smaller bits that were sometimes letters or numbers.

Even very young children are aware that the marks that constitute writing have certain physical characteristics. Giti (Baghban, 1984) distinguished between writing and drawing. Harste, Woodward, and Burke (1984) claimed that under certain circumstances all of their children four years old could distinguish between writing and art. They also found in their study that children had a sensitivity to the letter forms used in their own culture. In their study of four-year-old children in a multiethnic classroom, they noted that the scribble "writing" of a white American girl looked quite different from the scribble "writing" of a Saudi Arabian girl, and both sets of writing differed from that of an Israeli child.

Harste, Burke, and Woodward (1984) suggest that intellect and development may be less important than experience for literacy development of young children. Hall, May, Moores, Shearer, and Williams (1986) looked at a nursery class that was conventionally set out, but writing was an exceptional
event. There was a great deal of painting and making of objects, but children seldom incorporated writing with the other activities or any of their play activities. The researchers then changed the nonliterate home corner into a "literate" home corner. They added a variety of writing utensils and materials (such as notepads, directories, pens, pencils, markers). The effects of the changes to the home corner resulted in a change in children's activities. They wrote and sent letters, wrote diaries and calendars, took phone messages, and created a restaurant where they took food orders. Merely making materials available to the children fostered a change in their activities. Children want to write (Graves, 1983) and will write if provided with the experiences (Hall, et al, 1986; Harste, Burke, & Woodward, 1984). They found no reluctance on the part of the children to use written language.

Invention and Reinvention

Research has shown that children's writing develops through constant invention and reinvention of the forms of written language (Bissex, 1980; Clay, 1979, 1982, 1991; Dyson, 1986; Read, 1971, 1975). Children invent ways of making letters, words, and texts, moving from primitive forms through successively closer approximations of conventional forms. As children reconstruct their abilities to produce messages and texts, they simultaneously reconstruct their knowledge about written language.

Clay (1979) was the first to focus upon the patterns that could be inferred as underlying many different forms of writing. She made inferences about children's understandings about writing from examining the forms the children used. She suggests that children do not learn about language on any one level of organization before they manipulate units at higher levels (Clay, 1979).
Rather, as children learn to write, there is an intermingling of language learning across levels that may account for the fast progress that children can make (Clay, 1979, 1982, 1991). In her work, Clay noted 13 principles or patterns of emergent writing behaviors of young children, yet she has not been able to discover an acquisition sequence to these principles. The differences in children's emergent writing could be related to general intelligence, but they could equally occur because the experiences of children have been different (Harste, Burke, & Woodward, 1984), or because they have chosen to devote their attention to different aspects of their environment (Clay, 1979, 1982, 1991, 1993b). Clay doubts whether there is a fixed sequence of learning through which all children must pass.

Unlike Clay, Ferreiro and Teberosky (1982) noted stages through which children pass as they emerge as writers. Ferreiro and Teberosky (1982) studied forms of writing and children's interpretation of how different pieces of writing can be read. Low- and middle-income children from Buenos Aires were asked to write given words or sentences as dictated to them by an adult and to read these items back. The adults then asked the children about the relationship between the forms of their writing, their rereading, and the symbolic relationships involved. In her work, Ferreiro observed five levels of children's underlying conceptualizations about the alphabetic principle, moving in somewhat linear, hierarchical fashion from nonconventional writing to more conventional.

In the five stages of writing development identified by Ferreiro and Teberosky (1982), the marks may look similar to an adult, but the child considers them to be different. The first stage involves the intention to create a message. There appears to be a correspondence between the aspects of the
objects and the writing. For example, for a large object, the child uses more marks than for the name of a smaller object. There is often an interrelationship between the drawing and the writing, although both are used in different ways. Writing is always linear and many times cursive. If printing was used, a minimum of three characters was used before the child determined it to be writing, rather than other kinds of marks. Ferreiro and Teberosky (1982) state the requirement of three letters as a minimum level of writing came from the child and was not an outcome of adult influence.

At the second level, the graphic representation resembles more the conventional form and is more clearly defined. Children at this level often use the forms that they know in a variety of combinations, representing some discovery of the "combinational quality" (Hall, 1987) of alphabetic language. Stage three is characterized by the child beginning to assign a sound value to each of the letters. Ferreiro and Teberosky refer to this stage as the "syllabic hypotheses," because they claim that each letter stands for one syllable. In stage four the child abandons the syllabic hypothesis and analysis beyond just the syllable level. The child begins to use properties of text (such as length, letters, segmentation) as cues. Children understand that there is a relationship between the text and oral reading of that text. Children demonstrate evidence of their understanding of the alphabetic writing system in the fifth stage. Each written character corresponds to a sound value smaller than a syllable and children systematically analyze the phonemes of the words they are writing. Although children's writing is more conventional, there are still features of the orthographic system that children have to learn.

Several studies have explored children's understandings of the analysis of sounds and invented spellings before or even in absence of direct
instruction (Chomsky, 1976; Clark, 1976; Read, 1971, 1975). In a study of preschool children, Read (1971) was the first to describe children's systematic logic of invented spellings. He found that children developed their own way of spelling English and concluded that children made some kind of analysis of the sounds of English before encountering reading or even before they entered school. In each case, the child first learned the conventional names of letters of the alphabet; then, with blocks or some other movable alphabet toy, began to spell words. Finally, children produced written messages of all kinds, including stories and poems. Although the children's spellings deviated from standard English spellings, there were regularities in these differences. Young children who knew letter-sound rules but could barely read went wrong in their spelling attempts only in that they used the phonological code too literally when they spelled. Most of the children in Read's study knew the names of the alphabetic letters and their sounds, yet they often represented the sound in a word by the name of the letter name rather than by the letter sound. (hrak for truck, fes for fish)

Read (1971, 1975) also claimed that young children's invented spellings revealed that children often perceived and used phonological properties that adults no longer used. His study demonstrated how children were placing great reliance on their phonological knowledge of English. Children's spelling mistakes showed their awareness of the phonetic distinctions that adults have abandoned as a result of learning to spell correctly. Read demonstrated that children attended to, depended on, and used relations between letters and sounds in order to spell words. His work was influential for determining how other researchers perceived the way in which children attempted to spell. In addition, the children in Read's study demonstrated evidence that orthographic
knowledge appeared to be acquired systematically, not randomly (Read, 1975). Instead of viewing children's attempts as errors, attempts were viewed as inventions.

Henderson (1981) and his colleagues (Henderson & Beers, 1980; Zutell, 1979; Zutell & Rasinski, 1989) spent many years looking at children's representation of written language. Their work was concerned with children's knowledge of words, in particular the way in which children compose words. Henderson claimed that spelling is a developmental process in which, at the early stage, letters, invented letters, and numbers are recorded in a jumble and in any direction. According to Henderson, children then begin to spell words by the phonemic feature that is emphasized in each letter as it is named in the alphabet. Later, children's writings/spellings reflect a vowel transition, by adding silent letters or vowel markers. The importance of this change is that it indicates a shift from a kind of one-to-one correspondence between the sound and its representation by a single letter, to an understanding that there are other underlying features in written language (Hall, 1987, p. 52). Henderson argued that invented spellings are intelligent creations by children and changes in their spelling occur systematically. The stages and a brief description of each are listed below.

**Preliterate Prephonetic Stage**

In this early stage, children understand that the letters on the page and that sounds and meanings they hear and understand as others read to them are closely related. However, their understanding of how specific letter combinations represent specific spoken words is minimal. Many times their writings have a combination of letters and numbers. *(jsrpbb2f for boy)*
Preliterate Phonetic

As children interact with print by engaging in literacy activities, such as writing their own name and reading stories, they begin to develop an understanding of letter/sound correspondences. No longer are they writing using strings of letters or numbers in a seemingly random pattern. Instead, they begin to attend to the most salient features of the word and make beginning and incomplete attempts at letter sound matches. Often only one or two letters are used to represent a word. For example, many attempts include beginning or ending consonants as these are the ones most salient, and vowels are often omitted (bt for bat or C for Connie).

Letter-Name

Children in this stage have developed the concept of word as having a beginning and end and being composed of letters that match, or nearly match each phoneme in sequence. Letter names are used to spell the long consonant sounds (tim for time). In their attempts to match phonemes with the names of the letters they know, children often invent quite logical but incorrect spellings (Read, 1971). When representing the short vowels, Read's work explained that children use the long vowel that has the nearest point of articulation for the short vowel. A long a, when pronounced, is nearest in point of articulation for the short e, so a child's attempt to write bed might be bad in the letter-name stage.
Within-Word Pattern

In this stage, children have good control of consonants and short vowel patterns. They learn that words are made up of a beginning consonant pattern, a vowel, and an ending. Short vowel spellings are generally accurate (fish for fish) and long vowels are spelled using some marker (driev for drive). They also discover that one sound may be represented by more than one letter, so many times, during this stage, children overgeneralize vowel markers (bote for boat).

Syllable Juncture

In this stage, children have learned that words are made up of syllable units and word meanings and are spelled in complex, but systematic ways. Children apply what they already know about spelling to attempt unknown patterns (fnanshal for financial and robbin for robin).

Derivational Constancy

At this most sophisticated stage, children understand that morphemes in words control spelling patterns both within and across related words. Students use their knowledge of root words, prefixes, and suffixes in their spelling attempts (combine, combination).

Like Read (1975), Henderson and Beers (1980), and others (Zutell, 1979, 1993; Zutell & Raskinski, 1989), Chomsky (1972) viewed children's invented spelling as an active process in which they formed hypotheses that took them far beyond the rules of spelling. She proposed that children actually wrote before reading and it was their own writing that became their first texts in reading. In her work, she found that children who wrote with
invented spellings received valuable practice in translating from sound to print. After a program that fostered invented spellings, children could then bring these assumptions they made about writing to the task of reading (Chomsky, 1972).

The work of Clay (1991) and others (Baghban, 1984; Ferreiro & Teberosky, 1982; Harste, Woodward, & Burke, 1984; Goodman, 1980; Read, 1971; Teale & Sulzby, 1986; Zutell, 1979, 1993; Zutell & Rasinski, 1989) strongly suggests that most children, by the age of five, demonstrate through their writing that they have observed and understood a wide range of features of print production that they bring with them once they enter formal schooling. Before children enter an instructional setting, they use the knowledge they have acquired about print from their experiences, as they attempt to represent their ideas in writing.

**PHONOLOGICAL AWARENESS AND EARLY WRITING**

It is well documented that young children begin writing with their understanding of the sound system of the language as they attempt to represent their ideas in print (Chomsky, 1972; Clay, 1975, 1982, 1991; Henderson & Beers, 1980; Goswami, 1986; Read, 1971, 1975; Zutell, 1979, 1993). In order to write, young children first draw on their knowledge of the sound system of the English language. Clay (1991) uses the term "phonological awareness" to indicate that children process sounds at levels other than the single phoneme. Children use such systems as phoneme-grapheme relationships, letter clusters and their clustered sounds, orthographic patterns and their sounds, analogous parts of words, rhyme relationships between words, words within words, words combined with words, syllabic chunks, and words that are expanded by
prefixes and suffixes. The sound system of language encompasses sound sequences in sentences, words, syllables, and in letter clusters, as well as at the phoneme level (Clay, 1991). Most children do not have difficulties with phonological awareness at the level of sentence or word, but difficulty arises at the sub-word level. At the sentence and word levels, meaning is involved and reduces the need for phonological attention.

Goswami and Bryant (1990) relate phonological awareness to children's awareness of sounds. However, they recognize that the term includes different forms of awareness because there are different ways in which words and syllables can be divided up into smaller units of sounds. They consider three ways of breaking up a word into its constituent sounds; therefore, they contend that there are three forms of phonological awareness: syllables, phonemes, and intrasyllable units.

Before entering school, children are able to use and hear differences between words and natural speech (Clay, 1991; Goswami & Bryant, 1990). Clay argues that because they can differentiate between words does not mean that they understand that words consist of several sounds. This skill must be developed.

The syllable is the most obvious way to break up words. Liberman (1974) found that children have little difficulty hearing the parts of words. He devised a phonological tapping test for preschool, kindergarten, and first-grade children to find out what segments children could hear in words, in order to determine if children differ in their response to learning about sounds in words. In this study, Liberman devised two tapping tasks. One group was presented words with one, two, and three syllables. They were to tap out the number of syllables with a dowel on a table. The second group tapped out the number of
phonemes after being presented with words that had one, two, and three phonemes. The results indicated that syllables were easier to hear and count than were the phonemes. Liberman concluded that analysis of words into sounds (phonemes) developed after analysis of words into syllables had developed. Overall, older children did better on both tasks than the younger children.

A possible explanation for children's success in the phoneme task is that tapping out syllables is a rhythmic activity and the rhythm of a word can be captured in its syllables (Goswami & Bryant, 1990). A child may simply say a word to himself and tap out the word's rhythm as he does so. In the phoneme task, the number of phonemes has to be worked out first and then that number tapped out. To determine whether the syllable was actually easier for children to hear, Treiman and Baron (1981) gave both the phoneme and syllable task tests to five-year-old children. Instead of tapping with the dowel, children had to lay out tokens for each syllable in the syllable task, and one for each phoneme in the phoneme task. The results were the same as Liberman's (1974). Syllables were easier to detect, providing further evidence that the difficulty of the phoneme task is due to young children's insensitivity to the single phoneme.

Two studies examined the relationship of spelling/reading and students' success on the phonological tapping task (Ehri and Wilce, 1980; Tunmer & Nesdale, 1985) and found that children use their knowledge of spelling sequences when given the phonological tapping task. Although the ages of children differed in the two studies, both studies hypothesized that children become aware of phonemes after they learn to read and probably as a result of their experiences with reading. The children were asked to tap the number of
sounds of words that contained diagraphs and single phonemes (book), or words with just single phonemes (man). The children in each study tended to assign more counters to words with the greater number of letters. Children were more likely to make this mistake if they already knew how to spell the word properly.

The results from the research of phonological tapping tasks support the idea that explicit knowledge about syllables precedes reading, while an awareness of phonemes follows it (Ehri & Wilce, 1980; Liberman, 1974; Treiman & Baron, 1981; Tunmer & Nesdale, 1985).

Good readers use not just sounds of letters but phonological information from several levels of language. A child can provide phonological identities for letters, diagraphs, clusters, syllables, prefixes and suffixes, root words, phrases, and nonlanguage strings (Clay, 1991). A child will select the larger rather than the smaller unit for efficiency and may check one source of information against another. Word-solving may be done at the letter-sound level, but not only at that level.

A sound-to-letter analysis does not "reign supreme" in the hierarchy of skills to be acquired for very long (Clay, 1991, p. 88). The child who has learned only a small amount of reading or writing vocabulary begins to generalize about letter-sound relationships. The child links visually the simple clusters of letters with the sounds they consistently represent. Then this knowledge is transferred to new material (Clay, 1991).

While young children read and write their first stories they build up a vast amount of visual discrimination learning, which is vital to their literacy progress. Learning not only occurs at the level of single letters, but also at the level of clusters of letters or sounds. "The child who is learning to differentiate letters
one from another, and to associate letter sounds, will, at the same time, be
using larger building blocks--clusters of letters or sounds" (Clay, 1991, p. 273).

Clay (1991) describes these clusters of letters or sounds as "chunks" of
information. The units or clusters young readers and writers use can be one
letter, but may also be two, three, or even four. These clusters serve as units
that organize perception as soon as they become part of the reading or writing

By comparison single letter analysis is slow, requires more learning,
allows for more error and is more difficult to re-instate as a word. The
larger the pronounceable units a child can discover and use, the less
learning effort will be required. Phonological awareness is involved but
rarely phonics or blends. (Clay, 1991, p. 290)

Gibson (1965) reported an experiment to discover how long after
beginning reading children begin to anticipate words in terms of clusters of
letters that they expect to occur together. She used real words, pronounceable
nonwords and nonpronounceable words. Gibson concluded that soon after
beginning reading most readers tried to read nonsense words by using clusters
of letters. Gibson (1965) found children in their first year of reading instruction
who made use of clusters of letters that were always found in the same position
in a word and that did not vary in pronunciation (such as tion). Typically,
children read in short units, but early on, they generalized certain spelling-to-
sound correspondences. As children's skills developed, the span increased
and a similar difference could be observed for longer items that involved more
complex conditional rules and longer clusters. Children's generalizations
increased in complexity.

Goswami and Bryant (1990) posit that a third kind of phonological
awareness consists of units larger than a single phoneme--units that consist of
two or more phonemes--but are smaller than a syllable. Generally, it is possible
to divide a one-syllable word, or a single syllable of a multisyllable word, into two parts: an opening unit (onset) that consists of the letter(s) that precede the vowel; and the ending unit (rime) which includes the vowel and all letters following the vowel. For example, the word bread, has a clear beginning (onset) in the first two consonants \textit{br} and a clear end unit (rime) that contains the vowel and the last consonants \textit{ead}. This single-syllable word can be broken up into two phonological units, each consisting of more than one phoneme and which "lie somewhere between a phoneme and a syllable" (Goswami & Bryant, 1990, p. 3). These units are sometimes called intra-syllable units.

A group of studies dealing with auditory tasks for young children, specifically phoneme deletion and elision tasks (Bruce, 1964; Calfee, 1977; Content, Kolinsky, Morals, & Bertelson, 1986; Content, Morals, Alegria, & Bertelson, 1982; Fox & Routh, 1975; Rosner & Simon, 1971), demonstrate children's ability to detect the onset and rime of words. Bruce (1964) worked with children whose mental ages ranged from five to nine years. The children were given three different tasks, in which they had to determine what particular words would sound like if a specific phoneme was removed. The three tasks involved removing: the initial sound (\textit{jam-am}), the middle sound (\textit{snail-sail}), and the last sound (\textit{fork-for}). In every trial, the experimenter said a word, then told the child the sound that was to be deleted. Bruce's study demonstrated that young children stumble when they have to make phonological judgments that depend on explicit awareness of phonemes. It was through Bruce's research that others learned not to take phonological awareness in young children for granted (Goswami & Bryant, 1990).

It is possible that the children in Bruce's study found the tasks difficult because, in most trials, they had to manipulate only part of the onset or part of
the rime (Goswami & Bryant, 1990). Deletion studies were conducted that looked for ways in which children might overcome their weakness of phoneme deletions through specific training.

Although not describing tasks as dealing with onset and rime units, Calfee (1977) conducted an experiment in which five- and six-year old children were asked to play a game similar to Pig Latin. The children had to remove the initial phoneme (onset) from each word and leave the rime. Calfee first provided them with an example of how the task was to be done (When I say "greet" you say "eat"). After some training, the children were given transfer tests. Calfee (1977) concluded that children did well in training, being right in more than 90% of the trials. In addition, their scores in the transfer tasks were also high, with the correct response being above 80%. Calfee also found that children's age made no difference in their success on the trials. The five-year-olds did equally as well as the six-year-old children. There was clear evidence that children could delete a single phoneme in a word provided that this phoneme was the onset of the word.

In a similar study, Content, Morais, Alegria, and Bertelson (1982) asked five-year-old children, not yet in school, to delete the initial phoneme in a series of words. The task took the form of a game in which puppets spoke an invented language (Goswami & Bryant, 1990). One puppet made a mistake of putting an extra phoneme at the beginning of the word, and the other puppet corrected this error. This task was first demonstrated by the experimenters, and eventually the children took over from the second puppet and corrected the mistake themselves.

There were three types of words in which the initial sound had to be deleted: those that began with a vowel, those that began with a fricative
consonant, and those that began with a plosive consonant. The children were good at deleting the initial vowels, but they were less successful at deleting initial fricatives or plosives. However, when given training on phonemic manipulation and blending, the results of the two tasks improved dramatically. A group of children who did not receive training did not improve in this same way.

The deletion task studies show that young children who have not learned to read are in great difficulty in tasks in which they have to detect and manipulate phonemes (Bruce, 1964). The second contribution of the deletion studies has been to demonstrate that some phonemes are reasonably easy for young children to detect. Provided with the training to do so, young children can manage the deletion tasks well when the onset of a word and the rime are left intact (Calfee, 1977; Content, Morais, Alegría, & Bertleson, 1982; Fox & Routh, 1975).

These deletion tasks studies serve as a background for more recent attention to children's use of onset and rime (Goswami, 1990; Goswami & Bryant, 1990; Kirtley, Bryant, MacLean, & Bradley, 1989; Treiman, 1985). The following studies provide a framework for this explanation.

Two studies of young children who were plainly aware of syllables, but who had difficulty determining the phonemes, set out to determine whether these students could perceive and use the division between the onset and rime of a single syllable. Treiman (1985) demonstrated that children find it easier to segment syllables into onset and rime than into units that cut across onset and rime. In one experiment, Treiman (1985) played a game with eight-year old children in which she said a word and they had to substitute part of that word with another sound. At times, children had to substitute the opening two
phonemes of a word pronounced by the experimenter. Sometimes this involved breaking up the rime of the word (lug for fog), and in others, it involved preserving the rime (slu for fru). In other instances, it was the last two phonemes that had to be changed, sometimes involving breaking up the onset, as in fill for fru, and others, preserving it as in full for fog. Treiman found that children managed much better when the onset and rime was preserved than when it was not.

In order to determine if the onset and rime distinction was also important for younger children, Treiman (1985) set up a study for children aged four-and-a-half through six. Using puppets, Treiman told the children that the puppet had a favorite sound. Children had to judge whether a nonsense word contained the same sound that the puppet made. Part of the time, the sound was s and the other times it was f. The sound was always at the beginning of the nonsense word (such as sa, san, sna) and was either the complete onset or part of the onset. Treiman determined that children found it easier to identify the same sound when it formed the complete onset than when it did not.

A more recent study by Kirtley, Bryant, MacLean, and Bradley (1989), using oddity tasks, looked at the way in which young children judged whether different words begin or end with the same sound as each other. They found that onset and rime division seemed to play a part in children's awareness of sounds. The researchers gave a group of five-year-old children oddity tasks dealing with opening sounds (such as doll, deaf, cat) and ending sounds (such as mop, lead, whip). Children were asked to identify the word that did not belong in each set. The results of the study were that children were able to categorize easily when they could use the onset to do so, but not when they needed to break up the words' rimes.
Kirtley, Bryant, MacLean, and Bradley (1989) also reported the use of oddity tasks to again examine children's awareness of sounds. The researchers added a common vowel to the ending sound (such as top, rail, hop) and found that this made detecting the end sounds much easier than in the previous examples mentioned above.

The findings of these studies show that young children at the beginning stages of reading can break up syllables into onsets and rime with ease. This form of phonological awareness comes naturally to them. However, children find it difficult to detect phonemes, except when the phoneme coincides with the word's onset.

Onset and rime leads quite naturally to the question of children's awareness of rhyme and alliteration (Goswami & Bryant, 1990). Several studies determined that children can detect rhyme and alliteration before reading. Chukovsky (1963) collected a large amount of anecdotal evidence which suggests that children are fascinated by rhyming words from an early age and use them in their own language games and poems. The experience that children get from rhymes seems to be a natural and spontaneous part of their linguistic development.

There is research that establishes that children can detect rhyme long before they begin to read (Bradley & Bryant, 1983; Bryant, Bradley, MacLean, & Crossland, 1989; Chukovsky, 1963; Lenel and Cantor, 1981). In a study of preschool children, (ages four years eleven months, five years, and six years), Lenel and Cantor (1981) determined that young children could detect rhyme. The tasks given to the children were simple. The experimenter first read aloud one word (such as chair) to a child and then two other words (such as pear and flag). The child had to say which one of the words rhymed with the first one.
Sometimes the first word shared a sound with an incorrect "choice word" (such as sun with bun and pin). The children did quite well, with the older children doing the best. Even so, the youngest groups' performance was always well above chance level.

Bradley and Bryant (1983), in a much larger study, found similar conclusions to those of Lenel and Cantor (1981). Their study involved 403 children age four to five years who, at the time of the test, showed no signs of reading. At the beginning of the project, all children were given rhyme and alliteration oddity tasks. The experimenter said three or four words at a time and all but one of the words had a particular sound in common. The child was to spot the odd word. There were three oddity tasks in all. In the first, the distinctive sound was the last consonant (pin, win, sit, fin). In another, it was the middle (lot, cot, pot, hat), and in the third, it was the beginning consonant (ham, tap, had, hat). All the children did well on all tasks, and, as in Lenel and Cantor (1981), they were all well above chance level.

Young children are good at detecting rhyme and find this task particularly easy. Therefore, rhyming is a good predictor of children's reading development. Children's awareness of rhyme is especially important because it shows not just that they are aware of rimes, but also that they are able to categorize words on the basis of their sounds (Goswami & Bryant, 1990).

In summary, research has demonstrated that syllables are easier for young children to detect than phonemes (Ehri & Wilce, 1980; Liberman, 1974; Treiman & Baron, 1981; Tunmer & Nesdale, 1985). Children select the larger rather than the small unit for efficiency. Children visually link clusters of letters with sounds (Clay, 1991; Gibson, 1965). Young children can break up syllables into onset and rime with ease. Rhyme is a good predictor of success
in reading since one must categorize words to determine the similarities. This categorization process should transfer to the reading process and make it easier for young children to realize that these words share a common spelling pattern.

EARLY WRITING WITHIN THE INSTRUCTIONAL CONTEXT

Against the background of emergent literacy and the complex issue of phonological awareness and orthographic representation, the literature reviewed in this section focuses on the processes used by young children within an instructional setting as they begin to write stories, such as hearing and recording sounds in words, using letter clusters, making analogies, and using global strategies.

According to Elkonin (1973) a good reader knows how to create the correct sound form not only of a known word, but also of an unknown word. He argues that no matter how a child perceives a word visually—whether it is at the whole unit, syllable, or letter by letter—the child's understanding of that word is based on the sound formation of the word. Elkonin recommended that Russian children be taught to hear the sound sequences of word forms before they are introduced to the word in print. He felt that a sound analysis of fluid speech needed to be developed prior to the presentation of reading.

He developed a scheme in which children were given pictures of objects. Below the picture was a diagram of the sound structure of the word that names the object. The diagram consisted of a rectangle divided by vertical lines into squares according to the number of sounds/phonemes in the word represented in the picture. In addition, the child was given cardboard counters. The child was instructed to say the word with "stressed articulation
or to pronounce every sound in succession in a drawl" (Elkonin, 1973, p. 562). Then, while articulating each sound, the child had to place a counter in the appropriate square of the diagram and simultaneously call out the sound.

These conditions helped the child in several ways. First, the picture of the object reminded him of the word that had to be pronounced and analyzed. The diagram provided a visual framework and showed how many sound elements had to be found in the word's construction. "This led the child to produce behavior that was practical in operation: separating sounds on the basis of specially organized uttering and modeling the succession of sounds in the word" (Elkonin, 1973, p. 562). Filling the diagram with counters for the sounds appeared as a model of sound construction of the word.

Because of the reading programs, children become aware of sound sequences in words rather easily. However, some find it difficult. Clay (1982, 1991) adapted Elkonin's procedures with six-year-old children who were not making good progress in learning to read and write. In order to write words in stories, these children learned to analyze what sounds were heard in words and what the sequence of those sounds was. Clay suggests that a strategy of analyzing spoken words into sounds and then going from the sounds to the letters may be a precursor to the use of sound-symbol relationships in both reading and writing.

For children who cannot hear the order of sounds in words the teacher can act as an analyser of the words. She articulates the word slowly, but naturally, and gradually develops the same skill in her pupils. (Clay, 1979, p. 65)

It is essential to the Reading Recovery tutoring program that the child hear sounds in words in sequence, yet the sequence is an outcome. Initially, the child's first lessons take place without letters or printed words. Since syllables are easier to detect than phonemes (Liberman, 1974), the teacher
asks the child to first clap the parts he can hear in a few words he knows well, starting with one- or two-syllable words, and later, three- or four-syllable words. Once the child can hear the parts of the word easily, the next phase is the introduction of articulating a word slowly. The child must hear the word spoken, or speak it to himself, and try to break it into sounds.

To introduce the task, the teacher makes a few simple picture cards for words, such as bat, ship, and bus. In addition, the teacher prepares some cards that contain several squares drawn, one for each sound segment in the word, usually consisting of two, three, or four sounds. The teacher then introduces the articulation of the word in order to hear the sounds separated, but in a natural way. Then this task is transferred to the child.

Once the child is successful with saying words slowly, he learns to push counters into the boxes, sound by sound, while at the same time articulating the word. When a child can push counters into the boxes as he says the sounds, and when he has a good understanding of letter identification, he makes another transition in this sound analysis. Here the child articulates the word slowly while pushing the counters and then records the letters that represent the sounds that he hears. During the early stages of his learning of this task, letters are recorded in any sequence. Eventually, letters are recorded in the sequence in which their respective sounds are heard.

When the child is able to hear and record consonants well, is able to select some vowels correctly, and has control over writing most letters, another transition occurs. Instead of one box representing one sound, one box now represents a letter in the word. Using a combination of phonological and orthographic information, the child "problem-solves" the writing of the new word. The final phase is that the child no longer requires the use of boxes in
order to write new words. Instead, he is able to represent most, if not all, of the sounds in sequence on his own.

There is a form of phonological analysis in reading and orthographic analogies in spelling that is quite different from application in letter-sound rules. A group of words share common sounds as well as common spelling patterns and these typically consist of more than one phoneme. The ease with which young children rhyme and detect rhyme and alliteration is a good reason for treating the idea seriously that children read new words by making analogies (Clay, 1982, 1991, 1993; Goswami & Bryant, 1990). When children rhyme they are in effect putting words into categories: categories of words with the same end sounds or categories of words with the same beginning sounds. So children who are beginning to learn to read will already know that words like light, fight, and night have sounds in common (their rhyme), and this should make it easier for them to realize that these words may share a common spelling pattern as well (rime). "A young child who is skilled at recognizing rhyme, and who has already put words into rhyming categories before entering school, may quickly discover that words which sound the same are generally spelled the same (Goswami & Bryant, 1990, p. 64)."

The human mind often works by analogies and relates something new to something already known and familiar. Reasoning by analogy is probably the most fruitful source of hypotheses about any intellectual problem (Clay, 1991, p. 335, quoting Grice, 1975). Clay (1991) defines an analogy as using two knowns to get to an unknown (boat and go to get to goat.) Goswami and Bryant (1990) define analogies as the child's ability to use the spelling sound pattern of one word to predict the pronunciation of a new word. The core of known words that the child builds in writing and reading provides a mechanism from
which other words can be composed. By taking familiar bits from known words, the child can problem-solve on new words by use of analogies. By the time a list of core words that a child controls is around 40, the writer controls most of the letter-sound associations of the language, plus the most frequent and regular spelling correspondence, and will have an exemplar of each in his known writing vocabulary (Clay, 1991). Writing, as it accumulates, provides the phoneme-grapheme correspondence practice that children need to work with to form a solid foundation of both reading and writing skills of the more analytic kind (Clay, 1991).

Several studies examined the importance of analogies in learning how to read. Studies by Marsh, Desberg, and Cooper (1977) and Marsh, Friedman, Welch, and Desberg (1980) found that younger readers made fewer analogies than older children. The problem with both studies is that analogies could be made only if the analogous word was known (Goswami & Bryant, 1990). In addition, research has shown that children are more likely to turn to phoneme-grapheme rules when reading nonsense words than when given real words (Bryant & Bradley, 1980). Therefore, the use of nonsense words in both of the experiments could have contributed to the children's more frequent use of letter-by-letter analysis of the unknown words.

Several studies have explored the effect of teaching children about how to draw analogies in order to see if children then could make analogies with unknown words. Studies by Marsh, Friedman, Desberg and Saterdahl (1981) and Baron (1977) demonstrate that young children can make analogies about new words provided that they realize that such analogies are possible. Both studies also indicate that young children can make analogies if told how to do so.
Most of the studies on analogy are based on the words' rimes and on spelling sequences that represent those rimes. Analogies, according to Marsh and Baron, are inferences that the spelling pattern that represents the rime in one word will represent it in another as well.

Analogies might also be made about segments of speech and spelling patterns that cut across the onset-rime division (ba for bat and bad). Pick, Unze, Brownell, Drozdal, and Hopmann (1978) suggest that six-year-old children often do make analogies about consonant-vowel sequences (onset and half the rime). Baron (1979) found that nine-year-old children who made analogies used known words to get to the nonsense words. Baron concluded that the use of analogies is a natural mechanism for decoding nonsense words.

Goswami (1986) examined children's use of analogy in the beginning stages of learning to read with nine carefully designed experiments. She conducted her experiments in a manner that avoided training children in analogies. Instead, each child was told one word and then given others without instruction, to see if he could read the other words.

Goswami studied children between five and seven years of age. Most of the five-year-olds were at the beginning stages of reading and could read none of the words at the beginning. In order to determine which words children could read, in a pretest, children were first given all the words to be used in the experiment and asked to read them. Then they went through a series of trials that tested their ability to use clue words as a basis for analogies about new words. Children were shown a clue word and told what it was. Then they were asked to read other words, some of which shared the same spelling pattern with the clue word. Sometimes the common spelling represented the rime and other times the onset and half of the rime. Children were also asked to read two
control words that had three letters in common with the clue word, but not the spelling pattern.

Goswami (1986) found that children in all three age groups read analogy words which shared a rime and a common spelling sequence; therefore, even beginning readers made analogies based on rime. Even the youngest group did not make other types of analogies (onset and half the rime). The older children did manage to make analogies with the second kind of analogy word, but to a lesser extent than the first. Therefore, Goswami concluded that rime is an important factor in analogies and that it appears as though children start making analogies just about spelling sequences which represent that speech unit. She concluded that young children make analogies about spelling sequences that signify rimes and probably do so without being taught.

In a second part of her study, Goswami gave six-year-old children similar tasks to those mentioned above, except that two kinds of analogy words were different. One shared an onset that was always a consonant cluster with the clue word (trim-trap), and the other shared only part of a rime, which was again a consonant cluster, with the clue word (wink-tank). She found that children based analogies on speech units and did better in the first kind of analogies than the second since it is based on onset. Therefore, she concluded that onsets also play a significant role in children's analogies.

Later, Goswami (1990) designed an experiment to determine if children were actively making analogies versus merely being primed for the analogy (since the words rhymed). In this study, Goswami used irregular spellings of English words (head-bread-said) to determine if the child was being primed to make an analogy. If the child was merely being primed for an analogy to be made, then he would be likely to read said correctly. However, she found that
when children were given the clue word (*head*), they were more likely to read the word *bread* correctly. She showed that children do connect the common spelling sequences to the common rime.

Goswami also designed a study to determine if children make analogies when reading stories. For this study, she examined six- and seven-year-olds that were given a story to read with a clue word in the title. The child was given the title and told what it meant. In the story, which the child was to read, there were other words that had the same spelling sequences in common with the clueword (such as *Hark-harp, dark*) and also some control words. Goswami found that children were able to read the analogy words in the story more often than the control words.

Goswami's studies determined that there is a direct connection between phonological strategy and children's reading. Analogies are made about words which share sounds; therefore, analogies are based on sounds. Thus to make an analogy is to analyze the word that one is trying to read phonologically (Goswami & Bryant, 1990). Goswami and Bryant claim that children first base this phonological approach on the units that mean the most to them—onset and rime. They conclude that the research on analogies fits well with what is already known about children's sensitivity to rhyme and alliteration and that there is a connection between children's analogies about new words and their rhyming skills.

It is wrong to claim that young children rely only on letter-sound relationships when they start to write. There are signs from the beginning that there is more to the process of writing/spelling than a translation of sounds into letters. From the start, children display an understanding of orthographic knowledge as well. For example, many children know to put the letter *s* at the
end of a plural word, even though, phonologically, *z* is a better way to represent that sound.

Children read and spell words in quite different ways. Reading and spelling are two different processes, one involving the breaking down of a word to create meaning and the other building up to create messages (DeFord, 1991). Some words lend themselves to a phonological code more than others do, and some words are easier than others to recognize as familiar patterns.

The work of Elkonin (1973), Clay (1991), Goswami and Bryant (1990), and others (Teale & Sulzby, 1986; Ferreiro & Teberosky, 1982) indicates the importance of determining what level of information the child is using in order to make an analysis, whether it be at the level of word, cluster, or letter.

In this section attention has been given to the instructional implications of hearing and recording sounds in words as well as the role of instruction in using the concept analogy in writing. There are a large number of English words to which a more global strategy can be applied. Many of these words are common ones that children have learned to read and write quite early. Knowing a word in every detail is often called a visual strategy or a global strategy (Clay, 1991; Goswami & Bryant, 1990). The term global is used because it is quite possible that children might respond to the word as a whole, but as a sequence of letters rather than as a distinct visual shape. They may learn that individual letters, such as *t, h, e*, add up to the word, *the*, without always recognising the word as a distinctive visual pattern.

In an instructional setting, children use several processes as they begin to write stories. They hear and record sounds in words (Clay, 1982, 1991; Elkonin, 1973), use analogies of words that share a common spelling pattern (Goswami, 1986, 1990), and use global strategies (Clay, 1991; Goswami &
Bryant, 1990) in which words are recognized and written as a whole sequence of letters, not a visual shape.

RELATIONSHIPS BETWEEN READING AND WRITING

There is a tremendous amount of research in the area of reading and writing relationships (Tierney & Shanahan, 1991). The research can be divided into three main categories: (1) research that examines similarities of the two processes, (2) correlational studies, and (3) research that examines instructional methods in which reading and writing are used together.

Reading and Writing as Similar Processes

The connections between reading and writing are complex. A reader and a writer are engaged in similar, if not identical cognitive processes during the acts of comprehending or composing (Atwell, 1987; Kirby, 1986; Kucer, 1985; Martin, 1987; Smith, 1982; Squire, 1983; Tierney & Pearson, 1983).

Prior to reading, a reader establishes a purpose for reading and calls upon prior knowledge of the topic. The reader then consciously monitors comprehension through actively planning, regulating, checking, and rehypothesizing. A writer also establishes a purpose for writing and calls upon knowledge of the topic prior to the actual writing. A writer is intellectually and emotionally involved in constructing meaning, while at the same time monitoring the organization of the story, sentence structure, word choice, and letter/sound relationships.

Several scholars suggest that reading and writing involve simultaneously product and process, an interaction between the two, and a transaction between the reader and the writer (Rosenblatt, 1989; Tierney &
Leys, 1986; Tierney & Pearson, 1983). Rosenblatt's use of the term "transaction" or "transactional" is consistent with the twentieth-century shift in thinking about the relationship of human beings to the natural world. The term "interaction" has become too closely tied to a paradigm that treated human beings and nature as separate entities (Dewey & Bentley, 1949). Interaction implies that there are already defined entities acting on one another. On the other hand, transaction emphasizes the reciprocal relationship between human beings and nature. The term "transaction" designates relationships in which each element conditions and is conditioned by the other (Dewey & Bentley, 1949). Human activities and relationships are seen as transactions in which the individual and the social, cultural, and natural elements interfuse.

Rosenblatt states that the notion of transaction has significant implications for understanding language activities specifically for reading and writing. Language has traditionally been viewed as a "self-contained system or code, a set of arbitrary rules and conventions, manipulated as a tool by speakers and writers, or imprinting itself upon the minds of listeners and readers" (Rosenblatt, 1989, p. 3). In this view, the relationship is two-way: a dyadic between word and object, indicating that language is an autonomous system. A transactional model (Rosenblatt, 1989) is a triadic formulation. In this model, language and the processes involved in speaking, listening, reading, and writing are grounded firmly in the individual's transactions with the world. Therefore, language is viewed as a socially generated public system of communication always internalized by an individual human being in transaction with a particular environment, involving both public and private elements. Words do not function in isolation, but always in particular verbal, personal, and social contexts.
Rosenblatt (1989) views the processes of reading and writing as always involving individuals, with their particular linguistic and experiential resources, in particular transactions with particular environments or contexts. Her analyses of the reading and writing processes reveal parallels in patterns of symbolization and construction of meaning. Rosenblatt indicates that reading and writing are processes that both overlap and differ. Both reader and writer engage in constituting symbolic structures of meaning in a to-and-fro, circular transaction with the text. Both reading and writing follow similar patterns of thinking and call on similar linguistic habits. Both readers and writers are drawing on past linkages of signs, objects, and organic states in order to create new symbolizations, linkages, and organic states. Both reader and writer develop a framework, principle, or purpose that guides selective attention and the synthesizing and organization that creates meaning. Every reading and writing act falls on the efferent–aesthetic continuum. "Efferent" refers to the stance a reader or writer takes when attention is centered predominantly on what is to be carried away or retained after reading the event. "Aesthetic," on the other hand, refers to the stance a reader or writer takes when attention is on what is being lived through during the reading or writing event.

Although Rosenblatt agrees that readers and writers both "compose" a meaningful text, she indicates that the metaphor glosses over the differences in these two methods of composing. Essential to any reading or writing is the transaction of the reader/writer to the text. The transaction that starts with text produced by someone else is not the same transaction that starts with the individual facing a blank page. Reading is an integral part of the writing process, yet she argues that the writer's reading both resembles and differs from that of the reader's. A writer reading the text basically takes two stances
during the act of reading the text. Rosenblatt refers to these two readings as
authorial reading I and authorial reading II. In the authorial reading I, the writer
is carrying on a two-way, circular, transactional relationship with the very text
being written. This reading leads to revision, rewriting, and new meaning. The
second authorial reading is a reading in which the writer disassociates from the
text and reads it through the eyes of the potential readers, trying to judge what
they would make of the text.

Tierney and Pearson (1983) state that at the core of understanding
reading and writing connections, it is important to view the two as essentially
similar processes of meaning construction. They view both processes as acts
of composing. The reader creates meaning as he uses his background of
experience, together with the author's cues to come to grips with what the writer
is getting the reader to do or think and with what the reader creates for himself.
The writer, on the other hand, also uses a personal background of experience
to generate ideas and then filters these ideas through the judgment of what the
reader's background of experiences will be, what he wants to say, and what he
wants the reader to think or do. Both the reader and writer must adapt their
perceptions about their partner in negotiating what a text means.

Tierney and Pearson (1983) proposed a composing model of reading in
which reading and writing are viewed as acts of composing that share similar
underlying processes: planning, drafting, aligning, revising, and monitoring.
These activities involve continuous, recurring, and recursive transactions
among readers and writers, their respective inner selves, and their perceptions
of each other's goals and desires. In this model, reading is viewed as a
transaction between writers and readers and between the reader and himself.
Tierney and Pearson (1983) confirmed and extended the notion that reading
can be viewed as a situation-based or social accomplishment, not unlike what happens between listeners and speakers.

Other scholars (Kucer, 1985; Kirby, 1986; Martin, 1987) examined readers and writers during the acts of composing and found that similar strategies were used during the two processes. Kucer (1985) suggested that readers and writers were involved in several strategies of generating and integrating propositions through which internal structure of meaning known as the text world was built. These studies included the role of context, as well as strategies and procedures used by readers and writers in conjunction with accessing and transferring background knowledge.

Langer (1986) examined the reasoning operations and strategies of third-, sixth-, and ninth-grade readers and writers and found students used similar strategies during both processes. She indicated that students focus on meaning when formulating and refining ideas during both reading and writing.

Dobson (1989) looked for ways in which reading and writing intertwined in the learning process. She asked kindergarten and first-grade children to read and write any way they could. Common strategies were then identified and compared to strategies across tasks. This study revealed that children initially explore the mechanics of written language in their writing and in their reading of their own writing, developing composing strategies within the context of storybook reading. Dobson concluded that reading and writing supported each other with the transfer of strategies occurring in both directions. Since reading and writing are two aspects of the same language system, it could be expected that the two processes would be mutually supportive of each other.
Correlational Studies

There are numerous correlational studies that report on relationships between reading and writing. Some studies explore whether success in one correlates highly with success in the other. The influence of reading on writing as well as the influence of writing on reading is also explored across a number of factors.

One of the most influential of the correlational studies was Loban's (1963) study. This study was influential because of the large number of students involved (220) as well as the span of grade levels (first through twelfth). Student performance was measured using the Stanford Achievement Test, and writing was scored using holistic assessment procedures applied to a single writing sample done in response to a picture prompt. Loban found a high correlation between reading scores and ratings of writing quality in upper elementary grades and concluded that those who read well also write well; those who read poorly also write poorly. As a result of this study, Loban stated that success in reading was a predictor of success in writing. This research lead to additional studies that had similar findings, showing a high correlation between reading achievement and writing ability (Bippus, 1977; Calhoun, 1971; Fishco, 1966; Grimmer, 1970; Grobe & Grobe, 1977; Maloney, 1967; Woodfin, 1968). Studies conducted by Frith (1980) and Tierney (1983) had contrasting results from Loban in that they were able to locate students that were successful in reading but not in writing, or vice versa. These studies have lead to the conclusion that reading and writing are interrelated processes, but not always in ways that are easily predictable (Tierney & Shanahan, 1991).
Zutell and Rasinski (1989) examined the connections between the oral reading abilities and the spelling behaviors of third- and fifth-grade students in two different schools (one urban and one suburban). Each student read a selection one level above his/her current grade placement, was given words to spell on the appropriate grade level list of the Qualitative Inventory of Word Knowledge, and took the appropriate level of the Gates-MacGinitie Reading Tests. At both grade levels there were high significant correlations between spelling and reading variables. Their findings help to confirm a strong relationship between spelling skill and oral reading ability, and support the argument that a "common body of conceptual word knowledge underlies both" processes (Zutell & Rasinski, 1989, p. 137).

An additional group of studies examined the relationship between writing quality and the amount and diversity of reading experiences (Barbig, 1968; Donelson, 1967; Felland, 1981; Maloney, 1967; LaCampagne, 1968; Thomas, 1976; and Woodward & Phillips, 1967). There was a high correlation between writing achievement and the amount and diversity of reading that students had had.

A group of correlational studies examined how writing supported reading development. Bond and Dykstra (1967) and Maat (1977) found that merely including writing in the school curriculum enhanced students' success in reading comprehension and knowledge of story structure. A number of studies suggested the usefulness of writing activities for improving comprehension or retention of information in reading material. Such writing activities included summary writing (Doctorow, Witrock, & Marks, 1978; Glover, Plake, Roberts, Zimmer, & Palmere, 1981; Taylor & Berkowitz, 1980), note taking (Kulhavy, Dyer, & Silver, 1975), outlining (Dynes, 1932; Salisbury, 1934), and

Shanahan (1980, 1984) and Shanahan and Lomax (1986, 1988) examined the relationships among reading comprehension and vocabulary knowledge with t-unit length, organizational structure, vocabulary diversity and measures of spelling in stories written by more than 500 students in second and fifth grade. They found that reading and writing related in different ways at different reading levels. In Grade 2, the relationship was based on word recognition and spelling ability, while in Grade 5 the relationship was based on reading comprehension and several writing variables, especially organizational structure and vocabulary diversity. Juel, Griffith, and Gough (1986) also examined the relationship between reading comprehension and spelling, word identification, and writing ability and found a positive relationship between each.

Glenda Bissex's (1980) book demonstrated how the two processes of reading and writing develop in coordination with each other. Although Bissex focused on how her son, Paul, viewed himself as a writer, she found that reading was integrally involved and influenced his writing. Bissex (1980) demonstrated that young writers are influenced by what they read or hear read to them. Paul experimented with creating lists, letters, and stories as a result of hearing stories with these writing formats in them.

DeFord (1980) also examined the writings of first-grade children in different reading instructional approaches and found that the type of story that children read during reading instruction influenced the kind of writing the students wrote. Those children in basal programs wrote stories with controlled vocabularies found in the textbooks. The children who read and heard
literature read to them created stories with much more complex language and structure.

In a similar study, Eckhoff (1983) also explored the effects reading has on children's writing in second grade. She examined the writing of 37 children in two second-grade classes. The two classes differed in their reading series used for instruction. One classroom used a series (Basal A) that more closely matched the style and complexity of literary prose. The second classroom (Basal B) used a series with a more simplified style of text, less like children's natural language. Eckhoff found that the children's writing clearly contained features of their reading texts. The children exposed to the more natural language and complex prose used more elaborate linguistic structures. They used more words per t-unit, more complex verbs, subordinate clauses, and phrases. Children in Basal B classroom, on the other hand, used simpler structures. In addition, Eckhoff found differences in the format and style between these two groups. The Basal B classroom tended to copy the format of their reading texts by writing one sentence per line and also tended to use "and" at the beginning of the sentence and "too" at the end. At the higher levels of reading, the Basal B students did not write one sentence per line, but punctuated their writing as if it were.

Several studies have provided evidence to support the literacy learning of young children through the interaction of storybook reading (Clay, 1982; Goodman, 1984; Harste, Woodward, & Burke, 1984). Children learn about concepts about print, such as directionality, difference between letters and word, and that print is constant and does not change with reading.

Additional studies have demonstrated children's active involvement in learning about print while hearing stories read aloud. Cochran-Smith (1985)
and Morrow (1989) observed children during listening to stories read aloud and found that they asked questions about words and letters throughout the reading. In a recent study by McCarrier (1992), she observed how repeated readings of stories enhanced children's opportunities to engage in discussions about certain features of print. The first reading generally brought about comments about the illustrations or certain aspects within the story. Yet, as children became more familiar with the story, their attention turned to the visual details of print contained within these stories.

Interrelating Reading and Writing in Instruction

Tierney and McGinley (1987) view reading and writing as sufficiently overlapping activities. They support a symbiosis in which the impact of the two together becomes greater than the sum of their separate impacts. Reading and writing are viewed as processes that involve reception and production. The reader is viewed as a writer. Tierney and McGinley looked at four aspects of teaching writing which have been deemphasized or overlooked in the teaching of reading: respect for children as self-developing or initiated learners; orientation to process; concern for readership and authorship; and concern for the social nature of literacy.

According to Tierney and McGinley (1987), if the four aspects involved in teaching writing were also involved in the teaching of reading, the mutual processes would be strengthened. Tierney and McGinley propose a view of literacy in which reading and writing models work together to promote learning. Blending reading and writing fosters opportunities for children to explore in their own ways ideas and techniques from published works. Also supported would
be a level of engagement in learning that is more interconnected, intertextual, and more dialogical.

Several studies have suggested that using reading and writing instruction together engenders a more inquisitive attitude about learning (Tierney & Shanahan, 1991). These studies posit that interrelating reading and writing instruction leads students not only to have different learning outcomes, but also to be able to transfer knowledge acquired in one context to a novel context. Hayes (1987) states that the more the learner is engaged in both reading and writing, the greater the learning outcomes. Copeland (1989) and Newell (1984) state that it is not merely incorporating writing with reading that leads to different kinds of learning, but it is also the kind of writing that makes a difference. Copeland (1989) found that students who wrote essays about what they read had a higher level of understanding the novel read than students who wrote notes and prepared study questions. Newell's study (1984) had similar results using writing with expository texts.

Taylor (1983) suggests that both reading and writing processes are embedded in the social and linguistic contexts. A child first experiences them at home and then at school. The contexts influence children's access to literacy resources in both reading and writing. Other researchers focused on the collaboration of students and its influence on texts created. Graves and Hansen (1983) and Calkins (1983) found that students who collaborated in story writing discussed their stories and had a greater understanding of story format and structure than students who did not conference. Rowe (1986) and Short (1986) examined students who collaborated on stories and found that although they borrowed ideas from other students' stories, each incorporated the idea into his or her own story.
Tierney, Soter, O'Flahavan, and McGinley (1989) examined instructional methods incorporating reading and writing together and apart. The major focus of their study was to determine whether writing in combination with reading prompted more critical thinking than reading alone, writing alone, or either activity combined with questions. The researchers randomly assigned 137 undergraduate students to one of twelve treatment groups involving combinations of the following conditions in relation to one of two topics: introductory activity of writing (letter to the editor, knowledge activation, or no letter); a reading condition (reading or not reading editorial passage about the topic); and a question condition (answering or not answering questions related to the topic). Then all students wrote letters to the editor, with one group writing a second draft.

The researchers reported that significant differences emerged among students who both wrote and read and students in any of the other treatment groups. The combination of reading and writing contributed to a greater number of words and thought units as well as a wide range of revisions, such as additions, deletions, and substitutions, and to higher quality drafts than merely writing or reading alone.

Although many studies support the relationship between reading and writing processes (Brozo & Tomlinson, 1986; Fleming, 1982; Marino, Gould, & Haas, 1985; Marshall, 1987; Martin, Konopak, & Martin, 1986; Ogle, 1986; Salvatori, 1985), most have focused on older subjects who were already readers and writers. For the purposes of this study, however, it is important to examine the work related to emergent literacy, when children are becoming readers and writers.
Several areas of research have examined early instructional settings that used both reading and writing together (Barr, 1985; Clay, 1975, 1982, 1991; Dobson, 1989; Ferreiro & Teberosky, 1982; Kawakami-Arakaki, Oshira, & Farran, 1989; Pinnell & McCrerr, 1993; Sulzby, Barnhardt, & Hieshima, 1989). Barr (1985) posited that reading and writing are similar processes that mutually inform the other. Researchers suggest that using reading and writing together facilitates different cognitive thinking and fosters different learning outcomes.

Sulzby, Barnhardt, and Hieshima (1989) discussed how young children's emergent writing can be interpreted when compared with how children reread from their writing. There were 123 kindergarten subjects from five different classrooms over a period of two years. From the teachers, researchers collected monthly samples of children's classroom writing across time from October through May. In addition, researchers alone gathered samples from three individual sessions with the children. During individual sessions, observation notes were made of the order of composition and any other nonverbal behaviors. When the child was finished with the writing, the researcher asked for two rereadings, one without pointing and one with pointing. Findings indicated that the most common form of writing was drawing, scribbling, and random or patterned letter strings. All children produced some type of graphics. The predominant form of rereading was written monologue in which both wording and intonation were written language like.

Even though the written form appeared relatively immature, the reading attempts for that form were quite advanced. There appeared to be a developmental pattern in scribbling that began with not matching the scribble to the amount of speech and not tracking to beginning to try to coordinate scribble
and speech. The researchers also found that most five-year olds produced invented spellings for isolated words or brief phrases; however, they used invented spellings less often and later in age for longer pieces of composition. They divided invented spelling into three categories: syllabic (one letter per syllable); full invented spelling (one letter per phoneme); and intermediate (anything in between).

Dobson (1989) looked at how reading and writing are intertwined in the learning process. In order to trace children’s development through kindergarten and first grade, Dobson asked 18 children to read and write in any way they could. In each of 26 sessions conducted bimonthly throughout kindergarten and first grade, children were asked to draw a picture, to write about it, and to read their work when they were through. Children were also asked to choose and read an 8 page story book. The analysis suggested continuous rather than stage-like development with new strategies gradually becoming integrated into existing patterns.

This study examined children’s writing and reading strategies at five levels of understanding:

1. The child understands that the contents of books are meaningful and can be read as such.

2. The child understands that spoken text matches the written text (time-space match).

3. The child is aware that the alphabetic principal is used to match speech and print, thus producing a stable wording.

4. The child knows that words appear on a page as units of print, separated by space.
5. The child understands that morphemes (word, base, or affix) have a constant spelling but can be combined to form new units of meaning.

Each level reflects a more advanced state of print awareness and a progression toward the conventional. Parallel to the insights of print awareness were developments in children’s knowledge of stories, including story structure and composing strategies. Dobson found that print-related strategies developed initially in writing and then transferred to storybook reading. Composing strategies were initially developed in the context of storybook reading and then shifted to children’s writing. Her findings support the hypothesis that reading and writing are mutually supportive and connected at each step to learners’ knowledge of the system of written language and how it works.

According to Clay (1975, 1982, 1991), the first explorations of print may occur in writing rather than reading. Children start with scribbles, imitating their parents’ writing, and then experiment with letter-like writing. They write names of family members in sending letters to relatives or friends. While the child is creating a story in print, the eye and the brain are directed to important features, for the child must:

- attend very closely to features of letters
- construct his own words, letter by letter
- direct attention to spatial concepts
- work within the order and sequence constraints of print
- break down the task to its smallest segments while at the same time synthesizing them into words and sentences
- engage in his own form of segmenting sounds in words in order to write them.
Although Clay talks about how the building up and breaking down processes both occur in reading, she suggests that the constructive nature of writing is more obvious to the child. Clay hypothesizes that through these two processes—building up and breaking down—the child comes to understand the hierarchical relationships of letters, words, and utterances of speech. The child derives a sense of mastery when he writes a word that adults recognize. In order to accomplish this, the child had to organize his/her own behavior into appropriate sequences of actions, reach into his associations of graphemes with phonemes, his motor skill formation, and into his reading knowledge to check on the written sequences he created. Writing differs from reading since it requires the motor skills to produce letters and words instead of saying them, which Clay argues seems to be easier for the child.

According to Clay (1991), writing is a rough guide to the child's visual analysis skills. A child may be able to see what the hand cannot yet execute. Reading can also be a misleading guide to what the child is perceiving because early reading is likely to be driven by the child's language experiences. The absence of writing activities and a lack of a core of known words after a period of time in school may be a signal that the visual perception of print is not being organized into programs for seeing, producing, and recalling words. These will be first steps toward reading print. "...what the child writes is a rough indicator of what he is attending to in print, and demonstrates the programs of action he is using for word production" (p. 109). Clay suggests that writing creates opportunities for the child to gain control of literacy concepts. Clay (1982, 1991) found that good readers explore print more than poor readers. Good readers have both a writing vocabulary and reading vocabulary, while poor readers have little or no writing vocabulary.
After six months of instruction, a writing vocabulary was found to be equally as good a predictor of reading progress as letter identification (Robinson, 1973).

Clay recognizes the potential of early writing, not only as a satisfying experience for young children, but also as complementing children's early reading progress. Writing contributes to reading, for when the child writes, he has to know the sound-symbol relations inherent in reading. Auditory, visual, and motor systems are all at work when the child writes and all contribute to greater skill in reading (Clay, 1982, 1991; Smith, 1971). In the early stages of learning to read, a child acquires strategies that permit him to build great stores of items and strategies for searching and checking upon the accuracy of what he has written so far. If a child knows how to scan letters and words, how to study a word in order to write it, and how to organize his writing of that word, he has the skills to deal with the details of print (Clay, 1982, 1991).

For most five-year-old children, still developing the skills of visual exploration and learning visual perception with the support of hand and finger movements, early writing activities would presumably have the function of encouraging the development of those visual exploration behaviors necessary in reading (Clay, 1975). Early writing serves to organize the visual analysis for print and to strengthen important memoric strategies. A child's work provides evidence of what he has learned and creates the opportunity for the teacher to see how the child organizes his behavior as he writes.

. . . if the goal of reading and writing at this level is to have the child eager to search his stores of knowledge about written language, reaching out for new information to supplement them, meanwhile working slowly and carefully enough for the complex processes to become interrelated, for awareness of error to occur by feedback processes, and for self-correction to occur, then it may be appropriate that some of these activities are performed at slower speeds (Clay, 1982, p. 209).
The motor activity of writing adds another way of knowing about written language and provides an additional way in which errors can be recognized, providing another source of error detection.

Clay states that when a learner is a novice, with only tentative strategies for responding correctly, he needs more sources of error detection. Writing plays a significant part in early reading progress in that is a means of slowing up the complex activity so that all the pieces can be interwoven. Writing provides for synthetic experiences where letters are built into words that make up sentences, reinforcing the left-to-right principles and an understanding of the hierarchical nature of language. As the child becomes a better reader, he can afford to forget the movement as a way of checking on the correctness of his response. However, in the early, unsure days, his memories for words which he has tried to write may provide feedback to both early writing and early reading, and practice in writing could be critical at the early learning stage (Clay, 1982, 1991). Once the basic visual scanning, memoric, and self-correction strategies are established, practice in writing has its own value and does not contribute directly to reading progress. Then the goal for reading shifts from flexible organization of complex activities to automatic responses on the basis of partial cues (Clay, 1982).

INSTRUCTION AS ASSISTED LEARNING

From the earliest months of life, children are natural problem solvers (Bruner, 1973). It is often the case that children's efforts are assisted and fostered by others who are more skillful. Higher primate species learn by observation of their elders, yet what distinguishes man as a species is "not only
his capacity for learning, but for teaching as well" (Wood, Bruner, & Ross, 1976, p. 89). The most critical factor in a child's literacy development is the support received from others in the environment. Initially, the support has come from various members at home: older sibling, parent, grandparent, or caregiver. When children enter school, their resources to literacy learning come from the teacher.

Vygotsky (1978) argues that a child's development cannot be understood by studying the individual; rather, the external social world in which the individual developed also needs to be examined. The same is true for teaching and learning. Before school, children are learning higher-order cognitive and language skills in their home environment. In everyday activities, such as reading a story (Ninio & Bruner, 1978) or merely conversing, children are engaged in social interaction with a more capable adult or peer. The child's participation is sustained by the adult assuming most of the responsibility for carrying out the task (Wertsch, 1979). The adult allows the child to do what s/he is capable of doing and then provides assistance when necessary. It is with this assistance that the child is capable of doing something that ordinarily could not have been done alone (Tharp & Gallimore, 1988; Wertsch, 1990).

All functions in the child's cultural development appear in two planes (Wertsch, 1979, 1990). First, it appears in the social plane, or the intermental plane of cognitive development (Vygotsky, 1978; Wertsch, 1990). Then it appears in the psychological plane, or intramental plane (Vygotsky, 1978; Wertsch, 1990). The "intermental plane" is the joint construction of knowledge between the child and the adult. The intramental plane refers to the child's independent level of consciousness, where the task can be accomplished
without the assistance of a more capable person. The "intramental plane" occurs as a result of the interactions and discussions that take place during the intramental plane. This knowledge is not transferred from one plane to the other, but instead, it is internalized as a result of these interactions (Wertsch, 1990).

Until this mental activity is internalized and automaticized, assisted performance is needed. Tharp and Gallimore (1988) define assisted performance as providing support through the help of others, the environment, and the self. Vygotsky (1978) states that the contrast between assisted performance and unassisted performance is the fundamental link of learning and development (Tharp & Gallimore, 1988; Wertsch, 1990). Learning precedes development and pushes it forward.

Vygotsky states that the way that learning precedes development is by working within the child's zone of proximal development. Vygotsky (1978) defines the "zone of proximal development" as the distance between assisted performance and unassisted performance. The term refers to the "distance between the actual developmental level as determined by independent problem solving and the level of potential determined through problem solving under adult guidance or in collaboration with more capable peers" (Vygotsky, 1978, p. 86). Vygotsky believes that what children are capable of doing with help one day, they will be able to do without assistance the next.

...learning awakens a variety of internal developmental processes that are able to operate only when the child is interacting with people in his environment and cooperation with his peers. Once these processes are internalized, they become part of the child's independent developmental achievement (Vygotsky, in Tharp & Gallimore, 1988, p. 31).

There are four stages of the zone of proximal development, in which the child progresses from having little control over the task, to gradually
developing automaticity of the process. In the final stage, something causes conflict in the child's thinking, and a recursive loop occurs in which the child returns to the first stage of the zone.

Building from the Vygotskian perspective on the role of social interaction, the adult is seen as a key component to children's learning (Clay & Cazden, 1990; Vygotsky, 1978; Wood, 1988; Wood, Bruner, & Ross, 1976). Vygotsky's concept of the zone of proximal development provides a way of looking at instruction. Adult guidance takes into account "the nature of what a child knows, the problem solving processes used, and an understanding of what needs to be learned in order to strive for the potential available to the child" (Lyons, Pinnell, & DeFord, 1993, p. 130). Initially, children may have a limited understanding of the situation or task. The parent, teacher, or more capable peer offers directions or modeling, and children merely imitate (Wertsch, 1990). Gradually, children come to understand the way in which the parts of the activity relate to one another or the meaning of the performance (Tharp & Gallimore, 1988).

The help provided by another more capable person has been referred to as a "scaffold" (Bruner, 1978). An expert teacher, peer, or parent provides a supportive instructional environment in which children are able to build upon their repertoire of existing knowledge (Clay & Cazden, 1990). This scaffolding, however, does not mean simplifying the task. Instead, the difficulty of the task is held constant, while simplifying the children's role by means of graduated assistance from the adult or expert. Scaffolds are temporary and ever-changing. The adult "controls those elements of the task that are initially beyond the learner's capacity, thus permitting him to concentrate upon and complete only those elements that are within his range of competence" (Wood,
Gradually, the adult releases responsibilities of the learning over to the students as they gain competency over their own process of learning.

Wood, Bruner, and Ross (1976), in their study of three-, four-, and five-year-olds, observed several functions of the adult during the scaffolding process. The first task of the adult is that of recruiting or enlisting the child's interest in the problem. Once the child is interested in the problem-solving process, the adult then simplifies the task by reducing the complexity or size of the task so the child can contribute that of which he is capable. The adult then, assumes the rest of the tasks necessary for solving the problem. A third function is direction maintenance, where the adult keeps the child engaged and enthusiastic in the pursuit of a particular objective. A fourth function of adults is that they call attention to certain features of the task that are relevant. The adult selects what the teaching point is as well as what is reinforced. The situation is also monitored by the adult so that he controls the child's level of frustration. "Problem-solving should be less dangerous or stressful with a tutor than without" (Wood, Bruner, & Ross, 1976, p. 98). A final function observed is that of demonstration. The adult models or demonstrates solutions to a task.

Teaching is said to occur only when assisting performance in the child's zone of proximal development. The teacher assists performance in several ways: modeling, contingency management, feedback, instructing, questioning, and cognitive structuring (Tharp & Gallimore, 1988).

Through modeling, new behaviors are initiated by the teacher. The child first observes and then is asked to do the same thing as the teacher. The teacher demonstrates the task that the child is expected to do because the child is unable to do it alone or has little understanding of the task. For
example, when working with a group of students who are not familiar with
directionality principles, the teacher models where to start when she begins
reading. She models this again when the group begins to write a story and
includes the students in the process by engaging them in the discussion. The
teacher provides almost a running commentary of what she is doing. The
teacher is able to continually engage the students in the task. The task is not
simplified, but rather it is held constant while each child's role varies according
to the competence of the individual child.

Contingency management, or praise, is also part of assisted instruction.
Praise is used, not to initiate new behaviors, but rather to strengthen behaviors
that already exist. Using the example above of directionality, if a student begins
to write in the correct place, the teacher offers praise, such as, "Good John."

Feeding back information is a powerful means of assistance (Tharp &
Gallimore, 1988). Feedback refers to specific information about what the child
has done, such as, "Good, I like how you knew to check the pictures before
beginning to read." By providing specific feedback to the children, the teacher
is able to encourage the continuation of the desired behavior.

Instruction calls for specific action on the part of the adult. The teacher
gives guidance as to what the child needs to do or what he needs to attend to.
Instruction can be expected to occur only when teachers assume responsibility
for assisting performance, rather than expecting students to learn on their own.
"Effective instructions must be embedded in a context of other effective means,
notable contingency management, feeding-back, and cognitive structuring" (Tharp & Gallimore, 1988, p. 56).

Questioning calls specifically for a linguistic and cognitive response.
Questioning is one of the most essential types of assisting performance. There
are two kinds of questions: those that assess and those that assist. The assessment question is asked to discover the children's ability to perform without assistance. The assistance question, on the other hand, inquires in order to produce a mental operation that the pupil cannot or will not produce on their own. Clay (1975) proposes that demonstrations precede questioning. "Teach by demonstration. Use a questioning approach only for established responses" (p. 59).

Cognitive structuring refers to the provision of a structure for thinking and acting. It may be a structure for beliefs, for mental operations, or for understanding. It does not call for a specific response, but the teacher provides a structure for organizing elements in relation to one another (Lyons, Pinnell, & DeFord, 1993). By structuring the environment, the teacher is able to assist students' performance.

SUMMARY

Before entering school, children have had a variety of meaningful experiences in which they were actively engaged in discovering features of print (Clay, 1991; Goodman, 1980; Hall, 1987; Harste, Woodward, & Burke, 1984; Teale & Sulzby, 1986). Their writing demonstrates that they have observed and understood a wide range of features of print.

As young children attempt to represent their ideas in print, they begin writing with their understanding of the sound system of language (Chomsky, 1972; Clay, 1975, 1982, 1991; Goswami, 1986; Henderson & Beers, 1980; Read, 1971, 1975; Zutell, 1979). The sound system of language includes sound sequences in sentences, words, syllables, and letter clusters, and at the phoneme level. Children use such sound systems as phoneme-grapheme
relationships, letter clusters and their clustered sounds, orthographic patterns and their sounds, analogous parts of words, rhyme relationships between words, words within words, words combined with words, syllabic chunks such as onset and rime, and words that are expanded by prefixes and suffixes. Most children do not have difficulty with phonological awareness at the level of sentence or word, because meaning is involved, reducing the need for phonological attention, but the difficulty arises at the sub-word level.

In an instructional setting, children use a variety of strategies as they begin to write stories. They hear and record sounds in words (Clay, 1982, 1991; Elkonin, 1973), use analogies of words that share a common spelling pattern (Goswami, 1986; Goswami & Bryant, 1990), and also use global strategies in which they recognize and write words as an entire sequence of letters (Clay, 1991, 1993; Goswami & Bryant, 1990).

Writing and reading are similar cognitive processes of meaning construction (Atwell, 1987; Rosenblatt, 1989; Squire, 1983; Tierney & Pearson, 1983) in which similar strategies are used (Kirby, 1986; Kucer, 1985; Langer, 1986; Martin, 1987). Correlational studies of reading and writing explored how success in one process highly correlated with success in the other (Bippus, 1977; Fishco, 1966; Grimmer, 1970; Loban, 1963; Zutell & Rasinski, 1989). Additional studies have shown the influence of reading on writing and writing on reading (Bissex, 1980; Clay, 1991; DeFord, 1980; Eckhoff, 1983). Instruction that incorporates writing and reading together enhances students' ability to transfer knowledge acquired in one context to a novel context.

A child's development cannot be understood by understanding the individual; rather, his social world also needs to be examined. Building from a
Vygotskian perspective on the role of social interaction, the adult is seen as a key component to children's learning (Clay & Cazden, 1990; Vygotsky, 1978; Wood, 1988; Wood, Bruner, & Ross, 1978). In the instructional setting, the critical adult is the teacher. The teacher takes into account what the child knows, strategies he uses, and an understanding of what needs to be learned in order to strive for the potential available for the child.

Most studies measure children's progress by how well they operate independently. There is a need to know what students can do when given the opportunity to experience effective instruction, high support, and immersion in the processes of writing and reading. This study provided detailed observations of what students can do with support in writing, and what they can do independently.
CHAPTER III
METHODOLOGY

INTRODUCTION

This study set out to describe and interpret the behaviors of a first-grade teacher and a small group of at-risk students while they were engaged in literacy activities centered around interactive writing. This kind of task calls for a naturalistic setting and for qualitative methods that are notably suited for grasping the complexity of the phenomenon. By not prespecifying what they will attend to, and by virtue of the relatively extended amount of time they devote to exploring their phenomena, qualitative inquirers have practically no limit to what they can uncover (Peshkin, 1988, p. 416).

Four key features of qualitative research directly apply to the research design of this study (Eisner, 1991). Qualitative studies tend to be field focused and the researcher acts as the main instrument of data collection. Data are collected on the premises and supplemented by the understanding that is gained by the researcher being on location. "Action can be best understood when it is observed in the setting in which it occurs" (Bogdan & Biklen, 1992, p. 30).

Qualitative research is interpretive in nature. The researcher does not search out data or evidence to prove or disprove hypotheses held before entering the study. Rather, the abstractions are built as the particulars that have been gathered are grouped together. The researcher constructs a
picture that takes shape as the data are collected and examined (Bogdan & Biklen, 1992).

The open, emergent nature of qualitative research sets the stage for discovery. Hard-to-answer, context-bound questions emerge along with unexpected patterns and new understandings through the evolutionary nature of qualitative inquiry. The openness allows the researcher to approach the inherent complexity of social interactions and to do justice to that complexity.

Qualitative research tends to attend to the particulars. Researchers deal with multiple, socially constructed realities or "qualities" that are complex and indivisible into discrete variables and regard their task as coming to understand and interpret how the various participants in a social setting construct the world around them. Data are collected with the assumption that nothing is trivial, that everything has the potential of being a clue that might unlock a more comprehensive understanding of what is being studied (Glesne & Peshkin, 1990).

Meaning is of essential concern to the qualitative approach. Researchers are interested in the ways different people make sense out of their lives. By learning the perspectives of the participants, qualitative research illuminates the "inner dynamics of situations" (Bogdan & Biklen, 1992, p. 31). Researchers are interested in making sure they capture perspectives accurately, so strategies and procedures are set up that enable them to consider the experiences from the informants' perspectives.

Qualitative research makes use of expressive language. Data are collected in the form of words or pictures and analyzed with all their richness as closely as possible to the form in which they were recorded. Due to the research method employed, the researcher took on the role of participant-
observer (Spradley, 1980) in a first-grade classroom. Most of the data collected were descriptive and reflective. Other factors that reflect ethnographic research were incorporated and adhered to such as the following: the investigation took place in one particular setting over an extended period of time, the researcher was the primary data-gathering instrument, the focus was on the process rather than the products, and the data were analyzed inductively (Bogdan & Biklen, 1992).

The focus throughout this study was to investigate and describe the interactions of a small group of children and a teacher during interactive writing in a first-grade classroom. This chapter presents the rationale for the selection of the research setting and population, the time frame of the study, methods of resource collection and analysis, and the investigator's role throughout the study.

The following research questions were investigated during this study:

1. What takes place during interactive writing within the context of the literacy lesson?
2. How are student and teacher behaviors reciprocal of each other during interactive writing?
3. How do children independently use their knowledge of strategies in reading/writing contexts?

POPULATION AND SETTING

The study was conducted in a first-grade, self-contained classroom in an elementary school in the Denton Independent School District, Denton, Texas. The school enrollment of 672 students included children from prekindergarten through sixth grade. Approximately 66% of the school population was Anglo.
The minority populations included 12% African-American students, 16% Hispanic students, and 6% Asian and American Indian students. Thirty-nine percent of the student population were on free or reduced lunch programs. Thirteen percent of the students were identified as bilingual or ESL children. The school did not have a special curricular emphasis; that is, it was not an alternative school, yet the curriculum did include English as a Second Language and bilingual education, developmental first grade, and prekindergarten programs.

The following criteria were used to select the teacher in the study. The teacher:

- received administrative recommendation
- used literature to teach language arts
- was trained in Reading Recovery
- was willing to participate in the study

This particular first-grade classroom was selected as a site for the study because the teacher, Marcia Kellum, had a reputation within the district with both the administrative personnel and her peers as an excellent classroom teacher. The building principal, assistant principal, second-grade teachers, and Reading Recovery (Clay, 1975) teacher leader all commented on her children's strengths in reading and writing as a result of the classroom instruction each had received in first grade.

The second criterion for the selection of a teacher was the use of literature in classroom instruction. Since interactive writing is most often related to a piece of literature, it was essential that the teacher already be familiar with children's literature and use literature as part of her curriculum. Miss Kellum used literature in her classroom as the core for her instruction. Students had
multiple opportunities to read and write since all areas of the curriculum were integrated through this teacher's use of literature.

Another important criterion in the selection of a teacher was training and experience in Reading Recovery. Interactive writing is an instructional method unfamiliar to most educators in the geographic area of this study; however, it is theoretically similar to the writing component used in Reading Recovery. Since this study was to describe and interpret behaviors of a teacher and small group of students engaged in interactive writing, the researcher reasoned that the transition to interactive writing might be easier for a Reading Recovery teacher already trained in similar techniques and knowledgeable about the theoretical perspective behind the procedures. Miss Kellum had been a trained Reading Recovery teacher for two years and was knowledgeable about reading and writing processes. In addition, the teacher leader for the school district recommended Miss Kellum and stated that she was one of the most effective Reading Recovery teachers in the district.

Marcia Kellum had also agreed to participate in a year-long graduate course in early literacy for which the investigator was the course instructor. Although the course was not a requirement for teacher selection, it made Miss Kellum an even more attractive choice for the study. This class met weekly for 32 weeks to explore literacy learning within a small group and classroom instruction for kindergarten, first-grade, and Chapter I students. One of the major focuses of the class was on the instructional technique, interactive writing with emergent readers and writers.

Because the teacher was a trained and experienced Reading Recovery teacher, used literature as the core of her curriculum, integrated reading and writing throughout her curriculum, was highly regarded by administrative and
teaching personnel for her instruction, was enrolled in a year-long graduate course in early literacy, and agreed to participate in the study, her classroom seemed like an ideal setting for the proposed study.

The small group observed was established by the classroom teacher as a result of their need for more explicit instruction in literacy activities. This group operated the same as the other reading groups within the classroom, yet the instructional procedures varied according to the literacy needs of the children. Early identification of children's need for more explicit instruction was made using the following criteria:

1. The classroom teacher observed the first-grade children on literacy activities within the first two weeks of school.

2. The classroom teacher completed an alternate ranking of her first-grade class within the first two weeks of school, identifying the highest reader first, then the lowest reader, then the next highest reader, and the next lowest reader, and so on, until the entire class had been ranked.

3. Clay's Observation Survey (1993a) was administered to every student in the classroom. The composite of the Observational Survey for each individual student was analyzed by the classroom teacher.

As a result of the above criteria, the teacher identified six students from her classroom who had the lowest scores and, who, based on her informal observations, needed more explicit literacy instruction. At the onset of the study, these children did not receive additional services outside of the classroom for reading/writing instruction (such as Reading Recovery, ESL, or tutoring), and therefore were placed in the literacy group for the study. Parent permission letters were obtained for all six of the children for potential inclusion in the study.
The children selected for the literacy group had similar profiles at the beginning of the study. Individually, they demonstrated limited knowledge of upper- and lowercase letters, could articulate a few words slowly and represent some of those sounds with the appropriate letters (generally the initial or ending consonant), had one or two words that they could write in every detail, and showed evidence during the text reading that their oral language was so fluent that the coordination of visual perception and motor movement with language was difficult.

Three of the students, Heather, Jared, and Jessie, had been in a traditional kindergarten class prior to entering first grade. Their kindergarten teachers recommended placement in a developmental first-grade program for the first year of formal instruction.

The developmental first-grade program was created for students who teachers and parents believed needed another year of socialization opportunities and instruction before being placed in a regular first-grade classroom. After one year of instruction, these students are automatically placed in a first-grade classroom despite the rate of learning (that is, accelerated progress). The decision for placement in the developmental first-grade program is dependent upon parent approval. The parents of the three students, Heather, Jared, and Jessie, did not agree with or consent to the recommended developmental first-grade placement; therefore, these students continued their instruction in a regular first grade classroom.

Heather was six years and five months old when the study began. She had been recommended for the developmental first-grade classroom because her teacher felt she was not ready for a first-grade curriculum.
Jared was six years and two months old at the beginning of the study. His kindergarten teacher had recommended placement in a developmental program instead of the regular first grade classroom because he was emotionally immature and not ready for the rigors of the demanding first-grade curriculum.

At the beginning of the study, Jessie was six years and five months old. She also had received a year of instruction in kindergarten, but it was suggested that she be placed in a developmental first-grade classroom for reasons similar to those stated about Jared.

Justin, the fourth selected student, was seven years and five months old at the onset of the study. He was older than the other children in the group because this was his second year in first grade. His first year of first-grade instruction was in a developmental first-grade classroom. Because of his low scores on the Observation Survey and the classroom teacher's observations, Justin became one of the students in the literacy group.

Vanessa was six years and one month old when the study began. She was Hispanic, with Spanish being the primary language spoken in the home. The only time that she heard and used English was during the school day. Prior to first grade, Vanessa was in an English as a Second Language program. Her kindergarten teacher recommended that she continue in the ESL program throughout first grade; however, her parents felt a special program was not necessary.

Vince, the sixth student selected, participated in the study for the first two periods of data collection and then transferred to another school. For the purposes of reporting the data, his name is included in several vignettes.
Multiple Roles of the Researcher

At the onset of the study, the teacher and researcher established that they would interact with one another in different contexts and for varied purposes throughout the year. The researcher's primary function was to observe students and the classroom teacher during the literacy activity of interactive writing. The researcher's role as an observer (Spradley, 1980) varied depending on the particular activities in which the children and teacher were engaged. When the teacher was reading aloud a story to the children or conducting interactive writing instruction, the researcher took on the role of passive observer (Glesne & Peshkin, 1990), with little or no interaction with those being observed. The researcher videotaped and audiotaped these literacy activities and took field notes during this time, but did not interact with the class.

The role of the researcher often shifted to participant as observer (Glesne & Peshkin, 1990) when the children were working independently because the children perceived the researcher as another adult who could support them in their reading and writing activities. For example, on numerous occasions when children were engaged in reading familiar books independently, the students asked questions of the researcher (such as what a particular word was) or asked the investigator to read to them or listen to them read. Children also engaged in independent writing activities as part of the literacy lesson, such as creating retellings of The Three Bears, and would ask the researcher for help with writing sections of their story. During these kinds of literacy activities, the researcher complied with the students' requests and took on the role of participant as observer (Glesne & Peshkin, 1990), and interacted extensively in order to learn from the children rather than studying them
(Spradley, 1979). Immediately after the interactions, the researcher wrote up an account in her field notes.

In anthropological fieldwork, . . . you must be willing to turn your attention from one focus to another, . . . looking for clues to patterns and not knowing what will prove to be important or how your own attention and responsiveness have been shaped (Bateson, 1984, p. 164).

Occasionally, the researcher was a full participant (Glesne & Peshkin, 1990), functioning as a member of the classroom undergoing investigation. On several occasions, the teacher was called out of the room briefly and needed another adult to work with the students while she was gone. In addition, during the weekly meetings with the researcher, the teacher asked for specific suggestions regarding teaching methods, book selection, and extension activities and the researcher attempted to address these questions and concerns. Because the purpose of the study was to describe and interpret the literacy behaviors of the students and teacher during interactive writing, the researcher talked only about instructional decisions at the request of the teacher. However, throughout the investigation, both the researcher and teacher shared with each other their observations of the student interactions since this had been established from the beginning of the study.

Sometimes, the teacher requested that the researcher read a book aloud with the students so as to allow her the opportunity to observe the children during the literacy event. Early in the study, the teacher asked that the researcher conduct an interactive writing session so she could observe how the researcher interacted with the students and orchestrated the mechanics of this writing activity since it was a new technique for her. From the teacher's response, these occasional participations provided her a valuable time to learn
more about the literacy strategies of children, which helped her in her planning for future literacy instruction.

At the same time, the classroom teacher was also part of a graduate course at the university taught by the researcher, and therefore, the researcher and teacher also interacted as teacher and student. The purpose of the course was to support classroom teachers as they implemented the early literacy lesson framework in their classrooms. On several occasions, as part of the course requirements, the teacher and researcher discussed observations made during visits in the classroom, in videotaped lessons, in teacher comments written in her reflective journal, and in papers turned in for class.

Both the researcher and teacher were aware of their roles in the various contexts (Bogdan & Biklen, 1992) and were also flexible with their roles as they continued to emerge and shift throughout the study (Bogdan & Biklen, 1992; Glesne & Peshkin, 1990; Patton, 1990). The extent to which the teacher implemented the components of the early literacy lesson framework and the various instructional practices attempted and incorporated in her classroom were influenced by the graduate course and by knowing that she and her students were part of a year-long research study.

The investigator's different roles allowed her to observe and gather varying kinds of information as well as share this information as the study evolved. The various roles provided the investigator a deeper and broader way of observing the literacy events and the varied contexts created by the teacher and students.
CONTEXT OF THE STUDY

The Instructional Model

Literacy lessons as described in The Ohio State Early Literacy Initiative provide opportunities for children to learn about reading and writing in a supportive context with a small group of children and a teacher. Since the lesson framework was developed as a result of teachers' and researchers' experience with and knowledge of the theory behind Reading Recovery, several of these components are similar to those contained in Reading Recovery; however, differences do occur. Several lesson elements of Reading Recovery are congruent with good classroom practice (such as familiar reading, guided reading, writing). In addition, this framework has been designed to help, in particular, children with low experience levels and therefore, it is appropriate to borrow from Reading Recovery. Many of the lesson components do differ from Reading Recovery (such as reading aloud to students, story extensions, interactive writing, shared reading), making the instruction more conducive to the classroom setting.

The implementation of the literacy framework and the amount of time given varies from classroom to classroom. Some teachers incorporate the framework in their language arts block, consisting of the entire morning. Others implement the framework within a more structured time frame similar to reading groups. For the purposes of this study, the framework has been designed to be a 30- to 40-minute lesson. The components can occur in any order; however, many teachers establish routines and an order to that seems to work in her classroom. The following components are presented so that reading components and writing components are grouped together.
Reading Aloud to Children

Reading stories aloud to children is a daily component of the literacy lesson that provides an adult model of good reading behavior. Fluent reading, with phrasing and expression, draws the children into the story, allowing them to delight in books while they are, at the same time, learning to read. While the teacher reads, the children have opportunities to talk about the stories and to respond in ways unique to them.

Not only do children enjoy hearing stories read to them each day, but they also learn how stories are constructed. By hearing stories read to them and having opportunities to discuss books, children begin to see similarities and differences within stories, and in their discussions they can compare and contrast various aspects of stories (Huck, Hickman, & Hepler, 1993). The teacher carefully selects books to read aloud so that she might help children realize connections across stories. Selecting books carefully, along with fostering and facilitating rich discussions, create situations in which discoveries can be made while enjoying a story together.

Familiar Reading

During familiar reading, students choose from a variety of books to read independently for approximately 7 to 10 minutes. The collection combines literature that has been read aloud to the children in the group or to various individuals within the group, purchased big books or those made by children, published little books with natural language, and books written by students in the group.

In repeated readings of their own choosing, children become more independent readers. This reading time allows children opportunities to revisit
stories and to practice the orchestration of all the complex range of behaviors necessary for reading (Clay, 1982). Children solve problems independently and/or with a partner as they continue to make further discoveries about the way print operates.

**Guided Reading**

In guided reading, a new book at an instructional level is introduced by the teacher to an individual or a small group of students. The book is selected specifically for an individual child or group, based on reading strategies exhibited, text level of difficulty, concepts known, and interests expressed.

Before reading, the teacher first gives a brief overview of what the story is about. After the overview, the teacher and child (children) discuss the book, previewing the illustrations and talking about what takes place throughout the entire story. During this time, the teacher guides the conversation to enhance the meaning of the story, to develop concepts that need further explanation, to locate one to two new and important words in the story, and to familiarize the child with any unusual language structures contained in the book (Clay, 1991).

Once the book has been discussed, the student or group is given the opportunity to read the story independently. Throughout the reading, the teacher gives assistance, asking questions and providing prompts that build on the strengths and strategies controlled by the child or group members. Opportunities are still there, however, for the individual to problem-solve on the new text.

Following the first reading, the teacher and child (children) together occasionally read the story a second time for fluency (Clay, 1982). What has been worked on during the first reading is put back into the context of the entire
story, so that the meaning of the story is not lost. The next day, the teacher takes a running record of the child's reading of this book and uses that information for developing further instruction.

**Shared Reading**

The shared reading setting allows the teacher to further extend students' understanding of print, while at the same time enjoying and revisiting a familiar story together. While the teacher demonstrates specific reading strategies, students are actively engaged in the reading of the text within a supportive situation. Books for shared reading can be commercially published "big books," chart stories, lists, recipes, and other texts with print large enough for all members of the group to see clearly (Holdaway, 1979).

The texts are more complicated than children could be expected to read alone, but they are socially supported by the group as they engage in the reading process (Pinnell & McCarrier, 1993). As they become more knowledgeable and confident in reading a particular text, teachers use the shared reading experience to promote various reading behaviors and strategies, such as predicting, searching behaviors, locating known and unknown words, monitoring, and self-correcting.

In shared reading, both the teacher and children model good reading behaviors. Fluency and phrasing are easily demonstrated as students can use their voices to imitate particular characters. This process helps children understand that the text they read must sound right and make sense. Although a range of reading ability exists within the group, each member is learning at an individual level. The teacher has a wide variety of teaching opportunities during a shared reading experience. For example, knowledge of the
conventions of print, such as the print contains the message, directionality principles, and one-to-one matching of text are easily addressed during this time. Throughout the experience, children will increase their ability to use visual information, their oral language, and their ability to use and read new sentence structures.

**Interactive Writing**

Interactive writing is a form of shared writing (McKenzie, 1988) that supports young children's involvement in literacy processes (Pinnell & McCarriger, 1993). It is a method of writing instruction that has been found to be especially helpful for young children who have had few opportunities to interact with and to notice details of print.

It is a dynamic process in which the teacher and children are involved in (1) negotiating the composition of texts, either narrative or informational; (2) constructing words through analysis; (3) using the conventions of print; (4) reading and rereading texts; (5) searching, checking and confirming while reading and writing (Pinnell & McCarriger, 1993, p. 12).

Stories read aloud or classroom experiences often provide the framework for the group's interactive writing. In interactive writing, the teacher and children collaborate to construct a written text. The text may be a list, class newsletter, story retelling, alternative text, labels, or a recipe, as well as many other types of writing.

The process grows out of the oral language of the classroom as children want to write down important messages and information, but it is different from the traditional language experience approach in several ways. The teacher carefully structures the process in order to create a readable text for children; planning and organization take place over a relatively long period of time; and, teachers and children share the pen in the actual recording of composed messages (Pinnell & McCarriger, 1993, p. 13).
Interactive writing provides a powerful model for literacy. Within the process, early reading and writing strategies can be demonstrated: word-by-word matching, letter formation, directionality, letter-sound relationships, hearing sounds in words, and analogies.

Since reading and writing are reciprocal processes, in that what is written can be read, interactive writing is also closely linked with shared reading. Each time the children and teacher write, they read what has been written to see if it looks right, is consistent with their sense of language, and conveys the intended meaning.

**Independent Writing**

In literacy lessons, children are given opportunities to practice writing independently. Their own writing becomes a source for learning how to work simultaneously on elements of story structure, letter-sound relationships, punctuation, and other components of writing. Children use invented spelling in their individual writing, since they have opportunities to see and participate in the writing of standard spelling during the interactive writing situation.

There are many different types of independent writing in the literacy lessons. Children can write speech balloons, labels, letters to characters, story retellings, lists, recipes, and alternative texts. Since there is a range of abilities within the group, one student can be hearing and recording sounds in words in sequence, while another is hearing sounds and recording a single letter to represent that word. A third child could be using analogies in his writing, where he uses two known words to figure out an unknown word (such
as *trip, see, tree*). Providing time for independent writing helps the teacher focus on children as individual learners within the group context.

**Story Extensions**

Lessons may involve two different types of activities or projects about the story: those that require the students to go back to the story to find information that they seek, and those that require students to take the knowledge of the story and go beyond it (Huck, Hickman & Hepler, 1993). Many extension projects require children to do both. Both types of extensions provide additional opportunities for the students to revisit stories for a new purpose in order to help them gain insights and further enhance their understanding of the story.

Making story maps, creating big books, making comparison charts, writing recipes, dramatizing stories, creating dioramas, and drawing posters are all types of extensions that are used in literacy lessons. Children work as a group, using the teacher as a resource and guide (Glasbrenner, 1989). While working on extensions, group collaboration plays an important role in students' learning. Children discuss what parts of the story need to be included, their feelings about particular characters, similarities and differences between stories, reading and writing strategies, as well as many other examples. Both the teacher's talk and that of the group members are crucial to the extension project.
TIME FRAME OF THE STUDY

In order to gain entry into the first-grade classroom, the researcher observed in first-grade classrooms, talked with district administrators, and discussed the study with interested teachers the spring before the study was to begin. Once a teacher had been selected and agreed to participate in the study, the researcher and participant established a time frame for the upcoming study. In the fall of the next year, and 2 weeks prior to the collection of data, the researcher observed in the selected setting to become acquainted with the field site and the participants of the study (Lincoln & Guba, 1985). This prior ethnography (Corsaro, 1981; Lincoln & Guba, 1985) allowed the children, teacher, and researcher to become accustomed to each other's presence and served as a period of time to alleviate the researcher's obtrusiveness. In addition, this time provided the investigator with contextual data of the small group and classroom environment, such as the organization of the literacy lesson and the classroom events that took place daily. Moreover, this period gave the investigator time to reflect on and refine the research questions and data-collecting procedures prior to data collection.

Data collection began in August and continued over a period of 9 months (see Table 1). During three periods of time, data were collected every day for the length of a thematic unit. The investigator visited the school site for a 40- to 45-minute reading group (10:00 to 10:40 or 10:45 a.m.). In order to observe independent reading and writing in a context other than the small group setting, the investigator made additional periodic observations, scheduled once a week, in between the three extended periods of data collection. These observation sessions were prearranged with the teacher and generally lasted 30- to 40-minutes in length.
Table 1

**Time Frame of Data Collection**

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<tr>
<td>Photographs</td>
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</table>

**Data Collection**

The primary purpose of this investigation was to describe and interpret the literacy behaviors of one first-grade teacher and a small group of at-risk students while they were engaged in the literacy activity, interactive writing. Since the investigator was the principal source of data collection (Bogdan & Biklen, 1992; Glesne & Peshkin, 1990), during the 9-month period, the investigator used a variety of methods to collect data to gain as much information as possible during this literacy activity. Daily field notes were written from classroom observations and weekly informal teacher interviews; videotapes and audiotapes of classroom literacy instruction were made; photos were taken; student artifacts were collected each week; personal documents (teacher reflective journal, papers, lesson plans) were accumulated over the duration of the entire study; and formal observation measures of outcome data
(pre and post test of Clay's Diagnostic Survey) were used.

A description of each form of collection follows.

Qualitative Measures

Field Notes

Field notes were the principle means of collecting data. The researcher took field notes on every day spent in the classroom. The field notes contained what the researcher heard, observed, experienced, and thought related to the literacy events taking place. The field notes were both descriptive and reflective. The descriptive field notes represented the researcher's efforts to objectively record the details of what occurred in the setting (Bogden & Biklen, 1992). The field notes included a description of the literacy events taking place, the lesson format and the amount of time on each literacy lesson component, an account of dialogue, and interactions that took place between children as well as interactions that occurred between the teacher and students. (See appendix A with sample field notes)

The reflective field notes contained the investigator's personal account of the course of the inquiry. For these notes, the researcher recorded feelings, specific problems related to data collection, ideas, and hunches or impressions between the observed events and theoretical questions. The reflective field notes were recorded in two ways: throughout the field notes, as observer comments (Bogden & Biklen, 1992; Glesne & Peshkin, 1990; Patton, 1990), or at the end of each day's notes. These notes included reflections on analysis, method, ethical dilemmas and conflicts, observer's frame of mind, and points of clarification (Bogden & Biklen, 1992). (See appendix B of reflective notes)
**Videotapes**

Another major form of data collection was the daily videotaping of the interactive writing lesson. During the three periods of data collection, videotapes were taken daily by the researcher from beginning to end of the thematic unit. These videotapes provided another dimension to the collection of data, and permitted the researcher a greater in-depth analysis of the literacy events recorded. The tapes allowed the investigator to revisit each literacy lesson and record, through field notes, the events that occurred. The investigator viewed each tape daily, upon the completion of recording, and took field notes from the videotapes. Information gained from the viewing of the videotapes was combined with the observational data recorded in the form of field notes from the classroom.

During the third phase of data collection, three wireless microphones were used to better record the five students' voices onto the video tapes. Each day that students were videotaped, microphones were set up on three children in the group. This way, there were enough microphones to record the children's and teacher's voices from the group, and to avoid recording the voices of the remaining students in the classroom. The five students were hooked up with the individual microphones at least three times a week for the third phase of data collection.

**Audiotapes**

Audiotapes were used as a third form of data collection to provide the researcher with a check against the videotapes. Audiotapes were listened to selectively (for example, to detect conversations that the videotapes could not record), and transcribed selectively.
In addition, during the third round of data collection, the teacher began to introduce books independently to the children during the literacy lesson. Audiotapes were used to record the teacher's and student's conversation and the child's first reading of the new book introduced. Each dialogue was transcribed and added to the field notes for that day's literacy lesson.

Each informal teacher interview, held weekly, was audiotaped. After each interview, the researcher listened to the audiotape and recorded any additional thoughts, reflections, ideas, and hunches in the field notes. Sections of the audiotapes from the informal interviews were selectively transcribed.

**Informal Interviews**

Informal interviews with the teacher began at the onset of the study and continued on a weekly basis throughout the study. Interviews were held in order to discuss the teacher's planning and implementation of the group's lesson, as well as to allow the investigator an opportunity to understand the teacher's insider perspective related to the small group of children. The meeting sessions were negotiated between the teacher and the researcher. These interviews were audiotaped and selectively transcribed in order to help in the analysis of emerging patterns. For each extended period of data collection, one videotape was discussed during each interview time. This allowed the teacher to clarify teacher and student behaviors, and to receive input and ideas about the process of planning and implementation.

Occasionally, short, informal conversations occurred immediately after the observation of literacy lessons in the classroom. The investigator found that the more in-depth interviews outside of the classroom setting were the most
informative. As the study progressed and a rapport developed between the teacher and the investigator, the interviews became more collaborative, involving both the teacher and investigator in a joint discussion about observations and literacy planning for the students.

Photographs

The investigator took photographs in late winter and in the spring. The photographs represented the writing from each day's interactive writing. The photographs were used for reference when analyzing data in order to help recreate the sequence of progression from the beginning of the interactive writing project to its completion.

Collection of Children's Work

Each week, the investigator collected the children's independent writing, such as journal writing, retelling of The Three Bears, alternative texts of The Very Hungry Kids, and interactive writing samples (such as, lists, newsletters, and retelling of Mouse Views).

The investigator created a file for each child in which his/her materials were stored. The file became a way for the investigator and teacher to monitor each child's progress in literacy. The investigator and teacher reviewed these writing samples to determine writing strategies exhibited by each child. Comments from the teacher were recorded on the copy of the writing sample. Each item was dated to assist the investigator in later analysis.
Early Literacy Lesson Framework Lesson Plans

As soon as she began using them, the teacher gave the investigator copies of all Early Literacy Lesson Plans used throughout the study (from November through May). The lesson plan is formatted with a grid with the seven components of the literacy lesson written down the left hand and the days of the week across the top. The teacher recorded the specific activities implemented throughout the week on the grid. Components of the Early Literacy Lesson format include reading stories aloud, shared reading, familiar reading, guided reading, interactive writing, independent writing, and story extensions.

Quantitative Measures

Quantitative data have conventional uses in qualitative research (Bogdan & Biklen, 1992). Although some social science researchers (Lincoln & Guba, 1985) perceive qualitative and quantitative approaches as incompatible, others (Bogdan & Biklen, 1992; Patton, 1990) believe that the skilled researcher can successfully combine approaches. A variety of approaches allows the researcher to know and understand different things about the world (Glesne & Peshkin, 1990). For the purpose of this study, quantitative methods of collecting data were used. The following quantitative methods were employed.

Formal Measures

The classroom teacher administered Clay's Observation Survey (1985) to the selected students. The Observation Survey includes the following six literacy tasks:
The Letter Identification task consists of 54 letters, both the uppercase and lowercase alphabet with the inclusion of alternative forms of the letters "a" and "g". The child has three ways in which to respond to the task: by identifying the letter name, letter sound, or a word associated with that letter. From this method of assessment, the teacher learns the preferred mode the child uses to identify letters and is able to observe what letters are known or confused in order to integrate that knowledge into the student's instructional program (Pinnell, DeFord, & Lyons, 1988).

The Word Test consists of 20 high-frequency words that the student is asked to read. Although this assessment does not indicate how the child reads on extended text, it does demonstrate the child's knowledge about words that occur frequently in texts (Pinnell, DeFord, & Lyons, 1988).

The Concepts About Print test helps the teacher assess the development of significant concepts about printed language in which a child demonstrates control and understanding (such as, the difference between a letter or a word, where to begin reading, the direction in which to read print). The teacher and student interact while reading a specially constructed text accompanied with illustrations (Sand, 1988 or Stones, 1988).

During the Writing Vocabulary task, the child is asked to write all the words he or she knows during a maximum period of ten minutes. If the child exhausts his/her supply of known words, the teacher prompts the student to write high frequency words or specialized words the student might know. From this task, the teacher is able to observe not only what core of words the student knows in every detail, but also how letters and words are formed (such as, reversals, capital and lowercase). All responses, including the less accurate attempts, are carefully recorded and analyzed by the teacher.
During the Writing Dictation task, the teacher reads a simple sentence, containing 37 phonemes, and asks the child to try to write it. The purpose of this task is to observe how a student analyzes a word he or she hears and what sound-to-letter correspondences are made (Clay, p. 38, 1982).

The sixth literacy task is based on Text Reading. The teacher takes a running record of the student's reading of an extended text (Pinnell, DeFord, & Lyons, 1988). A running record is a system for recording a student's reading behaviors on extended texts. For the child unable to independently read lengthy texts, the teacher reads most of the texts aloud, asking the child to predict and participate on the repeated language patterns (Pinnell, DeFord, & Lyons, 1988). Records can be analyzed both quantitatively and qualitatively in order to determine how the student is independently using the three cueing systems in reading (semantic, syntactic, and graphophonemic).

Analysis of Data

The following sections justify the approach of analysis of qualitative data. Typically there is not a precise point at which data collection ends and analysis begins (Patton, 1990). Instead, the two processes are ongoing and simultaneous. The ideal model for data collection and analysis is one that interweaves them both from beginning to end of the data-collection period (Miles & Huberman, 1984). For this study, data collection and analysis occurred simultaneously throughout, and with care not to allow initial interpretations to distort or limit additional data (Patton, 1990).

Researchers cannot escape the influence of a priori theories or assumptions about their investigations. Since the researcher was the primary data collector as well as the main instrument in the analysis, what the
researcher saw as emerging from the data was the result of the researcher's own interpretive lens. It was necessary for the researcher to employ certain methodological measures to establish trustworthiness of the investigation. Although most traditional research deals with the issues of internal and external validity, reliability, and objectivity, Lincoln and Guba (1985) parallel these methodological issues with four terms that have a better fit for naturalistic epistemology: credibility, transferability, confirmability, and dependability.

**Credibility**

Credibility is the extent to which the findings are consistent with the participants' views of constructed reality, while acknowledging that reality takes on multiple meanings (Lincoln & Guba, 1985). In this study, activities to increase the likelihood of credible findings included: prolonged engagement, persistent observations, triangulation, peer debriefing, and member checking.

**Prolonged Engagement**

Prolonged engagement is the investment of sufficient time to achieve certain purposes: to establish trust and to become familiar with the context of the inquiry (Lincoln & Guba, 1985). Lincoln and Guba (1985) quantify the development of trust as "daily engagement" (p. 303). In this study the investigator spent 9 months in the participants' classroom, collecting data intensively for three periods and once a week in between these extensive observations. Mechanisms for building rapport and establishing trust were built into the design of the study by creating opportunities for interactive conversations between the participant and researcher to occur on a daily and weekly basis. In addition, the participating teacher was given videotapes to
view prior to the investigator's viewing in order to help alleviate any concern the teacher had about lessons or students.

**Persistent Observation**

The purpose of persistent observation is to identify those characteristics and elements in the situation that are the most relevant to the problem or issue being pursued and to then focus on them in detail. Although prolonged engagement will provide scope, persistent observation will provide depth to the study (Lincoln & Guba, 1985). Through persistent observation, the researcher becomes concerned with what Eisner (1975) called "pervasive qualities" involved—the things that really count. In this study, the investigator observed the teacher and small group of students in a variety of literacy contexts (small group instruction and other class activities) over several periods of time (August through May) in order to focus in detail on the research issues being pursued in the study.

**Triangulation**

Triangulation is the technique for improving the probability that the findings and interpretations of the data are accurate and credible. Denzin (1978) has suggested four different modes of triangulation: the use of multiple and different sources, methods, investigators, and theories. Triangulation of multiple data sources occurred throughout this study where data were compared and cross-checked for consistency of information derived at different times and by different means within qualitative and quantitative methods (Patton, 1990). Data of like sources were compared to each other in order to check for consistency or emerging patterns (such as, August observational
data to December observational data). In addition, a variety of data sources were compared to check for consistency and emerging patterns (for example, observational data were compared to interview, audiotape, and videotape data.)

Cicourel (in Corsaro, 1981) described a second kind of triangulation; the procedure of indefinite triangulation. Here the researcher involves others in the research process by creating circumstances whereby the same and different respondents react to information obtained on a previous occasion (Cicourel, in Corsaro, 1981). Indefinite triangulation was also used in this study. A faculty member who worked at a university and was knowledgeable in early literacy viewed one videotape from each data-collection period to assist in the researcher's interpretations of emerging patterns. In addition, a trained Reading Recovery teacher viewed and analyzed students' running records and Observation Survey (Clay, 1993a) in order to assist in the researcher's and classroom teacher's interpretations.

Peer Debriefing

Peer debriefing involves the researcher seeking insights from a peer who is not involved with the research. The task of the debriefer is to help keep the researcher "honest" by raising questions about methodology and design, asking for clarification, or even in some cases, playing the "devil's advocate" (Lincoln & Guba, 1985, p. 308). The debriefer probes the biases of the inquirer. Peer debriefing sessions allow the investigator the opportunity to test tentative hypotheses that may be emerging from the data and to receive advice on the next steps in methodological design. The debriefing sessions also serve as an opportunity to clear the investigator's mind of emotions and feelings that
may be preventing good judgment. In the period of this study, two peer debriefers, both university-based teacher educators, were used. The researcher met with the peer debriefers once each month to discuss issues relevant to the research design, data, patterns emerging, and analysis.

Member Checking

Member checking is a process by which the investigator's interpretations and conclusions are confirmed by the research informants. Member checks are key roles that involve the participants' input in the study and can be both informal and formal. The purpose of member checks is to place the participants in a position of importance in the creation of knowledge (Lincoln & Guba, 1985). This study had member checks incorporated into the design from the earliest stages of involvement to the end of the study. Interview transcripts and field notes were made accessible to the participant for her input. During the weekly informal interviews, the teacher and investigator discussed one videotaped lesson per week to jointly construct an understanding of the event.

Transferability

Transferability is parallel to the positivist term for external validity or generalizability (Lincoln & Guba, 1985). Lincoln and Guba (1985) state that the researcher cannot specify the external validity of the inquiry, but instead can supply only "thick description" (Denzin, 1978; Geertz, 1973) as a major technique for establishing transferability. The thick description provided by the researcher enables someone interested in making a transfer to reach a
conclusion about whether transfer can be contemplated as a possibility (Lincoln & Guba, 1985).

According to Patton (1990), the first task of the researcher in qualitative research is to present thick description. This study yielded detailed observations of one teacher working with a group of children during an instructional setting. Recording conventions suggested by Strauss (1964), Schatzman and Strauss (1973), and Corsaro (1981) were employed in the field notes to allow the investigator to separate different types of information within the data (FN—field notes, PN—personal notes, MN—methodological notes, TN—theoretical notes). Field notes were reviewed weekly to search for emerging patterns in the data.

Confirmability

Confirmability is the process of assuring that the data, interpretations, and outcomes of inquiries are grounded in contexts and persons apart from the evaluator and are not simply made up. Three techniques were used in this study to establish confirmability: data triangulation, data audit, and researcher reflexive journal. First, data were triangulated through the compilation of multiple sources. Second, data and all documents related to the study were archived to keep track of the records and sources of data. Included in these archives were audiotapes, videotapes, transcriptions of interviews, documents, and notes on analysis. Third, a reflexive journal was kept throughout the study to keep track of the events chronologically and to record any insights and hunches that occurred during data collection and analysis (Bogdan & Biklen, 1992; Lincoln & Guba, 1985).
Analysis Procedures

This naturalistic study involves elements of both quantitative and qualitative analysis. Clay's Observational Survey (1993, 1985) was administered in August and then again in May to provide quantitative data. Scores were compiled for each child to permit an examination of student gains and level of achievement over the period of time.

Qualitative data were analyzed inductively. Data from observations, videotapes, audiotapes, teacher interviews, writing samples, and artifacts were reviewed on the same day of collection to examine for emerging patterns (Goetz & LeCompte, 1981). The method of constant comparison advocated by Glaser and Strauss (1967) was used to continuously refine the categories and codes established throughout data collection. Discovering relationships began with the analysis of the initial data and underwent continuous refinement throughout the data collection and analysis process, thereby continuously feeding back into the category coding. In this manner, data were constantly compared with previous data in order to discover new dimensions and relationships. Data from the first collection period were read and initial categories established. Categories from the first collection period were then compared and refined with categories from each of the additional two collection periods. At the end of the third collection period, four major categories were established: construction of text, learning to look at print, hearing and recording sounds in words, and using the known (See Table 2).

Two essential subprocesses are involved in inductive analysis: unitizing and categorizing (Lincoln & Guba, 1985, p. 203). Unitizing is a process of coding in which raw data are systematically transformed and
Table 2

Analysis Categories and Sub-categories of Data

<table>
<thead>
<tr>
<th>Constructing the Message</th>
<th>Learning to Look at Print</th>
<th>Hearing and Recording Sounds in Words</th>
<th>Using the Known Words</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Inviting students to write</td>
<td>• Establishing spatial layout</td>
<td>• Saying words slowly</td>
<td>• Writing known words</td>
</tr>
<tr>
<td>• Negotiating text</td>
<td>• Locating responses</td>
<td>• Boxing words</td>
<td>• Linking</td>
</tr>
<tr>
<td></td>
<td>• Establishing specific details of print</td>
<td>• Listing clusters</td>
<td>• Making analogies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Sequencing</td>
<td></td>
</tr>
</tbody>
</table>

aggregated into units that permit precise description of relevant content characteristics. For this study, transcripts of interviews and observations, as well as field notes, were hand-coded and categorized, and then sorted to look for emerging categories.

Glaser and Strauss (1967) indicate that two kinds of categories develop: those that the researcher has constructed and those that have emerged as categories used by the respondents. This study contained both kinds of categories. Categories from other studies (Button, 1992; Cochran-Smith, 1985; Corsaro, 1981) were used during the initial stages of categorization since these studies also focused on social and academic interactions between teachers and students. The format of representing interactional conversations such as those portrayed by Cochran-Smith (1985) were used as beginning forms of representing the group dynamics and interactions that took place during the literacy lessons. William Corsaro's (1981) form for transcriptions and descriptions was also used. Other categories emerged from the data that the investigator reviewed daily.
SUMMARY

The major purpose of the study was to describe and interpret the behaviors of a first-grade teacher and a small group of at-risk students while they were engaged in interactive writing. Five students and one teacher were studied for the duration of an academic school year. Clay's Observation Survey (1993) was administered at the onset and the conclusion of the study.

Writing samples were gathered. Lessons were audiotaped and videotaped daily for three intense periods of data collection. Transcriptions of these tapes were categorized and coded according to a category system devised by the researcher. Codes were analyzed according to the frequencies to investigate trends in teacher and students behaviors during construction of text, learning to look at print, hearing and recording sounds in words, and using known letters and words.
CHAPTER IV
RESULTS
INTRODUCTION

The purpose of this study was to investigate and describe the interactions of a small group of children and a teacher during interactive writing in a first-grade classroom in order to provide detailed description of process and explore impact on children's learning. This chapter reports results of the analyses of four major sources of data.

The first source was field notes of 75 videotapes and 20 informal teacher interviews from throughout the academic year which were coded to discover behavior patterns that emerged for both the students and the teacher. The second source was transcripts of 11 selected videotapes and audiotapes of the literacy lessons throughout an academic year which were analyzed to refine the categories established and later used for the purpose of reporting analyses of data. Third, the Observation Survey, a controlled, systematic assessment was administered twice during data collection. The fall and spring assessment results for each child are presented, along with patterns evident in children's development of literacy behaviors. The fourth source was results of the analyses of students' writing samples from August through May.

With the use of these data sources, three major types of behaviors are analyzed in depth: (1) interactive writing within the context of the literacy
lesson, (2) the interplay of teacher and student literacy behaviors, and (3) the transfer of writing strategies from interactive writing to independent writing.

INTERACTIVE WRITING WITHIN THE CONTEXT OF THE LITERACY LESSON

Question one focused on events of interactive writing within the context of the literacy lesson: What takes place during interactive writing within the context of a literacy lesson? As a framework for addressing this question, a brief description of the seven components of a literacy lesson is presented. Then, analyses of one literacy lesson from the spring data collection period is presented in its entirety in order to describe the events of a typical lesson to reveal the relationships between interactive writing and the other lesson components. Finally, an analysis of three consecutive lessons is included to demonstrate and describe continuity across lessons.

The Literacy Framework

Literacy lessons as described earlier in this document (see Chapter III) provide opportunities for children to learn about reading and writing in a supportive context with a group of children and a teacher. For the purposes of this study, a small group literacy lesson was approximately 30 to 40 minutes in length. Table 3 summarizes the components that can take place within a literacy lesson, a brief description of the component, and the purpose of each literacy activity.
<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading Aloud</td>
<td>Teacher reads story aloud to children</td>
</tr>
<tr>
<td></td>
<td>• Provides motivation for learning to read</td>
</tr>
<tr>
<td></td>
<td>• Provides adult model of fluent reading</td>
</tr>
<tr>
<td></td>
<td>• Develops sense of story</td>
</tr>
<tr>
<td></td>
<td>• Develops vocabulary</td>
</tr>
<tr>
<td></td>
<td>• Builds prediction</td>
</tr>
<tr>
<td></td>
<td>• Builds a community of readers</td>
</tr>
<tr>
<td>Guided Reading</td>
<td>Teacher introduces a book one-on-one at a child's instructional level</td>
</tr>
<tr>
<td></td>
<td>• Promotes reading strategies</td>
</tr>
<tr>
<td></td>
<td>• Increases comprehension</td>
</tr>
<tr>
<td>Familiar Reading</td>
<td>Children read familiar stories independently</td>
</tr>
<tr>
<td></td>
<td>• Develops fluency</td>
</tr>
<tr>
<td></td>
<td>• Builds bridges across stories</td>
</tr>
<tr>
<td></td>
<td>• Extends comprehension</td>
</tr>
<tr>
<td></td>
<td>• Fosters self confidence</td>
</tr>
<tr>
<td>Shared Reading</td>
<td>Teacher and students read enlarged text together</td>
</tr>
<tr>
<td></td>
<td>• Develops concepts of print</td>
</tr>
<tr>
<td></td>
<td>• Develops sense of story</td>
</tr>
<tr>
<td></td>
<td>• Promotes reading strategies</td>
</tr>
<tr>
<td></td>
<td>• Develops fluency and phrasing</td>
</tr>
<tr>
<td></td>
<td>• Increases comprehension</td>
</tr>
<tr>
<td>Interactive Writing</td>
<td>Teacher and children collaborate to write a text</td>
</tr>
<tr>
<td></td>
<td>• Develops concepts of print</td>
</tr>
<tr>
<td></td>
<td>• Develops writing strategies</td>
</tr>
<tr>
<td></td>
<td>• Supports reading development</td>
</tr>
<tr>
<td></td>
<td>• Provides model for different kinds of writing</td>
</tr>
<tr>
<td>Independent Writing</td>
<td>Students write stories independently</td>
</tr>
<tr>
<td></td>
<td>• Strengthens story sequence</td>
</tr>
<tr>
<td></td>
<td>• Develops understanding of uses of writing</td>
</tr>
<tr>
<td></td>
<td>• Develops understanding of types of writing</td>
</tr>
<tr>
<td></td>
<td>• Supports reading development</td>
</tr>
<tr>
<td></td>
<td>• Develops writing strategies</td>
</tr>
<tr>
<td>Story Extensions</td>
<td>Students revisit stories while working on book projects</td>
</tr>
<tr>
<td></td>
<td>• Enhances greater understanding of story</td>
</tr>
<tr>
<td></td>
<td>• Builds a community of readers/writers</td>
</tr>
<tr>
<td></td>
<td>• Fosters collaboration</td>
</tr>
<tr>
<td>Documentation of Progress</td>
<td>Teacher monitors child's progress in reading and writing through systematic</td>
</tr>
<tr>
<td></td>
<td>observation</td>
</tr>
<tr>
<td></td>
<td>• Provides basis for instruction</td>
</tr>
</tbody>
</table>
Although all seven components are part of the literacy lesson framework, usually, a lesson does not consist of all these components each day. Time constraints of classroom schedules, working with several groups of children, and the attention span of young children are just some of the reasons that not all components are addressed each day. Instead, teachers provide a balance between the reading and writing elements, in order for a lesson to consist of some component of reading and writing each day. To exemplify this point, what follows is a description of one literacy lesson in its entirety.

A Literacy Lesson

Familiar Reading

At 10:00 a.m., Marcia called the five students to the open, carpeted area for their group time. The children came from various sections of the room in which they had been working on different reading and writing tasks (such as, journals, listening center, writing center, big books). Without any prompt from the teacher, the children selected books for familiar reading. Surrounding three sides of the meeting area was an assortment of books from which children could choose to read. The collection comprised literature that had been read aloud to the group or individuals, big books made by children or purchased ones, published little books with natural language, and books written by members of the group.

To the left and back areas of the group space, two rectangular tables were set up with books written and photo-illustrated by Bruce McMillan. The teacher had gathered multiple copies of each of the McMillan titles, so the books on these two tables were organized by like titles. Books were displayed
so that individual titles could be read easily and their covers readily examined by the students.

In a third section of their group space was a large crate of books that contained what the teacher referred to as "little books." These were paperback books from a variety of publishing companies (Wright, Sunshine, DLM) that Marcia had introduced and used for taking a running record with a child in that group. Every book placed in this basket was familiar to at least one member within the group. There were a variety of kinds of texts, such as informational, folklore, poetry, as well as a variety in the levels of difficulty. Hanging directly behind the crate of books were class-made big books and published big books, such as *Rosie's Walk* (Hutchins, 1968) or *Brown Bear, Brown Bear, What Do You See?* (Martin, 1983).

Children chose books from any of these three areas and selected a place to read for approximately 7 minutes. Students read a variety of books and levels of difficulty during this practice time. Table 4 is a listing of the books the students in the group read in one day.

Some books were very familiar, such as *The Little Red House* (Sawicki, 1989) and were read fluently and with great expression. Other books were less familiar (*Here a Chick, There a Chick*, McMillan, 1983) and therefore, the children were not as fluent. These familiar books provided opportunities for students to explore and learn about print. For example, when reading *Kitten Can* (McMillan, 1984), Justin made some discoveries about print and cleared up a misconception that he had. Picking up the book for the first time, he read the first few pages without any difficulty. Then, after reading two pages, he
Table 4

Books Read by Students During Familiar Reading

<table>
<thead>
<tr>
<th>Student</th>
<th>Books Read</th>
<th>Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vanessa</td>
<td><em>Oh No!</em></td>
<td>Cairns, 1987</td>
</tr>
<tr>
<td></td>
<td><em>Greedy Cat</em></td>
<td>Cowley, 1983</td>
</tr>
<tr>
<td></td>
<td><em>Cookie's Week</em></td>
<td>Ward, 1988</td>
</tr>
<tr>
<td></td>
<td><em>I Spy</em></td>
<td>Lawrence, 1989</td>
</tr>
<tr>
<td></td>
<td><em>Dad's Headache</em></td>
<td>Cowley, 1987</td>
</tr>
<tr>
<td>Jared</td>
<td><em>Pat's New Puppy</em></td>
<td>Learning, 1976</td>
</tr>
<tr>
<td></td>
<td><em>If I Were You</em></td>
<td>Wildsmith, 1987</td>
</tr>
<tr>
<td></td>
<td><em>Copy Cat</em></td>
<td>Cowley, 1981</td>
</tr>
<tr>
<td></td>
<td><em>Oh No!</em></td>
<td>Cairns, 1987</td>
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<tr>
<td></td>
<td><em>Rain</em></td>
<td>Kalan, 1978</td>
</tr>
<tr>
<td></td>
<td><em>Little Red House</em></td>
<td>Sawicki, 1989</td>
</tr>
<tr>
<td></td>
<td><em>Dad's Headache</em></td>
<td>Cowley, 1987</td>
</tr>
<tr>
<td>Justin</td>
<td><em>Growing Colors</em></td>
<td>McMillan, 1988</td>
</tr>
<tr>
<td></td>
<td><em>Kitten Can</em></td>
<td>McMillan, 1984</td>
</tr>
<tr>
<td></td>
<td><em>Here a Chick, There a Chick</em></td>
<td>McMillan, 1983</td>
</tr>
<tr>
<td></td>
<td><em>Step by Step</em></td>
<td>McMillan, 1987</td>
</tr>
<tr>
<td>Heather</td>
<td><em>Step by Step</em></td>
<td>McMillan, 1987</td>
</tr>
<tr>
<td></td>
<td><em>Here a Chick, There a Chick</em></td>
<td>McMillan, 1983</td>
</tr>
<tr>
<td></td>
<td><em>Finest Kind of Day</em></td>
<td>McMillan, 1977</td>
</tr>
<tr>
<td></td>
<td><em>Pat's New Puppy</em></td>
<td>Learning, 1976</td>
</tr>
<tr>
<td></td>
<td><em>Growing Colors</em></td>
<td>McMillan, 1988</td>
</tr>
</tbody>
</table>

asked for some assistance. While he and the teacher read, he noticed some features of words and together they worked to clarify his confusion.

Ju:  Kitten can...(he paused and made no further attempt)
T:  Check the picture to see what she's doing.
Ju:  (looked first at the photograph and then made the initial sound of the word) S...(glanced at the teacher)
T:  Good, you're starting the word (pointed to the beginning of the text and read) Kitten can...(paused)
Ju:  Step?  (looked at the teacher)
T:  Does it look right? Is that what the kitten's doing?
Ju:  Yep...(pointed to the word, step). That's a silent e.  (turned the page)
T:  (turned back to the previous page and pointed to the word, step,
again.) Look here (pointing to the e in step). Can't we hear that? Step (said it slowly and emphasized the e). It's in the middle there. Hear it?

Ju: It sounds like an a, though.
T: A little, uh huh.

Justin and the teacher continued reading the story together.

J: Sniff, hide.
T: Hide, now look. There's that silent e you were talking about.

**Guided Reading**

After one or two minutes of children reading familiar books, once the students were under way reading, Marcia chose to read with Jessie and to introduce a new book to her. Like the others in the group, Jessie had an opportunity to practice and warm up on known texts before a new book was introduced. Jessie first read *Cookie's Week* (Ward, 1988) and *The Wind* (1984) for her familiar books.

After reading two familiar books, Marcia showed Jessie, *Who Will Be My Mother?* (Cowley, 1986), and told her that they were going to look at the book together. Marcia held the book directly in front of Jessie, with the cover facing her, and gave a brief overview of what the story was about:

M: This one's called *Who Will Be My Mother?* And in this story, lamb is looking for a mother because mother sheep died. And he's going to go around to all the animals and say, 'Will you be my mother?' Let's see who he went to see.

After the overview, the two discussed the book, looking at the illustrations and talking about what took place throughout the story. During this time, Marcia guided the conversation to enhance the meaning of the story, worked to develop concepts that needed addressed, and familiarized Jessie with the unusual language structures contained in the book. The
characteristics of the dialogue was very much like one between a parent and child (the ease with which the two conversed throughout). However, the conversation differed in that Marcia's conversation was very deliberate and intentional. Marcia was specifically asking questions to direct Jessie's attention to particular features of the story so that Jessie would be able to use this acquired knowledge when she read the story. Sitting side-by-side on the carpet, each took turns providing information or commenting on the story and asking questions. There was a gentle back-and-forth give and take to their conversation.

Once they had looked through and discussed the entire book, Jessie read it by herself, with Marcia giving assistance as necessary. The teacher asked questions and provided prompts that built on the strengths and strategies Jessie controlled, yet still gave her opportunities to problem-solve on the new text.

Js: Maa, maa, maa, maa.  
(paused) She...little sheep...cried
M: Think about the story, Jessie. What did you just read?  
Js: Maa, maa, maa
M: Who did that?  
Js: The sheep.  
M: (pointing to the illustration) What is this?  
Js: A sheep.  
M: What do we call that little sheep? You're saying little sheep. Look at the word. Does it look right?  
Js: Lamb  
M: You look at it. Does that look like lamb?  
Js: Lamb (running finger under the word). Yeah.

The reading continued until Jessie completed the story. Then, as Marcia set the pace, the two of them reread the story a second time for fluency (Clay, 1993).
**Reading Aloud to Children**

When Jessie and Marcia completed their book, Marcia asked the small group of children to "find a good place to stop" so they could come join her for a new story. The children quickly gathered around Marcia, who sat on the floor, next to her rocking chair.

Marcia held up the book, *Kitten Can* (McMillan, 1984) for all to see. She next pointed to and read the title saying, "*Kitten Can.* I think it kind of goes with *Mouse Views.*" She then proceeded to read the story to the group. While she read, the students talked about and responded to the story in ways unique to them. Marcia allowed each child to respond in his or her own way and was sensitive to the differences of these responses. For example, throughout the reading, Jessie dramatized the antics and actions of Pixie, the kitten. When Marcia read, "Kitten can squeeze" Jessie pretended to squeeze through the doors as was seen in the photograph in the book. Later, as the story continued and Marcia read, "Kitten can jump", Jessie got up on her knees and jumped, and before landing softly on the floor, kicked her feet up into the air behind her. Jessie's re-enactments coincided with Marcia's reading.

Vanessa, on the other hand, related what was happening in the story to experiences from her own life. Her comments dealt with negative aspects of cats and kittens. After Marcia read the first page, "Kitten can stare," Vanessa cautiously said, "Cats' eyes look scary." Later, when the text read, "Kitten can scratch," Vanessa scowled and adamantly stated that she did "not like cats because they scratch!" At the conclusion of the book, Vanessa shared that she had been scratched by a cat and held up her arm for all to examine her scar.
Upon completion of the story, Marcia again brought up the idea of the similarities of the stories, *Kitten Can* (McMillan, 1984) and *Mouse Views* (McMillan, 1993). When the children did not respond, Marcia supplied a verbal commentary of her own thinking of the similarities, as in a "think aloud."

M: This is kind of what I was thinking about. Where did the kitten go and do all of these things? Did she stay just in her house?
Ja: No, she was going all around the house.
M: She's exploring all kinds of different things while she's outside. Did Chase go exploring in *Mouse Views*?
Ju: Yeah.
M: Did *Here a Chick, There a Chick* go different places?
Ju: He didn't go inside, though.
M: You're right. He didn't. Some things were different, weren't they? What about the lamb in *Mary Had a Little Lamb*? Where'd she go exploring?
Va: School
M: She wanted to go into the school. They've all taken a trip and all gone exploring.

**Interactive Writing**

In one smooth motion, at 10:20 a.m., Marcia reached behind her and took out a container of magic markers and other writing supplies (such as, white correction tape, magnets, magnetic board, strips of paper). The children reacted immediately to this gesture, took a marker, and returned to their respective position on the carpet. Jessie went over to the reading table, got the book *Mouse Views* (McMillan, 1993), and put it on the lip of the easel while the group got situated. The group scooted close to the easel and sat in a small semi-circle, leaving an open space in front where children could stand to write.

Before starting, Marcia briefly explained what they were going to do and recapped what they had done so far. Then, she took a long pointer in her hand, pointed to the first word in their text they had written for three days, and asked students to read along with her. Pointing underneath each word, Marcia
and the students read. The students stayed slightly behind, as if echoing their
teacher. When they finished the shared reading, Marcia pointed to the
beginning of their writing and asked them to read it again with her. On the
second shared reading, Marcia's voice faded out and the students' voices
dominated.

Each time before adding a place where the mouse went or the objects
that he saw, the students and teacher negotiated exactly what it was they were
going to write. For example, after deciding (and recording) that the library was
the next place where Chase, the mouse, went in the school, the students briefly
debated what the mouse first saw in the room—books or computer keys. When
the group could not decide the proper sequence, Marcia demonstrated how to
use the book as a resource, by first examining the photographs within the story
for the correct sequence, and then showing students how she confirmed her
findings with the map at the back of the book.

Once the group came to a consensus, Marcia asked the students to say
the word slowly several times before they made any attempt to write the word.
When writing their text, children used multiple sources of information to analyze
the word they were going to write. Several times throughout the writing, Marcia
used the hearing sounds in words technique (described in Chapter II) and had
children analyze the sounds of words in sequence.

In addition to analyzing the sounds they heard in words, Marcia also
called attention to certain letter clusters contained within words. In order to
write the word *computer*, students first said the word slowly, analyzed the
beginning sound, and told Marcia that it began with the letter *c*. Marcia wrote
the *c* on their chart and continued writing *omput*, then stopped. Looking out to
the group, she asked, "How am I going to end computer?" Jessie and Jared
simultaneously told her "r" and then quickly changed their minds to the cluster "e-r."

Continuing to address the letter cluster, er, Marcia took down a list of words containing er that the group had compiled over a period of time. She announced to the students, "You found another e-r word." Next, she clipped this special list to the side of the easel and wrote comput, saying the word slowly while she wrote. Vanessa chimed in "ter" on the last part of the word, and Marcia called on her to come up and finish writing the word. Vanessa wrote er on the end of the teacher's writing.

A third form of word analysis, links with students' names to the unknown word, was prevalent throughout the writing. After Jesse announced to the group that cafeteria had an e-r in the middle of the word, Vanessa realized that her last name also contained the letter cluster, e-r, which the group was discussing.

Va: Herrera? Herrera starts with an e-r. I know, my name starts with a e-r.

Prior to this day's writing, Marcia had made the link with another group member's name, Heather, to help children associate this particular cluster of letters. On this occasion, however, Vanessa made the link for herself.

A fourth form of word analysis during interactive writing was word analogies. While working on the word, crayons, Marcia demonstrated how to use two known words, day and tray, to write the rime, ay, in the unknown word. Jared initiated the beginning of the word by telling Marcia that crayons started with a c-r. He then came up and wrote the cr and stopped. Marcia then informed him that "It's going to be like tray and day." She pointed in their list to tray, a word that Jared had written the previous day, and then commented
about the similarities between *day*, another of his known words, and *tray*, the word she pointed to. While talking, Marcia wrote both *day* and *tray* on a separate piece of paper, placing the word, *day*, directly above the word, *tray*. The rime, *ay* in each word was written in exactly the same position, making it easier for children to see the similarities between the two words. Jared glanced at the chart and then added the *ay* to what he had written.

As they continued writing the word, *crayons*, Justin next informed the group that the word, *on*, was part of the word, *crayons*. So, Justin came to the chart and added this known word. Next he reread the word and added the *s* to the end of what had been written. While writing this one word, *crayons*, children analyzed sounds, used analogies and known words, and attended to and used letter clusters and endings.

Reading and writing were related activities during the interactive writing component. Each time the group added any writing to their chart, they always went back and reread. After Vanessa had written *er* in computer, with Marcia's prompt, the group went back and reread their list. Reading for another purpose, Marcia asked the students to go back through the chart and locate other words that ended like *computer*. Jessie hopped up quickly and pointed and read the word, *ruler*. Next, Vanessa located and read the word, *eraser*. Jared came up and found a third word, *paper*.

When the group completed the list, they went back and reread the entire text to determine if they had included all of the places where the mouse traveled around the school and the objects that he saw. Justin held the map and checked the key while the group read their interactive writing. Selected students came up and pointed to the text, while the rest of the group read along. Marcia sat back and observed the students during this shared reading. Next,
Marcia helped several of the children point and read quickly, telling students that they knew it so they could read it "a little bit faster so that it" sounded "more like talking." Marcia then joined in and established the pace during this shared reading. In all, the group reread their list a total of ten times throughout interactive writing. At 10:32 a. m., Marcia and the students transitioned from interactive writing and shared reading to the next component of their lesson.

**Story Extensions/Independent Writing**

Marcia kept the group seated around the easel while she explained that they were going to draw the objects that Chase saw around the school for their story map. Children volunteered to illustrate the various objects and then went to the reading table to get started. Markers, pencils, multiple copies of *Mouse Views* (McMillan, 1993), and small squares of white construction paper were placed on the table where they were to work.

Children worked on their illustrations, checking with the book for the proper perspective or to look at the object they were drawing. The teacher went from student to student offering assistance, discussing what might be needed in the illustration to help make the object clear to the viewer, and to clarify any of the students' confusions that arose.

Once their illustrations were complete, students labeled the object they had drawn. They relied on two sources of information when writing the labels. Vanessa used the group's interactive writing to locate the word she needed, and then returned to her seat and wrote the words for her label. Other students, such as Justin, said words slowly and recorded the sounds that they heard. For example, Justin wrote, *papr*, for *paper*. 
While students wrote their labels, Marcia chose individuals with whom to work. Jessie had written, *bells for balls*, and Marcia asked her to check to see if she was right. Jessie immediately pointed to the e she had written and told Marcia that an a was needed. The incorrect letter was covered up with the white tape, and Jessie wrote in the proper letter. Next, Marcia worked with Justin and asked him to think about the ending in the word, *paper*. She took him to the interactive writing chart, had him locate *paper* in their text, and then directed his attention to the *er* list of words the students had generated. Next she asked him, "What did we talk about at the end of *paper*?" Without a word, Justin went back to his illustration and added the e in *paper*.

Unlike Vanessa and Justin, Jared used the interactive writing to confirm his own writing. He first said the word, *crayons*, slowly to himself, wrote, *crayons*, and then checked the interactive writing chart to determine if he had written it correctly. At 10:41 a.m., the children completed the illustrations and labels, and were dismissed from the group.

**Characteristics of Interactive Writing**

Since this study dealt specifically with interactive writing, Table 5 enumerates the characteristics of interactive writing highlighted in the narrative of this literacy lesson and found to be consistent throughout the study. The characteristics are listed in a random order, rather than a specific sequence or hierarchy of importance.
Table 5

**Characteristics of Interactive Writing**

| Prior to Writing | • Establishing Routines  
|                  | - distributing supplies  
|                  | - arranging seating  
|                  | - using markers  
|                  | • Linking writing with story read aloud or hands-on experience  
|                  | • Prewriting discussions  
|                  | - establishing meaning of story read aloud  
|                  | - negotiating text for writing  
|                  | • Rereading what has been written prior to extending text  
| During the Writing | • Building on what children already know about print  
|                   | • Sharing of pen between children and teacher  
|                   | • Writing only a few sentences per day  
|                   | • Keeping writing period brief  
|                   | - averaging 12-14 minutes  
|                   | • Demonstrating and teaching writing strategies  
|                   | - hearing and recording sounds in words  
|                   | - recognizing letter clusters  
|                   | - making word analogies  
|                   | • Demonstrating and reinforcing reading strategies  
|                   | - monitoring  
|                   | - searching  
|                   | - cross-checking  
|                   | • Inter-relating other literacy lesson components  
|                   | - basing instruction on teacher observations of students  
|                   | throughout entire literacy lesson  
|                   | • Maintaining continuity  
|                   | - completing writing takes several days or weeks  
|                   | - teaching carries over from one day to next and across  
|                   | periods of time  
|                   | • Writing using standard spelling  
| Following the Writing | • Rereading text during small group instruction  
|                      | • Displaying text for continued opportunities to read  
|                      | • Writing may form the basis of a story extension  

Although the core of instruction occurred during interactive writing, the concepts demonstrated and modeled in interactive writing were also addressed in other components. Observations of children's literacy behaviors across the
entire literacy lesson and several lessons extending over a period of time, provided the input for Marcia's instruction during interactive writing. A focus of instruction continued for as long as necessary, possibly lasting for a period of several days, or weeks, and extended into the other lesson components. Table 6 helps to clarify the continuity of instruction across the literacy components that occurred over three consecutive days of lessons.

A story read aloud often was the springboard for the group’s interactive writing, as was the case during this data collection period. Prior to these three days, Marcia had read a book to the children about a mouse that escaped from his cage, ventured around the school, and eventually returned to his home. Because the students were enthusiastic about the story and wanted to do a project related to the book, *Mouse Views* (McMillan, 1993) became the springboard for the interactive writing. Additional books that were selected for reading aloud continued with the theme in that they were also about animals traveling about: the chick, in *Here a Chick, There a Chick* (McMillan, 1983), the kitten in *Kitten Can* (McMillan, 1984), and the lamb in *Mary Had a Little Lamb* (Hale, 1990).

A continuity of content and process existed over the three days of interactive writing instruction. Marcia focused on several writing strategies: hearing and recording sounds in sequence; directing attention to letter clusters; word analogies; making links with children's names; and searching for visual information. Each day of instruction built upon the previous day's. For example, when the letter unit of *er* came up on day one of their writing, Marcia directed students' attention to the cluster by linking it to Heather's name. Then, on day two, when the *er* unit came up again in interactive writing, Marcia reminded students, "That's like in Heather's name." She continued to address
Table 6
The Interrelationship of Interactive Writing and Other Lesson Components Over Three Consecutive Days

<table>
<thead>
<tr>
<th>Component</th>
<th>Day One</th>
<th>Day Two</th>
<th>Day Three</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>•chicks traveling</td>
<td>•kitten traveling</td>
<td>•lamb traveling</td>
</tr>
<tr>
<td>Guided Reading</td>
<td><em>Vanessa-Ten Little Bears</em></td>
<td><em>Jessie-Who Will Be My Mother?</em></td>
<td><em>Justin-Catch That Fly</em></td>
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<td>•cross-checking</td>
<td>•cross-checking</td>
</tr>
<tr>
<td></td>
<td>•searching using visual information</td>
<td>•searching using visual information</td>
<td>•searching using visual information</td>
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<td>Familiar Reading</td>
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<td>•rereading familiar books</td>
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<td>Shared Reading</td>
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<td><em>Reading Storymap List</em></td>
<td><em>Reading Kitten Can</em> (McMillan, 1984)</td>
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<td></td>
<td>•searching using visual information</td>
<td>•searching using visual information</td>
<td>Reading Storymap List</td>
</tr>
<tr>
<td></td>
<td>•cross-checking</td>
<td>•cross-checking</td>
<td>•searching using visual information</td>
</tr>
<tr>
<td>Interactive Writing</td>
<td>Listing places</td>
<td>List places</td>
<td>•cross-checking</td>
</tr>
<tr>
<td></td>
<td>•hearing and recording sounds in sequence</td>
<td>•hearing and recording sounds in sequence</td>
<td>•cross-checking</td>
</tr>
<tr>
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<td>•working with letter clusters (er, ch)</td>
<td>•working with letter clusters (er, ch, s)</td>
<td>•cross-checking</td>
</tr>
<tr>
<td></td>
<td>•linking with names (er-Heather)</td>
<td>•linking with names (er-Herrera)</td>
<td>•cross-checking</td>
</tr>
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<td>•making analogies (day, play, crayons)</td>
<td>•cross-checking</td>
</tr>
<tr>
<td></td>
<td>•searching using visual information</td>
<td></td>
<td></td>
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<td>Writing labels for storymap</td>
<td>Writing labels for storymap</td>
<td></td>
</tr>
<tr>
<td></td>
<td>•hearing and recording sounds in sequence</td>
<td>•hearing and recording sounds in sequence</td>
<td></td>
</tr>
<tr>
<td></td>
<td>•making analogies</td>
<td>•making analogies</td>
<td></td>
</tr>
<tr>
<td>Story Extensions</td>
<td>Illustrating objects for storymap</td>
<td>Organizing construction of storymap</td>
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<td>•revisiting story</td>
<td>•revisiting story</td>
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<tr>
<td></td>
<td></td>
<td>•negotiating layout</td>
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</table>
this letter cluster by creating a list of er words in which the students added words they knew that had this cluster of letters. Marcia later related their writing to reading when she asked students to quickly locate words in their written text containing the er unit. As children searched the chart, they had to use visual information to locate these known words.

These same strategies, addressed throughout interactive writing, were also addressed in the other components. During independent writing, students said words slowly, and heard and recorded sounds in sequence to write their labels and speech bubbles. The same letter clusters that had been addressed during interactive writing were also addressed during independent writing. When the children wrote their labels for the objects on the storymap, the er unit of letters came up frequently. Justin wrote the word papr for paper and Marcia prompted him to think about what they had talked about at the end of the word paper during interactive writing. Justin then corrected his writing by inserting an e just before the r. Jessie, working on the word computer for her label of computer keys, commented to Marcia, "Hey, it's got e-r."

In the shared reading component, Marcia built on strengths that the students exhibited during interactive writing in order to facilitate their reading. The students were able to say words slowly and use letters to record the sounds they heard. According to Marcia, during an informal interview, the students were having difficulty going from letter to sound in their reading. During shared reading of a familiar story, Marcia used a masking device to help children use their anticipation of what came next in the story, along with their strength of analysis of sounds in words to assist their reading.
For example, when reading the book, *Kitten Can* (McMillan, 1984), Marcia had covered the word *meow* with several Post-it notes. The students read, "Kitten can" and Marcia then stopped the reading and tapped directly above the print, to the photograph of a kitten meowing.

**M:** (tapping photograph) Kitten can...(tapping photograph)  
**All:** Meow.  
**M:** How do you know it’s going to be meow? Can you tell from the picture?  
**Ju:** It looks like the cat’s meowing.  
**M:** Yes, it does (touching the photograph). What would you expect to see at the beginning of the word, meow?  
**Va:** i  
**Ju:** M  
**M:** (lifting her hand from the text and revealing the M) Were you right?  
**Ju:** (nodding)

The students first predicted, using the picture what the next word in the text would be, and then predicted what letter it would start with. Finally, Marcia uncovered the M in the text and let students confirm their predicted word. She continued to have them search for more visual information by asking them what letter would be next.

During this final round of data collection, there was an additional inter-relationship across the literacy components. Each component built on the other to continue an activity, or project that had originated in interactive writing. These activities extended to additional projects and components throughout the collection period, which lasted four weeks. After hearing the story *Mouse Views* (McMillan, 1993), the group wrote a list of places the mouse traveled around the school and the items that he saw along the way. The list was used for a text in shared reading because the group continually went back and reread the previous day’s writing, revising or editing as necessary. Once
completed, the list continued to be used for shared reading, but was also used as a planning device for a story extension (storymap). When the storymap was complete, the students wrote speech bubbles for what the mouse might have said as he traveled around the school. This storymap and list were left on display and the students reread them during the familiar reading period of time.

Figure 1 highlights the relationship between instruction during the lesson components.

![Figure 1](image_url)

**Figure 1.** The inter-relationship of literacy components.
TEACHER AND STUDENT BEHAVIORS

Question two examined the behaviors of the students and teacher during interactive writing: How are student and teacher behaviors reciprocal of each other during interactive writing? The major source of data were field notes of the 75 interactive writing sessions throughout the academic year. In order to show the sequence of events within the fall and winter collection periods, the first, middle, and last interactive writing sessions were selected for transcribing. An additional series of five interactive writing sessions from the spring data collection were selected in order to make a closer examination of one interactive writing project from the start to completion. Each of the eleven selected sessions was analyzed for student and teacher behaviors that occurred over time.

The type of interactive writing differed for each period of data collection. In the fall, two of the selected sessions consisted of a group newsletter that focused around students' interests and important events in their lives. The third interactive writing session of the fall collection was a list of characters from a story that had been read aloud by the teacher.

All three of the interactive writing sessions selected and transcribed from the winter data collection period centered around a group retelling of the story, *The Three Bears*. The writing followed the teacher's reading of several variations of the folktale. For the spring data collection, the interactive writings also centered around a story read aloud to the children. During all five sessions, students were working to list the places traveled and items needed for a storymap they were going to make following the completion of their list. This list was to be used as a planning tool for an extension project.
Within the component of interactive writing, specific student and teacher behaviors occurred that were contingent upon each other. The answer to question two is presented according to the four categories of these contingent behaviors that emerged after analyses: construction of text, learning to look at print, phonological awareness, and using what they know.

Construction of the Text

The category of construction of the text was divided into two parts: invitation to writing, and the negotiation of the message. For this study, the term *invitation to writing* referred to discussions between the teacher and students that took place prior to writing the text. The negotiation of the text referred to specific conversations between the students and teacher that dealt specifically with the words they were going to be writing in their story.

**Invitation to Writing**

A different kind of writing structure existed for each data collection period. The fall interactive writings, with the exception of one, were newsletters in which children related events that happened in their lives. The writings from the winter collection period were a story retelling based on a book read aloud. A list for planning an extension project was the premise for the spring interactive writings. Although the writings differed in each collection period, a pattern in Marcia's behavior was observed, specifically on the first session of each of the three periods. The patterns in teacher behaviors were observed in the discussions that took place prior to the writing of a new text form: newsletter, retelling, or storymap list.
In the fall, before writing their first newsletter, there was a discussion about what news was. The prewriting discussion started with where the children were in their understanding about newspapers, and continued with Marcia leading them in a specific direction she had in mind.

M: OK, when you...when your moms or your dads pick up the newspaper to read in the morning, what's something they find in the newspaper? What do you think you might find in the newspaper?
Vi: I don't know.
Ju: Jobs.
M: OK, it tells about jobs. What else, Vanessa?
Va: House.
M: Houses, it tells you about, if you're looking for a house how much money it would take to buy the house, rent the house, or what you...or that the house has three bedrooms. All kinds of different things. And yards...What else might you see in the newspaper?
Vi: How much for an electric thing.
M: If you're looking for something, like an electric gate? Or who you might call to help you put up the gate?
H: A dog or cat
M: Right. If you want to sell a dog or cat, or if you'd like to buy one. Or if you just want to see if there are free ones. Sometimes it says, "Free kittens." (pausing) How many of you have seen pictures in the newspaper?

The students did not respond to her question, and Marcia continued:

M: What about stories about things that happen? Is that in the newspaper? Yeah, things that happen. In our Denton paper, it tells about stories that happen in Denton, doesn't it?

Marcia's initial prompt helped her find out what the children knew about a newspaper. After her opening question, Marcia's other prompts were influenced by or dependent upon the kinds of responses the children offered. She listened to what the children told her, and then extended their one-word
ideas, much as research has shown that a parent does with a very young child (Snow & Ninio, 1986). As she extended the students' comments, Marcia stayed within the realm of the children's world, discussing the kinds of things children knew about dogs and cats, or houses.

As she reacted and responded to the information the children gave her related to their knowledge of newspapers, Marcia guided the direction in which the conversation went. Initially, the discussion topic was quite broad, and any of the children's responses were acceptable. Gradually, the focus of the discussion narrowed and the acceptability of student responses was more limited.

M: In our Denton paper, it tells about stories that happen in Denton, doesn't it?

The talk about news continually was refined until it related specifically to the kind of writing they were about to do as a group. Marcia's final prompt was very definite, as she purposefully guided the children into the writing she had planned.

M: I want you to help me write a newspaper about things that happen to you. A newspaper of our classroom.

**Winter teacher behavior.**

Marcia's behaviors during the second collection period's prewriting conversation were similar when she introduced the concept of a story retelling. Their discussion centered around an oral retelling of *The Three Bears* and then lead directly into the kind of writing Marcia planned for the group. Prior to the writing, Marcia sat in the chair, holding Paul Galdone's version of *The Three*
Bears (1972) in her hands and displaying the illustrations as they talked about the story.

M: I want us to think about the story of The Three Bears? What happened? How does the story start?

H, Js, & Ju: Once upon a time.
M: Yes, once upon a time. Then what happened?
H: The three bears...
M: There were three bears.
Js: Who lived in the woods.
H: There's the little baby bear.
M: The little wee bear.
H: Little Wee Bear. Hey, that's what we wrote over there (pointing to their chart that listed threes in stories they had read).
M: Then they saw...
Ju: Then they saw the middle sized bear and the great big bear.
M: Alright, then what happened next?
Va: They were going down the...
H: The little wee bear had a little wee bowl.
M: Three bowls (pointing to the illustration of three bowls).
Va: Three bowls go "Boom, boom."
Ja: Little, itty, bitty bowls.
Vi: And three books.
M: And the bears had three chairs, three books, and three beds.

They continued until they completed the entire story.

Js: And somebody's been sleeping in my bed.
Ja: And here she is.
H: She was so frightened that she jumped out.
Ja: The three bears never saw her again.
M: And then, when Goldilocks saw all the bears, she jumped out and ran out the window and Goldilocks ran away.
Ju: She ran her little legs off.

Just as she had done in the fall, Marcia prompted to begin the dialogue, and found out what the children knew about the story of The Three Bears. Her additional prompts were then based on what the children said. As they told the story, Marcia supported their efforts by bridging the gaps of information they left out or by extending their ideas. Her prompts initiated the discussion (for example, How does the story start?), built transitions from what the students
said to the next event in the story's sequence (such as, And then what happened?), or summarized several responses given at once (such as, And the bears had three chairs, three books, and three beds.).

Following their oral version of *The Three Bears*, Marcia moved immediately into the interactive writing, drawing from their oral version to the written retelling she had decided the writing would be.

**M:** I want us to think about the way that you just now retold the story...That's what we want to work on now.

**Spring teacher behavior.**

Again, in the spring, Marcia exhibited the same kinds of behaviors during their prewriting discussion for their storymap list. Marcia first prompted to find out what the children were thinking. Then, she varied her prompts to match the kinds of responses that the children gave. Finally, she narrowed their focus to more specific information related to the writing they were about to take part in.

**M:** First, let's look and see how they did this map to talk about where the mouse went and how we follow him along. Then we'll use what we learned about this map to make our own, for our story.

Figure 2 summarizes the patterns of teacher behaviors found to have occurred during all three data collection periods.
• Prompting to find out what children know or what they are thinking
• Listening to responses of children to determine the next prompt
• Refining the discussion topic
• Guiding discussion to an intended outcome

Figure 2. Characteristics of teacher behavior during prewriting discussions across all three data collection periods.

Although a pattern of Marcia's behaviors was detected on the first session of all three rounds of data collection, Marcia's behavior appeared to be contingent upon the students' responses. The students' responses varied over time. Changes in student responses occurred in the amount of interaction throughout the initial discussion; and the kinds of responses given to the teacher.

**Fall student behaviors.**

In the fall, the conversation was almost completely one-sided, with Marcia dominating most of the discussion. Students gave one-word responses that Marcia continually extended in order to enhance their understanding about news.

Several reasons might explain the small amount of input the children gave during this first discussion. The September 8 session was the first time students were together as a group, as well as the first time they worked with Marcia in that type of instructional setting. Also, a newspaper might not have been familiar to all of the children since not everyone in the group offered an
idea about news. Third, everything about the group situation was new and the children had many items to attend to that first time (such as, where to sit, how to use the magic markers, how to listen to each other and wait their turn to talk).

Winter student behaviors.

The children's level of involvement in the winter was greater as they discussed a retelling, as evidenced by the number of statements students made versus the number of statements Marcia made. Marcia occasionally prompted, but more to continue the sequence of the story than to help them with their idea. Students became more responsible for the discussion, extending each other's comments and ideas. In many instances, the conversation took place with very little input from Marcia as the following example illustrates.

Vi: Then the middle sized bear's chair. Too...
Js: soft.
Ja: Then the baby bear's chair
Js: Baby bear...
All: was just right.
Js: Little wee bear's chair...broke.
M: Jessie, what happened when she sat in the wee bear's chair?
Js: Broke.
Ju: And there's a little piece of it, right there (pointing to the broken chair in the illustration).

Students also incorporated some characteristics of Marcia's talk into their own when orally retelling the story. Frequently, students used prompts that Marcia had used in earlier writings. For example, when Vince shared his idea about the middle size bear's chair, he started the phrase, too soft, and then paused as if waiting for another child to continue with the thought. As if on cue, Jessie then completed his idea. In other instances, students used the word, then, to continue with the correct sequence in their story. They also
paused after saying the word and waited for another student to continue their thought.

Some of the student behaviors might be explained by the fact that the small group setting was quite familiar to these children, as were most of the routines, allowing for few prompts needed by Marcia to elicit a conversation. In addition, students' familiarity with the story, along with its language and structure, (such as the beginning of once upon a time and a set sequence of events), also fostered their comments and level of involvement in the prewriting discussion.

**Spring student behaviors.**

By the spring, hearing a story and writing about it had become a familiar event, as Jared's comment demonstrates.

M: (reading the title) *Mouse Views*, photo illustrated by Bruce McMillan.
Ja: We're going to write about it. It's probably going to be short, I bet.

During the final collection period, the children's familiarity with writing routines that previously enhanced writing discussions, now created some difficulties throughout the discussion of *Mouse Views*. What some of the students anticipated they were going to discuss differed from what Marcia tried to get them to talk about. The students were thinking more in terms of retelling the story, while Marcia attempted to steer the conversation to explain how maps were used.

M: OK, yesterday we talked about *Mouse Views*.
Js: He went to the cafeteria.
With the first prompt, Jessie started to recap the story, telling what happened. Marcia tried to start again, and the student's response still did not match the direction in which Marcia intended to lead them.

M: We talked about...
Js: K is for cafeteria.

Students responded to a third prompt given.

M: If we wanted to make our own map of Mouse Views, we'd first think...
H: About where we went.
M: First of all, we need to find out though...
H: A title.

The students renegotiated the direction the dialogue went with each additional prompt from Marcia. As the prompts got more specific, the students' responses became more limited and closer to the kind of response the teacher was working toward.

M: So, what do we need to tell first if we're thinking about what a map tells?
H: (echoing Marcia) What does the map tell? It tells where we go.
M: OK, but in this story, what does the map tell?
Ju: Where the mouse went.
M: That's it, Justin. It tells where the mouse went.
H: Then, we'll have to put him in the cafeteria.

Eventually, after constant prompts from Marcia, the children's responses coincided with the direction in which Marcia was leading them. The path that the conversation took in order to get to Marcia's destination had detours along the way that Marcia had to follow. Each time the students went in a different direction, Marcia attempted to redirect the discussion in order to lead them to thinking about the list for the map that they were going to make.
Table 7 summarizes observable characteristics of the students' responses over the three data collection periods. There were differences in both the quantity and quality of responses across the three periods of data collection.

Table 7

Observable Characteristics of Student Responses During Prewriting Discussions

<table>
<thead>
<tr>
<th>Period</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td><strong>Students giving one word responses to teacher's prompt</strong>&lt;br&gt;M: ...what's something they find in the newspaper?&lt;br&gt;V: Jobs</td>
</tr>
<tr>
<td>Winter</td>
<td><strong>Children discussing story with little teacher input</strong>&lt;br&gt;Ja: They went for a walk.&lt;br&gt;M: They went for a walk because the porridge was...&lt;br&gt;Va: Hot!&lt;br&gt;Ja: Papa's was too hot.&lt;br&gt;H: Mama Bear's was too cold.</td>
</tr>
<tr>
<td>Spring</td>
<td><strong>Students anticipating the event</strong>&lt;br&gt;Ja: We're going to write about it. It's probably going to be short.</td>
</tr>
<tr>
<td></td>
<td><strong>Students' responses leading teacher's prompts</strong>&lt;br&gt;Js: K is for cafeteria.&lt;br&gt;M: If we wanted to make our own map of Mouse Views, we'd first think...&lt;br&gt;H: about where he went.&lt;br&gt;M: First of all, we need to find out, though...</td>
</tr>
<tr>
<td></td>
<td><strong>Student discussion coinciding with teacher's intended direction</strong>&lt;br&gt;H: What does the map tell? It tells where we go.&lt;br&gt;M: But in this story, what does the map tell?&lt;br&gt;Ja: Where the mouse went.&lt;br&gt;M: That's it, Justin. It tells where the mouse went.</td>
</tr>
</tbody>
</table>
To start their writing in the fall, Marcia established the initial structure of their newsletter. Each writing began with, *Today is...* and continued with the day of the week, the month, and the date. For example, *Today is Tuesday, September 8.* Initially, Marcia not only established the writing structure, she also provided the model for the students by telling them how they were going to start their newsletter:

M: I want us to start out our newspaper with today. *Today is...*

Marcia talked them through that first sentence, providing the sequence of words in their writing.

M: OK, who can tell me what today is? We talked about that on the calendar. *Today is...* we're going to write the name of the month. Remember the name of the month? Vanessa?

Va: Wednesday.

M: That's the name of a day. That would be tomorrow. How about today?

Ja: Tuesday.

M: Tuesday!

Marcia had originally intended to write the month first, but changed the structure based on Vanessa's response.

After providing the structure of the starting sentence for their newsletter, Marcia next elicited much greater input from the students for the remainder of the text negotiation. She prompted:
M: Now, what are we going to put in our news? What's something that you'd like to say?
Va: (raising her hand, but not speaking)

Marcia then continued to prompt, providing some suggestions as to what they might think about for their newsletter.

M: Can you think of something that you'd like to say about school, or maybe about something that has happened to you?
Va: Play.

Once Marcia had a response from Vanessa, she worked to extend Vanessa's initial one word response in order to have a more complete idea that the group could write about. Even though the initial idea came from Vanessa, Marcia elicited help from the others in the group.

M: OK, what can we say?
Va: Play.
M: Vanessa said something about play. She wants to talk about play. Can we make a sentence out of that? What can we say about that together? Have any idea?
Vi: I keep saying play.
M: All right, you keep thinking about that. Let's think up something we can say.

Marcia suggested a starting structure for Vanessa's idea after repeatedly prompting and getting the same one-word response. Without stating a complete message, she offered only part of the text and waited for any response from the group.

M: I like to...(pausing and looking to the group)
Va: Play. Play with friends.
M: Play? I like to play. What else did you say, Vanessa?
Va: with friends.
M: That's a good thing to talk about in the news. I like to play with friends. Let's work on that. Let's think on that so far. Everybody say that with me.
All: I like to play with friends.
Together, Marcia and Vanessa negotiated and determined the text for that day. Marcia did most of the work in order to get the message, always building from the response that Vanessa gave her and extending the idea until she felt the group could use that in their newsletter. Even though Marcia was receptive to the kinds of things students could write about, she established the criteria of acceptability of the message, by having the final say in what they were going to include in the newsletter.

After the decision was made as to what it was they were going to write, Marcia asked the entire group to repeat their message several times.

M: Everybody say that with me. I like to play with friends.
All: I like to play with friends.

Repeating their message served three purposes. As they restated their idea, children could all hear and agree on what it was they were going to write, and Marcia could listen to determine if they were all saying the same message. Repeating their message also helped students to know the story so well that they were better able to concentrate on the specific details of print.

As the group continued to write newsletters, students became aware that their newsletter started with the same structure each day. Marcia no longer had to explain the sequence in the first sentence. Instead, students anticipated the sequence. Sometimes as she called them to come to the carpet for their group, children were already deciding who was going to write certain words in their opening line of text.

Ja: I can start today.
Va: Today!
Vi: I'll put Friday. I know what it is. F.
Winter.

In winter, some aspects of text negotiation came much easier than the fall, due to specific prompts provided by Marcia, the story's structure, and the children's familiarity with *The Three Bears*. As they first began their written retelling, it was clear that Marcia had determined the starting point to be the title of their story, eliminating the opportunity for negotiating the text.

M: Vince, what story are we going to tell?
Vi: The Three Bears.
M: OK, so we need to do our title, real quick.

Later, she prompted for a constructive activity which allowed the students to become more directly involved in the negotiation of their message.

M: Now, we've got the name of the story. When you started telling me the story, when we looked through the pictures, what did you start with when you started the story?
H: The
Js: Three
M: OK...
Js: Once upon a time.
M: (repeating after Jessie) Once upon a time...that's something we've noticed about fairy tales. They start with once upon a time...

On this occasion, what had just previously been written and their familiarity with folktales influenced the type of responses the students gave. Again, Marcia directed the conversation toward a specific outcome she desired.

Once they started writing the retelling, Marcia transferred some of the decision-making processes over to the children. The students and Marcia negotiated with each other what they needed to include in their story and how it was going to be stated.

M: OK, what do we need next?
No response.

M: We've got to think about what comes next within the story. Once upon a time...(pausing)
Vi: there was three bears.

Marcia stopped and looked at Vince and asked:

M: There was three bears? (pausing) Let's say that again. Once upon a time...
All: Once upon a time, there was three bears.
M: Let's say it together, again. Once...
All: upon a time, there was three bears.

When the structure of the student's language did not match precisely with the structure of standard English, Marcia first questioned Vince's response. Then, she let the group determine the criteria of acceptability. After repeating Vince's original statement several times, the students did not attempt to alter its structure, and Marcia accepted his language. The way in which Vince dictated the text was the way in which it was written in their story.

Spring.

Negotiation of the text looked much different during the spring data collection period. Instead of having a predetermined outcome of what they were going to say for their text, and a set path in which they would follow to get to the end product, Marcia was more receptive to the students' ideas and followed their lead. Marcia and the students were responsive to each other and their comments closely intertwined. Sometimes it was even difficult to determine the direction in which the negotiation was going and what the intended outcome was to be. For example, to get them started, Marcia asked:
M:  We know what our list is telling. How can we start our list?

With that initial prompt, two messages were conveyed to the students. The first comment addressed the idea of what a list was. Marcia's second question asked about the kinds of things that were included in a list. Heather elected to answer the second question.

H:  Rulers!

After Heather's response, Marcia tried to clarify her own thinking for the group.

M:  ...So we'll know what we're listing?
H:  The title!
M:  The name of the story. But what can we say?

This time, Marcia switched directions and prompted students to think about a way to indicate what they were doing. But her second question did not clarify the direction in which she was headed. Once again, students tried to follow Marcia's lead, while Marcia, at the same time, tried to respond to the students' comments to better determine the direction they were headed.

V:  The very hungry mouse.
M:  ...I know what you're thinking. You're thinking about that (turning to the title page). That's all right. We're going to list exactly where the mouse went. So, how can we tell that that's what we're listing?
H:  Where our mouse goes.

By the third prompt, it was clearer that Marcia was asking the students to come up with a caption to indicate what their intended list was about. She almost told them directly what it was that they were going to write and the students figured this out.
Ja: Where our mouse went.
M: Yes, how can we say that?
Js: Where is our mouse?
M: OK.
H: Where are we?
Va: No, where are the school?
M: We don't need to ask where...we know where because we're going to list it. So, what do we need to say? (pausing) This...
Ja: This is
Js: This is where we went.

Once the students' and Marcia's thinking became more aligned with each other, the negotiation of the text became much easier. Marcia extended the ideas that the children provided until by the end, they came up with their text.

H: This is a map of where ...our pet went or where we went.
M: OK, but we're not ready for the map yet. We've got to make the list first of the places and then we'll turn it into a map.
H: This is our map.
M: OK, we had started out...This is where
Ja: the mouse went.
M: All right, there you go. This is where the mouse went...
H: in our school.
Js: In the school.
M: But not in our school, just in the school. OK, this is where the mouse went in the school.

Until the group came to a consensus, there was a continual back-and-forth negotiation of the text, where both the children's and Marcia's responses were dependent upon each other.

In addition to Marcia's openness to negotiating the text, students were more involved with challenging the text even after they began writing. The group had written, *This is where the mouse went in the school*, when Jessie wanted to alter their text.
Js: Why isn't it mouse pet?
M: This is where the mouse pet went in the school?
Ju: It doesn't sound right.
M: We had already started on this before you started your new idea.
Ju: It doesn't sound right, though.
M: I think it's OK. We'll put something in there later about that he's the pet.

Although Marcia had the final say, Justin was the one who provided the reason to Jessie's question, "Why isn't it mouse pet?"

Shortly after Jessie tried to make an addition to their text, Heather questioned the structure of their writing. They had written, *This is where the mouse went in the school* and were discussing the places the mouse went in the story and the objects that he saw in each place.

Ju: Rulers.
Ja: Our class pet saw...
Js: Rulers.
M: Let's look at the map.
H: (shaking her head) I don't get this. I don't get it.
M: What do you not understand, Heather?
H: Rulers? And then you're going to check and see if it's rulers?
M: OK, do we maybe need to say what he saw and then where he saw it? Would that make more sense?
H: Yeah.
M: OK. This is where the mouse went in the school. We could say, he saw...
H: No, he saw...
Ju: You can just use the map.
M: OK, where are we going to see the rulers? We see where he starts out first, don't we?
Ju: Just check the map.
M: But how do we get our map? If we're going to make a map of our own, then we've got to list where to go. (pausing for a bit) This is the first grade classroom and in the first grade classroom he saw...
Js: OK, here's the mouse...
M: But we need to somehow tell what he saw. That would help us understand. What he saw and where he went. OK? (long pause) Where'd he see the rulers?
H: In first grade.
M: OK, (looking at their text on the chart) This is where the mouse went in the school.
Js: Where his classroom was.
Ju: And what he saw.
M: We need to say, "This is where the mouse went and what he saw."

Heather's comment, "I don't get it" forced Marcia to rethink the organization of the writing. As a result, they renegotiated their text until their caption referring to their list corresponded with the actual list they were going to make. Marcia's prompts were always contingent upon the responses that the students provided.

Table 8 summarizes the inter-relatedness of the students' and teacher's responses during the negotiation of the text in all three periods of data collection.

Table 8
Sequential Interplay of Teacher and Student Behaviors During Message Negotiation

| Fall—Directed | Teacher supplying the starting structure
|               | M: We're going to say, "Today is..."
| Teacher       | Teacher prompting for constructive activity
|               | M: What can we write about?
| Students      | Students giving one word response
|               | Va: Play
| Teacher       | Teacher extending student response
|               | M: What can we say about play?
|               | Va: Play.
|               | M: Vanessa said something about play. She wants to talk about play. Can we make a sentence out of that? What can we say about that together? Have any idea?
| Teacher and students | Teacher and students restating message
|               | All: I like to play with friends.
(Table 8 continued)

| Winter-Student/Teacher Co-Direction | **Teacher** prompting to get started  
M: Now we've got the name of the story. When you started telling me the story,... what did you start with when you started...?  
**Students**' knowing story helped provide structure and sequence for retelling  
M: ...when we looked through the pictures, what did you start with when you started the story?  
H: The  
Js: Three...  
M: OK.  
Js: Once upon a time.  
**Students** giving more input into the text  
M: Think about what comes next in our story. Once upon a time...  
Vl: There was three bears.  
M: There was three bears? Let's say that again.  
All: Once upon a time, there was three bears.  
**Teacher and students** coming to consensus for the text  
Js: Then Goldilocks came along and ate the porridge.  
Ju: Then Goldilocks came in.  
M: Came in? That's an idea. Or came along? What do you think?  
Vl: Came in. Came in.  
All: Then Goldilocks came in.  
**Students** increasing level of involvement in text negotiation  
Js: Why isn't it mouse pet? It would make more sense, though.  
M: This is where the mouse pet went in our school?  
Ju: It doesn't sound right.  
**Teacher's** level of involvement occurring when necessary to sort out students' confusions  
H: I don't get this. I don't get it.  
M: What do you not understand, Heather?  
H: Rulers? And then you're going to check and see if it's rulers?  
**Teacher and students** commenting based on the other's response  
M: OK, this is where the mouse went in the school.  
Js: Where his classroom was.  
Ju: And what he saw.  
M: We need to say, "This is where the mouse went and what he saw." |

| Spring-Student and Teacher Directed | **Teacher** prompting to get the text to come from the students instead of teacher  
M: Yes, how can we say that?  
Js: Where is our mouse?  
M: OK.  
H: Where are we?  
Va: No, where are the school?  
M: We don't need to ask where...we know where because we're going to list it. So, what do we need to say? This...  
Js: This is where we went.  
**Students** increasing level of involvement in text negotiation  
Js: Why isn't it mouse pet? It would make more sense, though.  
M: This is where the mouse pet went in our school?  
Ju: It doesn't sound right.  
**Teacher's** level of involvement occurring when necessary to sort out students' confusions  
H: I don't get this. I don't get it.  
M: What do you not understand, Heather?  
H: Rulers? And then you're going to check and see if it's rulers?  
**Teacher and students** commenting based on the other's response  
M: OK, this is where the mouse went in the school.  
Js: Where his classroom was.  
Ju: And what he saw.  
M: We need to say, "This is where the mouse went and what he saw." |
Learning to Look at Print

The category of learning to look at print was comprised of four areas: directionality, spatial layout, locating behaviors, and specific details of print. Both student and teacher behaviors are discussed in each area.

Directionality

Behaviors of directionality include establishing a top-left starting point, consistent left-to-right movement across lines, the return sweep, and the top-to-bottom movement on several lines of print. Two of the directional behaviors were firmly established with all students in the small group, as revealed in the results from the Fall Observation Survey. Each child knew the starting position in print and moved consistently across the text in a left-to-right motion. Because these two directional concepts were already controlled by the students, Marcia did not address them in her instruction.

The return sweep and writing from top to bottom were addressed during interactive writing, as these behaviors were not yet established. Specific instruction on these directionality behaviors occurred only during the first period of data collection. What follows is an analysis of the interactive writing sessions from the fall data collection period.

The return sweep was the first directionality principle that was addressed during interactive writing. In their early writings, the group wrote a newsletter consisting of more than one line of text, so this concept came up frequently. When first working with this concept, Marcia modeled, demonstrated, and told students where to write when they ran out of room on the line of text. She did this by pointing to the actual position on the chart paper.
and then telling children where to write the next word. For example, in the September 9 newsletter, Heather was to write the S in September. Marcia stated, "OK, let's move it right over here," pointed to the new line in text where the word was to be written, and then asked Heather to write. Marcia kept her finger on the new line until Heather started writing. Later that same day, they needed to start a new line, and again Marcia pointed to the place on the chart where the word was to go and said, "Start the new line here."

Although the task of the return sweep remained constant each time, carrying out the task gradually shifted from the teacher to the students. Initially, in the first writing, Marcia demonstrated and instructed students where to place the next word. Then, once students demonstrated some control of the process, Marcia held them accountable for aspects of the tasks they controlled. By the middle of the fall interactive writing sessions, Marcia's assistance shifted from initiating a student response (by telling them what to do), to following students' responses. The children were given the opportunity to carry out the task. Then, if a student demonstrated a confusion, Marcia provided help. Even when intervening for the one child, Marcia elicited some level of involvement from the other children in the group.

On one line of text, they had written Miss Kellum met, leaving a small amount of space for the next word, parents. Before writing any part of the next word, Marcia asked the children to clap parents. Clapping the word to hear the parts, helped provide a framework for analyzing and visualizing the length of the word relative to the amount of space left on the line. Together, they clapped the word and Marcia asked:

M: Long or short word? What do you think?
Va: Short.
When clapping did not clarify the concept for Vanessa, Marcia next explained the relationship between the length of the word and the decision of where to write it.

M: It has two parts. It's probably going to be a little longer. I don't think it'll be able to fit in. Where do I need to go back to? Vanessa?

Vanessa came to the chart and pointed to the far right side of the line of text. There was not enough room to write where she indicated. Rather than telling Vanessa what to do, as she had done in their earlier writings, Marcia posed the question to the group, allowing them to determine where Vanessa should write:

All: No.
M: Jared is saying no. Why?
Ja: Because it's long.
M: OK, it's long. We probably won't have enough space.

Vanessa moved her marker to the next line and began writing while Marcia commented, "Good, you need to come right back over here."

As students continued to demonstrate more control of the return sweep, Marcia's questions became less supportive throughout the first collection period; she turned more of the responsibility of the task over to the students. For example, when Jessie was to write her name on a new line, Marcia asked:

M: She's already moving over here. Is she going to put it in the right spot?
H: Yep.
M: Is she starting it in the right place? What do you think?
All: Yes.
M: Yes.
Her question placed the responsibility of monitoring each other's spacing on the group. Although Jessie indicated an awareness of the return sweep, Marcia's question provided an opportunity to check the other group members' understanding of this directional concept.

On the last fall session, the structure of the group's writing altered and a second aspect of directionality was addressed: moving from the top of the page downwards. No longer writing a newsletter, they created a list of characters from a story that had been read aloud. Since the writing differed from their previous ones, initially Marcia's prompts for the new task were again very supportive and resembled more closely those of the first interactive writing. For example, when writing the first word in their list, Marcia indicated, by pointing, where to write the word, *dog*. No additional prompt or words accompanied the hand gesture, and the child wrote the word on the list in the correct position.

When the second word in their list was needed, Marcia did not indicate where to write. The student came to the chart, hesitated, and then looked at the teacher. Marcia thought the child was confused about what he was to write; however, the child was uncertain where to write.

M: We're working on the letter we would expect to see at the beginning of *duck*. You told me...
Ju: But I don't know where to put it.
M: Oh, if we're making a list, you can put it right under here (pointed underneath the first word in their list). Right under the word, *dog*.

Marcia had removed her support for this child too quickly. Once she understood the child's confusion, Marcia based her instruction on the student's response and provided the support that was needed in order to accomplish the task. Throughout the remainder of their writing, Marcia continued to provide support with such verbal prompts as, "When we're making a list, you can start
here (pointing to next line on text) and then just list the other animals right down."

By the end of the first data collection period, students were able to independently determine when the return sweep was necessary, and moved from top to bottom in their writing. These concepts were no longer the focus of instruction during interactive writing in the other two data collection periods. Figure 3 shows the teacher and student behaviors that occurred during the fall data collection period while establishing directionality behaviors.

| Teacher providing the model |
| M: Let's move it right over here (pointing to next line). |
| H: (started the next word on the new line where Marcia pointed). |

- Teacher prompting for a constructive activity
  - M: Clap the word, parents.
  - All: Parents (clapping while saying it).

- Students demonstrating evidence of some control

- Teacher tightening the criteria
  - M: She's already moving over here. Is she going to put it in the right spot?
  - H: Yep.
  - M: Is she starting in the right place? What do you think?

- Teacher introducing something new/providing the model
  - M: When we're making a list, you can start here and then just list the other animals right down.

- Students controlling the task without assistance
  - Students independently controlling directionality concepts

Figure 3. Sequential inter-relationship of teacher and student behaviors in establishing directionality.
Spatial Layout

How space is used on the page was a concept addressed throughout the year, but differed in each data collection period. In the fall data collection, the teacher put a greater emphasis on the use of space in order to firmly establish students' understanding of the concept of a word, and also to firmly establish one-to-one matching in both their reading and writing.

Fall.

Marcia demonstrated how to leave a space between words early in the fall session. She called attention to the concept initially by pointing to the place where the child would write. Then, she placed two fingers between the word that had just been written and the place where the child was to write next. Each time she did this, she commented about the space she was leaving (for example, "I'll leave some space."). The space she left was exaggerated, making the distance between each word easier to see. Only after the child started to write did Marcia remove her fingers from the chart.

During the second writing session in the fall, Marcia frequently explained the reason for leaving a space between words and introduced the role of a spacer—one child selected to mark the spaces for the day's writing. Students became actively engaged in their learning about the purpose for leaving a space between words. For example, on the September 18 newsletter, Vince had written the F for Friday too close to the previous word and Marcia said:

M: OK, let's...give it a little bit more space. We want to be sure to make it easy to read. Heather, we do need a spacer. Come up.
Heather had been selected by the teacher to be the spacer but Heather did not control the concept of spacing or one-to-one matching. When Heather came to the easel, Marcia took her two fingers and placed them on the paper. Then, Marcia removed her own hand, but continued to guide Heather with verbal instructions:


Although Marcia monitored their spacing for them by calling attention to it, she gradually relinquished the spacing responsibility to the children the remainder of that writing session. For example, in the following vignette, Marcia monitored the spacing for the group, prompted, modeled, and then turned the task over to Heather.

Jared had written the $M$ too close to the previous word. The spacing, or lack of, went undetected by the group, so Marcia directed their attention to it, saying, "I think that spacing might be a little too close. Make sure it's easy for everybody to read." Heather stood beside the chart and looked on. Next, Marcia covered up the $M$ that Jared made with correction tape, and put two fingers up to indicate the amount of space needed. She asked:

M: What do you think?  
Ja: Yep.  
M: Does that look all right up there?  
Ja: Yep.  
M: Are you going to help us, Heather?

Upon hearing her name called, Heather reached in, placed two fingers on the chart for the space that was needed and Jared wrote the $M$. 
Later that same day, Marcia needed only to verbally prompt the children to remind them to leave a space between words.

M: Justin, as he's coming up, he's already thinking about, "I need to leave a space. I'm thinking about where to put the w."

By the final fall writing session, changes occurred in both the teacher's and students' behaviors. Instead of first prompting for a specific response from the students, Marcia waited and observed the students and varied her instruction or prompt according to the specific actions of the child or group. When Vanessa wrote the F too close to the word beside it in their list, Marcia asked the group:

M: What do you think about her spacing? Too close? Is it enough?  
Js: Too close.  
M: (to Vanessa) Let's move it over just a little bit to make it easy to read.

Rather than anticipating that Vanessa might not leave a space, Marcia waited to see whether Vanessa left a space between words. Then Marcia placed the responsibility of monitoring the spacing with the other students.

Some student behaviors also changed during the last writing session in the fall. As they became more aware of their own spacing, they asked about leaving a space when about to write a word, or sometimes left a space without any prompt from Marcia.

Winter.

The children continued to demonstrate a greater awareness of spacing during the winter collection period. During this time, they turned to each other
for assistance with spacing, rather than turning to Marcia. On November 11, as students were working on their retelling of the story, *The Three Bears*, Justin came to the chart to write the next word. Coming up to the chart, he said under his breath, "Space. I need Vanessa" (the spacer that day). Justin's verbalization took the place of Marcia's prompt and brought the act of spacing to a level of consciousness. His thinking out loud preceded the action. Then, before Vanessa came up to the chart, Justin left the space independently and wrote the first letter of the next word.

Often in the winter period, children who exhibited the most confusion with the concept of spacing appointed themselves to be in charge of spacing. Vince took it upon himself to scoot up close to the easel where he could occasionally slip his fingers up for the spacing while students wrote on the chart.

By the last winter session, spacing had became a behavior executed automatically without prompts from Marcia or from each other. Students independently monitored their own spacing as they came to the chart to write.

*Spring.*

Occasionally, discussions related to spacing occurred, but they were always initiated by the students. In the spring, while writing their list, Heather asked if she could be the spacer that day. Marcia simply told her, "We don't need that any more. We know space." The group then continued with their writing.

On other occasions, students closely monitored their classmates' writing, as Jessie did in a writing session in the spring.
J:s: That's too close, Heather. Not so close.
M: Heather, what is she telling you?
Ja: It's not supposed to be there.
M: Do you have any space?
H: No.

Figure 4 represents the interplay of teacher and student behaviors in establishing students' control of spatial layout. Initially, all aspects of the task are directed by teacher in the fall, but are gradually turned over to the students. By the winter data collection period, students independently controlled the spatial layout in their writing.

• **Teacher providing the model**
  M: (putting two fingers up to mark the space) I'll leave some space.

• **Teacher introducing something new**
  M: Justin knows that a space is needed. Are you going to stay up here and be our spacer?
  Ju: Uh huh. (Justin stays up and marks the space for the remainder of the writing.)

• **Teacher prompting for a constructive activity**
  M: OK, let's give it a little bit more space. We want to be sure to make it easy to read. Heather, we do need a spacer.
  H: (comes up and marks the space for Vince.)

• **Teacher creating opportunities for students to work with new knowledge**
  M: What do you think about her spacing? Too close? Is it enough?
  Js: Too close.
  M: Let's move it over just a little bit to make it easy to read.

• **Teacher tightening criteria of acceptability**
  M: I think that spacing might be a little too close.
  Vi: (reaches in and holds the space for Vanessa.)

• **Students asking each other for assistance**
  Ju: Space. I need Vanessa.

• **Students monitoring each other**
  Js: That's too close, Heather. Not so close.

• **Students controlling the task independently**
  Children independently leaving spaces between words as they come up to write.

**Figure 4.** Sequential inter-relationship of teacher and student behaviors in establishing spatial layout.
Locating Behaviors

Fall.

Throughout the first two data collection periods, one-to-one matching was addressed most often as the children reread their written message. Upon completion of their first interactive writing in the fall, Marcia invited students to come to the chart to read what they had written. One by one, each child came to the easel, stood to the side, and, with a long pointer in hand, pointed and read their message for the day. With each of the students, Marcia accompanied their pointing, holding and moving the pointer with them while the entire group read their message together.

These shared readings continued throughout the fall sessions. With each session, Marcia's questions to the children became more deliberate and specific. After reading their text, with Jared pointing, Marcia asked:

M: Did you match? Did you use some of the words that you knew to make it match?
Ja: (nodding)
M: (to the group) Did his pointing match when we were finished?
H: Yes.
M: Did he have any words left over?
H: No.
M: He made all the words match.

She also reminded students how their known words could help them with their matching. For example, before reading the September 18 newsletter, Marcia asked:

M: What is Vince going to be looking for as he's pointing?
Ja: Where he starts.
M: Exactly, he's going to start with the word, today.
By the end of the fall writing period, Marcia asked students to locate known words in their writing, as well as to locate unknown words in their text. When they finished listing the characters from *The Farm Concert* (Cowley, 1983), Marcia asked Jared to come to the chart to locate in print the character she pointed to on the cover of the book. She began with his known word, *dog*, which he easily pointed to. Then, she had him locate a few unknown words. After he had located several of the characters, the group went back and reread the entire list, pointing to each word.

Winter.

By the second period of data collection, students demonstrated control of one-to-one matching, so Marcia did not have to prompt for that behavior. When a confusion arose, Marcia dealt with it. For example, in the November 11 retelling, the word, *upon*, kept giving students trouble. Their text was, *Once upon a time there were three bears*. Each time the children pointed and read, they were unable to match when pointing to the multisyllable word, *upon*. First, Marcia told the students to say the word. While saying the word, Jared clapped twice. The others followed his lead and also clapped the word while saying it. Marcia extended their clapping and demonstrated how to use that information when they read.

Ja: There's the word, upon (clapping two times).
M: When you get there with your pointer, keep it there for the whole word. Upon (keeping pointer down while saying the word). It's a longer word. Once upon (pointing) a time...OK, now you try it (to Jessie).
When Jessie went back and read, and was still confused, Marcia said, "OK, we need to leave it down for upon. Upon."

Later in the winter collection period, the students' retelling had acquired several lines of text. Parts of the text were difficult to read since the paper was unlined and the students' writing was not evenly lined up across the line. Sometimes, as they reread their story, they lost their place where the lines of text were quite close together, and were unable to maintain one-to-one matching. Marcia stopped the group and suggested a way for students to get back on track with their reading. Pointing to the words, GREAT BIG PAPA BEAR, written all in capital letters, Marcia said:

M: Those are always the words to use so we know exactly where we're reading. We know to check there...GREAT BIG PAPA BEAR!

Spring.

During the spring collection period, students had firmly established the locating behaviors and these were not addressed during that time. Figure 5 summarizes the teacher and student behaviors exhibited to establish locating behaviors.

**Specific Details of Print**

**Letters**

Most frequently, letters that children did not know and the formation of letters were attended to in the fall. When students did not know a particular letter, Marcia provided a model. For example, in the September 8 newsletter, Jessie came to the chart to write the n in *friends*. Before Jessie wrote, Marcia reached down beside her, took the magnetic letter, n, and then displayed it at
• **Teacher** prompting students to reread text
  
  M: Let's go back and read what we have.

• **Teacher** supporting students' attempts to match one-to-one
  
  M: (pointing to text with students to establish one-to-one matching)

• **Teacher** prompting students to work with new knowledge
  
  M: (to the group) Did his pointing match when we were finished?
  
  H: Yes.
  
  M: Did he have any words left over?
  
  H: No.
  
  M: He made all of the words match.

• **Teacher** prompting students to use known words to monitor their one-to-one matching
  
  M: What is Vince going to be looking for as he's pointing?
  
  Ja: Where he starts.
  
  M: Exactly, he's going to start with the word, today.

• **Students** establishing control over one-to-one matching
  
  Students independently matching when rereading text without teacher assistance

• **Students** demonstrating a confusion with one-to-one matching in a new context
  
  (Multisyllable words)
  
  (Several lines of text)

• **Teacher** demonstrating one-to-one matching at points of confusion
  
  (Multisyllable words)
  
  Ja: There's the word, upon (clapping two times).
  
  M: When you get there with your pointer, keep it there for the whole word.

(Several lines of text)
  
  M: Those are always the words to use so we know exactly where we're reading. We know to check there...GREAT BIG PAPA BEAR!

• **Students** demonstrating control of one-to-one matching on several lines of text and multisyllable words

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**Figure 5.** Sequential interplay of teacher and student behaviors in establishing locating responses.

the top of the chart. Jessie looked at the letter and wrote the *n* on the chart paper. Marcia had anticipated that Jessie might need help and supported her writing by providing the model of the letter.
A model for letter formation was also provided in the early fall writing sessions. Marcia described the movement of the letter formation, and demonstrated how to make the letter as she talked. When a child had written \( i \) for \( l \), Marcia first praised the child for his attempt and then demonstrated the correct way of making the \( l \) that was needed for their text.

M: That's wonderful, Vince, but this time it's...Let me show you. For the word, \( l \), you write it just like this. Come straight down. Marcia then wrote on the top of their paper, a large capital \( l \). The child examined the letter and wrote the \( I \) for their story.

During the fall, Marcia accepted either an uppercase or lowercase letter. After discussing the \( l \) in the first writing, for a period of time, the same child continued to write \( l \) for \( i \). Rather than attending to the concept of uppercase and lowercase letters with the child, Marcia chose not to attend to it, and focused on letter formation and letter confusions.

Although Marcia accepted the letters that the children wrote, she held them accountable for what they already knew about letters. For example, in the last writing period of the fall, Jared had written \( boG \) for \( dog \). Before returning to his seat, he stopped and looked briefly at what he had written. Marcia followed up on Jared's hesitation and commented:

M: OK, Jared, look at your word very carefully. Do you see anything?
Js: \( Dl \)

Following Jessie's comment, Marcia pointed under the \( b \) and tapped her finger.

Js: I said \( Dl \)
M: (pointing to the \( b \)) Is this a \( d \)?
Ja: No.
M: What do we need to do to it to fix it?
Js: Turn it the other way.
M: OK, turn it around.
Providing the model, Marcia took out the magnetic letter, d and placed it directly above the b Jared had written. Next, she covered up his first attempt, and he quickly changed what he had written.

Capital letters were briefly addressed during the fall collection period. On their first newsletter, Marcia mentioned one time for a child to "come up and make a big s for us...a big capital S." Other than that one incident, neither Marcia nor the children discussed capital letters until the winter collection period.

It was during the winter writings that capital letters were brought to the attention of the entire group and the discussion was initiated by a student. Justin was writing at the chart, when he stopped and asked Marcia:

Ju: Capital?
M: Just a lowercase.
H: Capital? What's a capital? He asked about a capital.
M: A big letter.

That was the end of the explanation at that time.

Once capital letters had been discussed, the children quickly began to demonstrate an awareness of uppercase and lowercase letters. Shortly after Heather's initial question of "What's a capital?", Justin looked at the chart and exclaimed, "There's lots of big letters up there!" Heather then corrected him by saying, "Capitals."

Around the middle of December, students began to check themselves in their use of capital letters. Vanessa came to the chart, pointed to the H written in the middle of THE and commented:

Va: I need to make the h. That's supposed to be an h.
M: What do you think?
Va: It's supposed to be a little h.
M: It's a capital H now. What do you think? Should I put a capital H?

Marcia then provided the model and took out the uppercase and lowercase magnetic letters.

M: Here's the lowercase (pointing to the magnetic letter, h). Do you think we need the lowercase for the word, the?
Va: Yeah.
M: Almost always it's a lowercase when it's in the middle of a word.

By March, Marcia tightened her criteria of acceptability in the students' use of uppercase and lowercase letters. For example, when Jessie had written an uppercase T where it was not necessary, Marcia stopped and commented: "OK, Jessie...we're making sure we're doing capitals and lowercase letters and for this, we'll need a lowercase t." Heather offered assistance in letter formation with her comment, "Like a cross." Even though she had limited acceptable responses children could give, Marcia still offered support when necessary.

Students continued to actively construct their own understanding of capital letters through Marcia's prompts in the spring. When Justin asked whether he needed a "lowercase b?" for the word balls, Marcia turned to the group and asked, "What do you think?" The group, along with Justin all said, "Yes." Justin then wrote the b.

At the end of the spring collection period, the group's writing was almost entirely written in lowercase letters. Jared demonstrated some confusion still with lowercase b and Marcia chose once to not attend to that at the time.

Figure 6 summarizes the inter-relationship between teacher and student behaviors in regards to letter knowledge.
• **Teacher** anticipating student response

• **Teacher** providing model of letter for students  
  Marcia reached to get the magnetic letter, *n*, for Jessie.

• **Teacher** demonstrating letter formation  
  M: That's wonderful, Vince, but this time it...Let me show you. For the word, *l*, you write it just like this. Come straight down.

• **Teacher** holding students accountable for letters they know  
  M: Ok Jared, look at your word very carefully. Do you see anything?  
  Js: *D*  
  M: Is this a *b*?  
  Ja: No.

• **Students** asking about something new  
  Ju: Capital?  
  M: Just a lower case.  
  H: Capital? What's a capital? He asked about a capital.  
  M: A big letter

• **Students** demonstrating their understanding of a new concept  
  Ju: There's lots of big letters up there!  
  H: Capitals!

• **Students** monitoring their use of uppercase and lowercase letters  
  Va: I need to make the *h*. That's supposed to be an *h* (lowercase).

• **Students** demonstrating some control of uppercase and lowercase  

• **Teacher** tightening criteria of acceptability  
  M: What do you think?  
  Va: It's supposed to be a little *h*.

• **Students** demonstrating consistent knowledge of letters (formation, uppercase and lowercase)

**Figure 6.** Sequential interplay of teacher and student behaviors in establishing letter knowledge.
Punctuation

Fall.

The period was the first form of punctuation addressed during the interactive writing sessions. Attention to the period was first mentioned upon completion of the September 8 newsletter. Marcia commented, more to herself than to the group, that she would add the period at the end of the sentence. For several days following that writing, Heather added a dot to everything she wrote. She varied the positioning of the dot: sometimes placing a dot above the letter; other times alongside the word. Occasionally, she put the dot below the letter or word she wrote.

Following Heather's overgeneralization of the period, Marcia discussed the period in greater detail. After mentioning her own use of the period in their writing, Marcia then helped direct students' attention by prompting for a constructive activity.

M: Always when we've written something, go back and reread. Make sure you've got your spacing how you want it. What else do you want to check for?
Js: If you've finished it all.
M: Yes. We've finished it all. We have all our message.
Ja: Put a period.
M: OK, let's go back and check.

The group went back and reread their message and Marcia asked:

M: Is that all of our message?

Winter.

During the winter collection time, Marcia varied her instruction, no longer modeling for the children, but prompting them to become more actively
involved in their understanding of the use of the period. When they were writing the retelling of *The Three Bears*, Marcia asked the group:

M: Is there anything else to that idea that we need to add? Once upon a time there was three bears. Now, that's the end of that first idea, isn't it? So, what do we need to put there? We're finished with that first part of the story.

Va: Period!

Js: Period!

Vince came to the chart to add the period, stopped, pointed to the end of the line, not the end of the sentence, and asked Marcia:

Vi: Do you need a period up here?

M: Well, I don't know. Let's see if we can answer him. Let's go back and reread up to that point and see if we need one there.

All: Once upon a time there was

H: No. No period.

M: Why do we not need a period there?

Js: Because we're done here (pointed to the end of the sentence), not here (pointed to the end of the first line).

M: Ok, because we're not finished here (pointed to end of line). But we are finished here. Once upon a time there was three bears. Here's where we're finished.

Spring.

By the spring, the children correctly used the period in their own writing. Each time new punctuation was introduced to the group, Marcia provided a model for the children and explained the function of the punctuation. During the spring, while writing their list, other forms of punctuation were briefly addressed as students raised questions about the marks Marcia had included in the chart. She quickly discussed the colon and the comma, but no further mention was made of these forms of punctuation.

Figure 7 summarizes the teacher and student behaviors that transpired to establish the use of the period.
Phonological Awareness

**Hearing and Recording Sounds in Words**

Over the period of the academic year, there was a gradual progression in instruction for developing children's phonological awareness, with each task building upon the previous one. During the fall, Marcia focused mainly on the articulation of words and recording letters that represented the sounds in
On the very first interactive writing, she began by demonstrating for the children how to say words slowly.

When *Tuesday* was the next word needed in their newsletter, Marcia said the word slowly for the students. Even though this was the first time she modeled the articulation of the word, she quickly transferred this task to the children, by asking them to say it with her.

M:   *Tuesday*. Everybody say *Tuesday* slowly with me.
All:  *Tuesday*.

Immediately following the group's saying the word slowly, Marcia next asked students to identify the sounds that they heard:

M:   What would you expect *Tuesday* to start with? *Tuesday*. What do you hear at the beginning of *Tuesday*?

Vanessa supplied the *T* and Marcia prompted repeatedly, "What else do you hear?" The children did not respond to her prompts and Marcia wrote in the remaining letters. This kind of teacher question, student response activity continued for the first two words: *Tuesday* and *September*.

Within that first interactive writing, Marcia's prompts changed and more closely matched with what the students were capable of doing at that point in time. For example, as she had done with their first word, *Tuesday*, Marcia asked the children to say the word, *September*, slowly with her. She immediately followed her prompt with an additional question, "What do you hear at the beginning?" The students said the word slowly and responded to her first prompt only. Although a second prompt had been given, none of the children were able to tell her any of the sounds that they heard. Marcia resumed her original role, and said the word slowly, eliminating one aspect of
the task that she had asked the children to do on their own. This time, as she said the word slowly for the children and emphasized certain sounds in the word, students' hands went up and voices shouted:

Ja:  C!
H:  S!
Ju:  I hear a s!

Throughout the remainder of the day, Marcia continued to divide the task of hearing and recording sounds into two distinct parts—one part to be carried out by the teacher, and one part to be carried out by the students. With the exception of one word, hearing and recording sounds was a collaborative effort, with Marcia articulating the word and students identifying its sounds.

By the ninth and final word in the first newsletter, Marcia tried again to have the students carry out both parts of the hearing and recording task.

M:  Say friends.
All:  Friends.
Js:  N!
M:  Wonderful. Come up and put the n. You heard the n in friends.

Without having to ask, "What can you hear?" students volunteered what they heard. The task that had initially been shared between the teacher and children became a task that was carried out by the students alone.

Marcia demonstrated her responsiveness to children's behaviors a second time within that first interactive writing session. When she first attempted to get children to attend to the sounds in words, Marcia asked, "What do you hear at the beginning of the word...?" Her question was very limiting because only one answer was acceptable. Marcia received a few correct responses, but most often, the children gave a response that did not answer her question. The answers typically focused on the ending consonant sound
or other salient sounds within the word, yet Marcia's prompt was for the initial sound. Although they were discussing the same word, the students and Marcia were not attending to the same aspect of the word.

When analyzing the sounds they heard in the third word, Marcia shifted her prompt to, "What do you hear?" This question allowed for several appropriate responses instead of a single one. By changing the question, a specific sequence in recording the sounds was no longer required.

Any sound and any sequence in which children heard the sounds were acceptable. Their responses allowed Marcia the opportunity to understand what the children attended to within that word. The sounds that they were unable to hear or identify, Marcia wrote on the chart paper. She handled all aspects of the task that the children were unable to manage on their own.

H: A
M: All right. Let me start it out for us (wrote p-l). P-l and then there's the a that you heard. Heather, come write the a.

The group played a significant factor in each other's learning about the English sound system. When writing like, Justin identified the initial consonant /l/, Heather heard the final /k/ sound, Vanessa and Jared both heard the /l/, and Marcia supplied the /e/. Together, with the support of the group, Marcia's questions and repeated prompts, they were able to represent many of the sounds in words (such as, /LIK/ in like, or /FNS/ in friends) while Marcia supplied the remaining letters. Figure 8 shows the sequence of teacher and student behaviors used in helping to establish children's phonological awareness.
**Teacher** demonstrated articulating words slowly
   M: Tuesday. Tuesday

**Teacher** prompted students for a constructive activity
   M: Everybody say September.
   All: September

**Teacher** prompted students for a constructive activity too complex for the students
   M: What do you hear at the beginning of September?
   All: (no response)

**Teacher** resumed previous role of articulating words for students
   M: September

**Students** heard and recorded sounds in words
   Ja: Cl
   H: S
   Ju: I hear a st

**Teacher and students** shared task of hearing and recording sounds in words
   M: Play
   H: A!

**Students** controlled both aspects of saying words slowly and hearing and recording sounds
   All: Friends.
   Js: N!

---

Figure 8. Sequential interplay of teacher and student behaviors in establishing phonological awareness.

**Boxing**

During the winter data collection period Marcia varied the way in which they went about analyzing the sounds in words, and introduced the use of an activity, based on Clay's adaptation of Elkonin's work. As an everyday term to describe the activity, teachers have used the word, *boxing*. This term is not used by Clay. To help children analyze the sounds in words, a box was drawn for every sound in the word. As the children articulate the word, they place a counter in the appropriate square of the diagram. Then, children write in the letter that represents the sound(s) heard in the boxes.
Before the boxes became an activity used with the group, Marcia took each child through a sequence of activity designed to help them learn the task: clapping words to hear its parts; saying words slowly; articulating words and pushing counters into the sound boxes; and articulating, pushing, and identifying sounds heard simultaneously. This sequence of actions was suggested by Clay for use as appropriate with children in Reading Recovery. Marcia adapted the approach for use with the group since the students were not closely attending to print as a result of other instructional methods used. The boxes were not used during interactive writing until every child within the group was able to manage each of the tasks listed above.

Marcia used a large magnetic board when boxing words. After articulating the word they were going to box, Marcia next drew the appropriate number of boxes for the number of sounds in the word, and held the magnetic board up for students to see. She then placed small round counters (magnets) underneath each box, and modeled pushing the counters into the box while saying the word slowly.

M: *Time* (pushing).

After quickly modeling this process for the children, Marcia enlisted their involvement in the process. While working on the retelling of *The Three Bears*, they needed the word *time* in their story. Marcia stopped, reached for the magnetic board, and said:

M: Everybody say *time*.
Js: *T*
Ja: *T*
M: Say *time*.
H: *Time* (slowly).
M: You know what. Heather is the first one that has said the word slowly.
H: (slowly) *Time.*

Marcia then drew three boxes on the magnetic board and placed a magnet under each box (see Figure 9).

Figure 9. Sound boxes.

Next, she said *time* slowly and simultaneously pushed the counters into the boxes. Then, Marcia asked Jessie to push the counters while saying the word slowly:

M: Jessie, since you're saying it slowly, you push while you're saying *time.*

Jessie then pushed the counters and said *time* slowly. The others remained actively involved by saying the word along with Jessie. After saying the word slowly and pushing to hear its sounds, the group heard and recorded all of its sounds. Since the *e* in *time* represents no sound, Marcia wrote it in outside the sound box and commented, "I'll write the silent *e.*"

The introduction of boxes to the group elicited a greater number of responses from the children than the other times when they articulated words slowly and recorded sounds they heard. In the fall, when students said words slowly, they generally contributed one or two dominant consonant sounds and the remainder of the word was written by Marcia. After boxes were introduced,
the number of contributions increased so that children wrote more than Marcia. This trend continued throughout the remainder of the winter and spring data collection periods as shown in Table 9.

Table 9

Sample of Letter Contributions Written by the Teacher and Students: First Day From Each Data Collection Period

<table>
<thead>
<tr>
<th>Data Sample</th>
<th>Number of Letters Written by Marcia</th>
<th>Number of Letters Written by Children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall–9/3/92</td>
<td>33</td>
<td>12</td>
</tr>
<tr>
<td>Winter–11/11/93</td>
<td>13</td>
<td>31</td>
</tr>
<tr>
<td>Spring–3/24/93</td>
<td>9</td>
<td>35</td>
</tr>
</tbody>
</table>

Boxing helped to provide a visual framework that enabled children to see that there was more to the word than just one letter. Instead of a child giving just a single sound, some of the students began to identify several of the sounds they heard in the word. Most, if not all of the sounds in the words were represented with the support of the entire group and less writing was done by Marcia. What the children could do as a group was more than they were able to manage on their own. For example, in the word time, Jessie, Vanessa, and Heather heard the t, and Justin and Jared heard both the i and m.

Shortly after the introduction of boxes, the students' conversations during group time began to change. They started to discuss among themselves
the sounds that they heard in words. For example, while Marcia was getting set up for the day's writing, the children initiated the rereading of the chart and decided what was needed next in their story. Their talk then centered around the letters they heard in the next word, *middle*.

H: I know how to start it. *M.*
Va: Me too.
H: (saying it slowly) *Middle.*
Ju: *l.*
Ja: *l, s.*
Ju: No, *middle* (saying it slowly). *M* and *d.*
H: *Middle, middle* (saying it slowly)
Va: *Middle. M.*

Independently, the children articulated the word slowly and identified several sounds within the word and demonstrated their awareness of the position of the sound. See Figure 10 for the sequence of teacher and student behaviors that transpired during boxing.

- **Teacher** introduced concept of boxing to students
- **Teacher** went through individual tasks of saying words slowly and pushing the counters with students individually
- **Teacher** decided which words in text to box and modeled all aspects of the task of boxing for students
- **Teacher** transferred parts of the task of pushing, hearing, and recording sounds in words to students
- **Students** simultaneously pushed and said words slowly, and recorded most sounds in words
- **Teacher** provided the letter/sounds children were unable to supply in words

*Figure 10.* Sequential interplay of teacher and student behaviors during boxing.
Letter Clusters

Winter.

Throughout the winter collection period, Marcia and the students also began to attend to the larger units or letter clusters within words. There was no preplanning by Marcia as to which clusters were introduced on a certain day. Instead, she attended to them as they occurred in the interactive writing. As the clusters reoccurred in their writing, Marcia took the opportunity to call attention to them.

The acquisition of a letter cluster was generally first brought to the attention of the group by Marcia commenting about it in some way and linking it with a sound association. For example, when writing the word, three in the title of their retelling, The Three Bears, Jessie kept articulating the word with an f at the beginning, as if the word were free. Marcia stopped, said the word slowly for the group and told them there were two letters making that first sound. As she talked about the two letters, she wrote th on the paper for all of the children to see. After commenting briefly about these letters, Marcia and the students continued recording the rest of the sounds in the word.

As the th cluster reoccurred in their writing, Marcia continued to draw children's attention to it. Along with a verbal comment, the cluster was written down to help draw attention to how it looked in addition to the sound that it represented. Sound boxes occasionally helped to direct children's attention to these letter clusters. Recording more than one letter in the sound box sometimes created another opportunity to discuss letter clusters in relation to the sounds they represented.

For example, as the students continued in their retelling of The Three Bears, the word three came up once more in their text. For the second time that
day, Jessie insisted that the word began with the letter f. After Marcia
pronounced the word several times for Jessie, emphasizing the initial sound,
she took out the magnetic board and drew three boxes. She then told the
group:

M: Everybody say the word, three.
All: Three.
Js: F
H: No!
M: Say the word again, three.
All: Three.
M: What do you hear?
Js: R-E. (pointing to the second and third box)
H: Put in the r and e, Jessie.

Still accepting any sequence of sounds/letters, Marcia had Jessie write the r
and e in the second and third boxes. She continued:

M: Ok, there's another sound.
Ja: H.
M: There's going to be another letter that goes up there with the h.
   You know what. There's also going to be a t (writing in the th
   while talking). The t-h go together.

Marcia told the students about the t-h representing one sound, and showed
them by placing the two letters in the same box.

A second way in which Marcia used the printed form to help direct
students' attention to letter clusters was by making a list of words containing the
cluster they discussed. Following a second discussion about the letters t-h,
Marcia took a strip of paper, wrote the th at the top of their list, and told them
that the word the would help her think about the th. As she said this, she wrote
the underneath the th and put the list aside. Later, as the group continued to
notice t-h in words, Marcia added these words to their list. At the conclusion of
the first day of writing their retelling, the group had added to their *th* list: *the*, *three*, and *there*.

\[
\begin{array}{l}
Th \\
The \\
three \\
there
\end{array}
\]

In many instances, the physical layout of the words printed in list form along with the initial discussion, facilitated children's understanding of the letter clusters. Writing the words underneath each other in list form, made the cluster of letters more noticeable, as the next example demonstrates.

After the group had discussed the *t-h* unit several times, and started a *t-h* list with three words, Justin hopped up, came to the list, and pointed to the letters, *t-h* in each word in the list. Then, he pointed again to the *t-h* in each *t-h* word in their retelling. Marcia asked Justin to explain his pointing:

\[
\begin{array}{l}
Ju: \text{ They're all the same.} \\
M: \text{ What do you mean? What are you looking at, Justin?} \\
Ju: \text{ See this (pointing to the *th* in *three*).} \\
M: \text{ Uh huh.} \\
Ju: \text{ In this (pointing to *TH* in *The*) and this (pointing to *th* in *three*).}
\end{array}
\]

Instead of telling Justin what she noticed that was alike about the words he pointed to, Marcia asked him to explain what he noticed. Asking Justin helped Marcia to determine what it was that he knew. He could have been attending to another feature of the word, unrelated to the letter cluster Marcia was addressing.

\[
\begin{array}{l}
M: \text{ What do you notice at the beginning?} \\
Vl: \text{ *T-h*.} \\
Js: \text{ The *t-h*.} \\
H: \text{ *T-h*.} \\
M: \text{ Ok, the *t-h* again. That's why we've been listing these words. To help us see the *t-h* together.}
\end{array}
\]
Marcia then circled the t-h in each of the words on their list, demonstrating very specifically the cluster which she was attending to.

Frequently, letter clusters were attended to as a result of a student noticing something about them. As the group reread, "He sat in papa bear's chair," Jessie came up to the chart and circled the c in chair with her marker and said:

Js: It's not supposed to be like that (pointing to the c). Chair. It starts with a c? Chair?
M: Jessie's pointed out in chair, it starts with a c and she's thinking that...OK, what sound is c?
Js: Cat.
M: It's because when we say chair, we make a different sound.
Js: Chair (saying it slowly).
M: That's because the...
Ju: The c-h.
M: The c-h make their sound together. Chair....Justin, we talked about this today when you were working on a word that you needed in your journal. It was Chinese...
Ju: Chinese fighting fish.
M: Yes, you were going to get a Chinese fighting fish. And so, Jessie said, this doesn't start like we usually say for the c (pointing to the word, chair).

Marcia then put the ch at the top of the list and added:

M: I'm going to take the word chair and put it on this list. Can anybody think of some other words, real quick?
Vi: Chase
Ja: Change
Va: Cat
M: ...Cat, we just hear the c. Everyone say chair and say cat.
All: Cat
M: And now say chair.
All: Chair
M: Now watch my mouth while I say them. Cat...chair.
Va: Cat...
M: Now say chair.
Va: Chair.
Marcia then pulled out the c list that they had made in the fall and put it in her lap.

M: Here's cat. It starts with just the letter c. Jessie was thinking about the...
Vi: c-h.
M: Uh huh. Now we're thinking about chair. The ch makes that sound.

Spring.

In the spring data collection period, Marcia continued to use the lists to direct students' attention to larger units in words, but the students were more actively involved in and responsible for their use. For example, when the next word in their text was *started*, Justin hopped up from his place on the carpet and went over to the lists hanging to the left of the easel. The group continued analyzing the sounds in *started* while Justin searched briefly for the *st* list. Then, he grabbed the list of words that had the letters *st* in them and waved it in front of Marcia. Marcia placed the list on the chart and asked:

M: Does it (*started*) go on our list?
All: yeah.
M: We found out that *started* starts with...
Js: *s-t*.
M: *Started* starts with *s-t*.

Students also initiated the idea of making word lists. As they were writing the word *started*, Marcia had commented that the *ar* went together. Jessie then suggested that they begin making a list of *a-r* words, which they did.

The instruction in the analysis of sounds in words continued to change throughout the final data collection period. Marcia transferred more of the responsibility of the tasks to the children. There was less frequent use of sound
boxes. Instead, the children analyzed the sounds in words right within the text as they were writing. For example, when adding the word keys on their list, the group said it slowly. Then, Marcia asked Jared to come up and write. He wrote, *ke*, stopped, and looked at Marcia. Marcia wrote in the *y* and Jared added the *s* at the end of their word.

Marcia also tightened the criteria in what kinds of responses she accepted from the students. She prompted children to think about the sounds in sequence as they recorded them. Prompts such as "How will we begin this word?", "Listen to the first part," "Jessie hears the *s* next," "What do you hear at the end of the word?" all addressed the concept of recording the letters in the sequence in which they were actually seen in print.

Toward the end of the data collection period in the spring, Marcia began asking questions in which students had to think about how a word looked in print in addition to the sounds that letters represented. For example, when the group was getting ready to write the word *chalk* on their list, Marcia asked, "What letters would you expect to see at the beginning of the word *chalk*?" Later, when Jessie had written *et* for *it*, Marcia asked her: "Think about how that looks, Jessie. What do you think?" Jessie then immediately corrected her writing to *it*.

As Marcia's questions shifted to asking about the visual features of words, students began to initiate questions about the English spelling system. They compared how words were actually written, with how they expected them to be written based upon how they sounded. Following a lengthy discussion about the *c-h* cluster in the word, *lunch*, the next word to write in their list was *trays*. They had written the word and were rereading their story when Justin said:
Ju: It doesn't sound like a t to me. Sounds like it's supposed to be a $ch$ (making the $ich$ sound).

The actual print did not match Justin's expectations since his initial prediction was based on a sound analysis only. He was beginning to learn that sound system of language was not the only system that was used to write words. The behavior sequence concerning letter clusters appears in Figure 11.

There was a progression of instruction to develop children's phonological awareness. In the fall, Marcia had students articulate words slowly to listen for word parts and to hear and record sounds in words. In the winter, Marcia introduced the concept of boxing words to direct students'
attention to hear and record more than one sound to represent an entire word. Letter clusters were also introduced during the winter collection period and continued throughout the spring. By spring, Marcia had tightened the criteria for analyzing sounds in words and had students record sounds in sequence, right within the text they were writing. Occasionally, words were boxed to help provide a visual framework for the students.

Using the Known

This section examines the use of known items in students' writing. There is some overlap from the other three categories, because using the known occurred as children learned to look at print, heard and recorded sounds in words, and attended to letter clusters.

Known Letters and Words

During the fall, helping children to use what they knew about letters and words in the interactive writing became a way to direct their attention to print. Using students' known words in the interactive writing became one way of helping children develop the concept of a word. As children wrote their known words in the text, Marcia addressed spatial layout between one word and the next. Also, establishing the concept of a word was then used to help with one-to-one matching behaviors in order to monitor their reading, as previously discussed in the analysis of learning to look at print.

Fall.

From the first interactive writing session, Marcia prompted students to use their known words and letters in their writing. She was aware of the words
and letters that the students knew from the Observation Survey, and made use of this knowledge by specifically calling on individuals to write what they knew as it occurred in their text. In their first newsletter (Today is Tuesday, September 8. I like to play with friends.) when the t for Tuesday came up, Marcia said, "Vince, you know t." In a newsletter later that fall, Jared knew the word, to, so when it came up in their text, Marcia asked him to write it, commenting, "Jared, you know the word to. Come up and write the word to."

Early in the fall, Marcia also prompted students to think about their known words and letters in relation to unknown words that they were writing. Often, she prompted students to compare words in order to help them attend to specific visual details within the word. For example, when they created a list of characters from The Farm Concert (Cowley, 1983), Jared wrote one of his known words, doG, on the chart. The next word they wrote in the list was duck. Marcia stopped and asked the students:

M: So far we've written two words that start with the same letter. What are they?
Vi: I know...duck and dog.
Js: Duck and dog.
M: OK, I heard Vince say them. Tell us again, Vince.
Vi: Dog and duck.
M: Dog and duck. And the letter they both start with is...
Va: D!
M: Heather, did you hear that? We had two words that...
Vi: Dog and duck.
M: Dog and duck start the same.

Another important source of known words, students' names, were used throughout the year in several ways: learning to look at print, establishing letter/sound relationships, learning letter clusters, and analyzing words. In the early fall writing sessions, Marcia devised a way to use children's names as
part of the text they constructed. Following the first newsletter, the structure of
the newsletter incorporated students' names within the text. For example,
Figure 12, which lists a representative sample of the fall newsletters includes
students' names.

| Today is Tuesday, September 8. I like to play with friends. |
| Today is Wednesday, September 9. Vince likes to ride horses. |
| Today is Monday, September 14. Jessie said, "My mom fixed yucky meatloaf." |
| Today is Tuesday, September 15. Justin said, "My grandfather caught a swordfish." |
| Today is Thursday, September 17. Heather's nana mixes up her step-uncle's food. He has false teeth. |
| Today is Friday, September 18. Miss Kellum met parents last night and Jessie did the cake walk. |

Figure 12. Sample of newsletters—fall data collection period.

Marcia also demonstrated how to use what children knew about their
name in order to apply that information when writing an unknown word. Initially,
Marcia modeled the process of making links with students' names using name
cards that she had made at the beginning of the school year. Each child's
name was written on a large strip of tag board, approximately 3"x12", and
placed in a pocket chart that hung in the front of the room, next to the writing
easel. When Marcia wanted to link specific features of print from the children's
names with other words, she reached over to the chart and pulled out the name
card(s) needed.

Initially the name cards were used as a way to help children attend to
visual similarities within each of their names. In the small group, there were
three students whose names began with the letter J (Justin, Jared, Jessie), two
with the letter V (Vince, Vanessa), and one with the letter H (Heather). To help
children see how their names were alike, Marcia placed the name cards that
began with the same letter, one right underneath the other in the pocket chart, and commented about the names beginning with the same letter. Children also discovered similarities within each of their names, such as, names with the same number of letters, and names in which some of the letters were the same.

Marcia used children’s names not only to notice the visual similarities of words, but also to attend to similarities of letter/sound relationships. The name cards were often used to help link a letter/sound relationship from their name with a word they were writing. In a fall newsletter, when writing the word, September, Marcia asked the students to say the word slowly and listen for any sound in the word. She asked:

M: What do you hear in September?
Ja: C.
M: OK, what’s the other letter that makes that sound? Like in the middle of Vanessa (emphasizing the s in Vanessa’s name).

As she articulated the word, Vanessa, Marcia brought out Vanessa’s name card, pointed to the s, and asked:

M: What other letter makes that sound?
H: S or c?
M: This time it’s going to be the...
H: s.
M: Like in Vanessa’s name.

By linking the s in Vanessa’s name to the s in September, Marcia demonstrated the process of how to use what they knew about letter/sound relationships in a known word, their name, when analyzing the sounds in a new or unknown word.

In the fall, Marcia generally made the links for the students. She did this by verbalizing what she noticed about the students’ name and how it related to the word they were writing, whether it was by how the word looked or the
relationship between similar sounds and letters in students' names (such as, "S, like in Vanessa's name"). Along with this oral commentary of her analysis, Marcia used the students' name cards to help show the similarities she was attending to.

**Winter.**

During the winter, however, the children started to independently use their names to make links for themselves. While writing their retelling of *The Three Bears*, the next word in their story was *just* (And it was just right). Marcia repeated their message:

M: *just right.*
Ja: It starts with a *j.*
Js: Justin, Jared...(looking at the group members)
Ja: Yeah, like Josh!
M: Jessie, go get the names that start with *j.*

Jessie got up and returned with the following names: Justin, Jimmie, Josh, Jared, and Jessie. She lined them up on the easel, one by one, with Justin's name on the far left side. Then, Jessie looked at each of the name cards and put them all in a pile, and left Justin's card on top. Marcia asked:

M: Why did you leave Justin?
Js: So we could see the *Just.*
Ju: Oh, look! Look, that's how much we need.

As Justin said this, he covered up the word *in* in his name and left *Just* exposed.

Ju: Because that's how much to make it *just.* *Just.*
M: Good, I was wondering...Justin noticed that the word *just* was in his name.
Ju: Like ...(showing the word, just, from his name) there's the word, just.
M: That's just what we needed.
Ju: Just what we needed. (giggling) Get it?

Marcia used the children's names for links with unknown words differently during the winter collection period. Instead of using names for a single letter relationship (H for Heather), names were used to help establish links for letter clusters. When adding to their list of th words, Marcia first demonstrated, with their known word, the, how to use the known when thinking about something unknown. She had written the word the and told them that was how she would remember the th unit. After several days of adding to their th list, Marcia pointed out that Heather's name also had the th unit, and Heather's name was added to their list. As the students began to take notice of the th cluster of letters, often Marcia prompted them to think if the word they were working on was "th like in Heather".

It was also during the winter when the students began to make links for themselves with children's names outside those in their group. After adding Heather's name to their th list, students also discovered that Ethany had a th, and added her name to their list. For the sh list they included: Josh, Sheila, and Shelly.

Spring.

By the spring, as Marcia and the children discussed letter clusters, the children were the ones who continued to make links with their names. For example, while they were writing their list of places and objects that the mouse had seen, the children noticed that several of the words had er in them. Initially, the letter cluster had been brought to the group's attention by Marcia.
She mentioned that many words that ended with that sound used an er. The second day, Heather realized that her name also contained this cluster, so the group started a list of er words that they knew, adding Heather's name at the top. As they continued with their list, the next word was eraser. Using the child's name to help link this er cluster with the word they were writing, Marcia asked:

M: Could it be like Heather?
Ju: e-r.
M: It's going to be like Heather, and ruler. You found another word that ends with e-r.

This comparison between Heather's name and the new word helped reinforce the er unit that Marcia was addressing.

By the third day, the er cluster came up once again, in their writing. Marcia used reading to reinforce a concept being addressed in writing and asked the children to come to the chart to locate a word that had the er like Heather.

Ja: I see one (pointing to rulers).
M: What one do you see?
All: Rulers.
Ja: I found another one. Paper.
Js: (pointing to pencil erasers) Pencil erasers.
M: OK, erasers. What about this one? (pointing to computer)
Js: computer. Here's another one that has an e-r. (pointing to cafeteria)
Va: Herrera? Hey, Herrera starts with an e-r! I know...my name...there's an e-r!

Both Vanessa and Heather had made the connection that their names each had the letter cluster that was discussed. Following Vanessa's realization of the er unit in her name, the students began to generate other words they knew that had the cluster in it.
Later, in the spring, students used their names to make links with letter clusters that were not associated with letter/sound relationships. As the group was writing the word *started*, they discussed the *ed* unit at the end of the word. They had written the word *start*, and Marcia started to prompt with:

M: OK, ...
Va: I.
Ju: It sounds like an *i*.
Js: *e-d*. I think we have that (going over to list of words to look for an *ed* list).
M: Can you think of some other words that are like *started*? Words that are action...like uh...
Js: (glancing around the group) Jared!
M: Heather...*looked* (wrote look and looked on the magnetic board).
Js: Jared! Jared! (pulling down the name card, Jared from the pocket chart)!
M: All right, here's the word *look* and I made it *looked* (pointing to words she had written on the magnetic board).
Js: Jared.
Va: walk.
M: Like walk (writing *walk* on the magnetic board). Now, look while I make it *walked* (writing *walked* by adding the *ed* to the end of *walk*).
Ja: *e-d*.
M: *Walked*.
Ju: *Walk ed* (reading as two separate words).
M: Let's look at it. *Start, started, look, looked, walk, walked*.

Jessie then handed Jared's name card to Marcia.

Js: There's an *ed* on the word. We do have an *ed* list, I know. But here's Jared.
M: This isn't a word by itself though, Jessie. If we took the *ed* off, it wouldn't be a word.
Js: It would be *Jare* (giggling).
M: Just *Jare*.
Va: It'd be *jar* (giggling).
M: But if we took the *ed* off started, what would it be? (holding up magnet board for all to see the word, start)
Ju: *Start.*

As the above example illustrates, the students became more sophisticated in the ways they analyzed words. Marcia's questioning also grew more sophisticated in the way she helped children think about the way in which words worked. Toward the end of the spring data collection, Marcia started prompting children to use analogies in order to solve new words. As the group was writing the word *tray*, Marcia asked Jared to come to the chart.

M: Jared, you know the word, *day*.
Ja: Uh huh.
M: OK, use the word *day* to help you think about the word *tray*.

Jared then wrote the *t* on the chart and stopped.

Ja: I already wrote the *t*.
M: It's going to be like *day*. Let's see how he uses the word, *day* to...
Va: *d-a-y* (spelling).
M: *tray*.
Ju: *d-a-y*.
M: Say *day*.
All: *Day*
M: And *tray*.
All: *Tray*.

Jared then wrote *day* on the chart paper. Marcia covered up *day* with the correction tape and commented:

M: That's *day*. So how can he use that to make it *tray*? OK, there's a *t-r* that makes the first sounds. *Tray*. It's going to be like the word, *day*.
Va: *Day, play, tray*. 
M: OK, This is day and now we want to make tray. Let's think about what's going to be the same about day and tray?
Ja: a-y?

Marcia then wrote day on a strip of paper and tray, directly underneath the word, day.

M: Yes. They both have the ay in them. Day...tray.

This was the first attempt to get students to use word analogies in order to problem-solve on a new word. Marcia first prompted Jared to try to get him to think about what he knew. Then, seeing that her prompts did not support his efforts, she came in and provided further assistance and showed him what she meant.

The day after Marcia had tried to demonstrate how to use an analogy when writing a new word, the word crayons came up in their text. Jessie told Marcia that it started with cr and she came to the chart to write. Then Marcia prompted Jared again:

M: Jared, think about crayons. It's going to be like tray (pointing in the list to tray) and day. Tray, day, and crayons.
Ja: A?
M: It's going to be just like this, Jared. Like you wrote tray for us. It's going to have the y on it too (pointing to tray).

Marcia continued to address the concept of word analogies throughout the remainder of the data collection in the spring.

Figure 13 summarizes the interplay of teacher and student behaviors in establishing the use of known words to problem-solve on unknown words. Initially, the teacher controlled the process, directing students' attention to certain features within words that were similar to features in their names and
• **Teacher** prompted students to use known words and letters in their writing
  
  M: Vince, you know t.
  
  M: Jared, you know the word, to.

• **Teacher** prompted students to think about what they knew in relation to unknown words/letters
  
  M: So far we've written two words that start with the same letter. What are they?
  
  Vi: I know...duck and dog.

• **Teacher** incorporated students' names into the text
  
  (Today is Wednesday, September 9. Vince likes to ride horses.)

• **Students** wrote names independently in the newsletter

• **Teacher** demonstrated links with students' names
  
  - name cards to attend to visual similarities between words
  - name cards to help establish link(s) with letter/sound relationships

• **Students** made links with their names using single letter from name
  
  Ja: It starts with a j.
  
  Js: Justin, Jared
  
  Ja: Yeah, like Josh!

• **Teacher** demonstrated using students' names for links with letter clusters
  
  M: T-h like Heather.

• **Students** made links with names of students outside their small group for letter clusters
  
  Vi: Ethany has a t-h!

• **Teacher** prompted students to compare and contrast words using students' names
  
  M: Could it be like Heather?
  
  Ju: e-r

• **Students** initiated use of name cards to link with letter clusters not associated with letter/sound relationships
  
  M: Can you think of some other words that are like started?
  
  Js: Jared! (going over to get Jared's name card)

• **Teacher** introduced the use of analogies in their writing, but task too difficult
  
  M: It's going to be like day. Let's see how he uses the word, day...

• **Teacher** guided students' use of analogies to write unknown words
  
  M: Ok...this is day and now we want to make it tray. Let's think about what's going to be the same about the day and tray.
  
  Ja: a-y?

• **Teacher** prompted students to use analogies in their writing of unknown words
  
  M: Jared, think about crayons. It's going to be like tray and day.

• **Teacher** supported students' use of known words to write unknown words

---

**Figure 13.** Sequential interplay of teacher and student behaviors when using the known.
other known words. Eventually, the students began to recognize the similarities between their names and known words with a word they were trying to write. By the spring, when the teacher was working to help students understand the use of analogies, the teacher and students, together, shared the task.

THE TRANSFER OF WRITING STRATEGIES FROM INTERACTIVE WRITING TO INDEPENDENT WRITING

Question three examined the transfer of writing strategies from the group setting to independent writing: How do students use what they have learned during interactive writing independently in their own writing? In order to examine the transfer of learning that occurred, the analysis is divided into three parts: analysis of the Observation Survey administered prior to the study to provide baseline data, an analysis of students' independent writing samples collected throughout the academic year, and an analysis of the end of the year Observation Survey.

Data from all students in the study are reported and included at some point in the discussion. However, in each of the following analytical sections, two students, Jared and Justin, were selected to best represent the patterns of learning that occurred with all students in the group. These two children were selected to examine closely for four reasons. First, on two tasks from the Observation Survey (letter identification and writing vocabulary), their scores indicated a wide range of ability. Similarities of their scores did occur. Even though scores on four of the tasks were quantitatively similar (word test, CAP, dictation, and text reading), a closer analysis revealed distinct differences in
their writing strategies. A third reason for selecting Jared and Justin was that there were limitations to discussing in detail some of the other students.

Heather had a significant number of absences (32) throughout the year, missing one lesson a week, on the average. Vanessa was placed in the Reading Recovery program in the middle of the study and therefore, received individual instruction as well as group instruction. Vince moved to another school during the middle of the second data collection period.

A final reason for selecting two students to discuss in greater detail was that to discuss each of the five students in the group would be unwieldy. For the sake of clarity and brevity, the researcher chose a more limited number of students to discuss.

Observation Survey

The Observation Survey is a standard measure for observing and comparing how a child reads and writes over a period of time. It is designed to enable the teacher to observe the child on six tasks: letter identification, concepts about print, word tests, writing, hearing and recording sounds in words (dictation), and text reading. (For a further explanation of the individual tasks, refer to Chapter III of the study.)

The Observation Survey was administered to all six students in the group prior to the study to provide baseline data. Their results are listed in Table 10. A discussion of the spring Observation Survey can be found on pages 232-244.
Table 10

Observation Survey Results—Fall (September) and Spring (May)

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Letter ID (max=54)</th>
<th>Word Test (max=20)</th>
<th>CAP (max=24)</th>
<th>Writing (max=37)</th>
<th>Dictation (max=37)</th>
<th>Text Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>S</td>
<td>F</td>
<td>S</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>Heather</td>
<td>46</td>
<td>52</td>
<td>1</td>
<td>9</td>
<td>11</td>
<td>17</td>
</tr>
<tr>
<td>Jessie</td>
<td>45</td>
<td>51</td>
<td>0</td>
<td>8</td>
<td>15</td>
<td>18</td>
</tr>
<tr>
<td>Jared</td>
<td>47</td>
<td>54</td>
<td>1</td>
<td>19</td>
<td>12</td>
<td>18</td>
</tr>
<tr>
<td>Justin</td>
<td>29</td>
<td>54</td>
<td>0</td>
<td>16</td>
<td>14</td>
<td>19</td>
</tr>
<tr>
<td>Vanessa</td>
<td>47</td>
<td>53</td>
<td>0</td>
<td>19</td>
<td>10</td>
<td>18</td>
</tr>
<tr>
<td>Vince*</td>
<td>41</td>
<td>-</td>
<td>0</td>
<td>-</td>
<td>13</td>
<td>-</td>
</tr>
</tbody>
</table>

*Vince moved and data were incomplete.

The text reading levels are roughly equivalent to the following basal reader levels: A-2 readiness, 3-8 preprimer (1,2,3), 9-12 primer, 14-16 grade one readers, 18-20 grade two readers.

In Reading Recovery, a summary of analysis of the Observation Survey is done by looking across the six tasks, rather than examining each task individually. Looking at the numerical value only of each task offers the teacher limited information about the student. Instead, the strength of the Observation Survey as an assessment tool is that the teacher can compile the data from all six tasks, to provide a more complete picture of the students' strategic knowledge of text, words, and letters.

For this study, data were compiled from all six of the Observation Survey tasks and analyzed according to the following categories: useful strategies on text, problem strategies on text, useful strategies with words, problem strategies...
with words, useful strategies with letters, and problem strategies with letters.

**Jared—Fall Observation Survey Results**

**Useful Strategies on Text**

In September, Jared controlled most directional movements in both his reading and writing. On the tasks in which writing was required, he wrote from left to right and top to bottom. He exhibited his consistency of directional movement during text reading and on the Concepts About Print task. He knew: to read the left page before the right, to read text from left to right, and where to go when there was more than one line of print.

Jared’s miscues in text reading were both semantically and syntactically correct. When provided with the story structure, he continued the same structure throughout his reading. For example, in the story, *A Bird Can Fly*, Jared read:

| Text: (A monkey can swing.) | So can I. |
| Teacher: A monkey can swing. | So can I. |
| Jared: A bird can fly. So can I. | So can I. |

(In this example, and the similar ones that follow, the parentheses indicate the parts of the text that the teacher, not the child, is responsible for reading.)

**Problem Strategies on Text**

Although Jared was able to read using the meaning and structure of the story, he did not attend to the visual details of print. He examined each picture before reading, and relied on these picture cues and the story’s structure throughout his reading. As noted by his teacher, on several occasions during
text reading Jared looked only at the pictures and ignored the actual text. In
the story, Hats, the teacher indicated on the recording sheet that Jared's eyes
were looking at the illustration while he read:

Text: (The woman) has a yellow hat.
Teacher: The woman
Jared: has all kinds of color hats.

Text: (Now) the monkey has a yellow hat.
Teacher: Now
Jared: the monkey has it now.

His story matched with what took place within each illustration, yet did not
match with the precise message of the written text.

On difficult texts (those below 90% accuracy rate), other behaviors
emerged. He appealed to the teacher for help and waited for her to tell him the
unknown part. He also was unable to maintain one-to-one correspondence on
difficult texts in which the story's pattern could not be relied upon when
reading.

Useful Strategies with Words

On the writing vocabulary and dictation tasks, Jared was able to write
ten words, predominantly in uppercase letters: JARed, doG, I, A, GO, MOM,
NO, Red, STOP, and TO. He wrote these words quickly and without hesitation,
although for each word he needed a prompt from the teacher to write. Each
time when writing, Jared began in the upper left hand corner and wrote from left
to right and from top to bottom. His words were written close together with no
evidence of spacing. On the writing vocabulary task, Jared first wrote his
name and then the word, doG. After writing the second word, he went back and
squeezed in a small period just after the d in his name, separating the d in Jared from the d in doG. When prompted to write to on the writing vocabulary, Jared was unable to do so; however, when it came up again on the dictation task, he wrote TO fluently and without hesitation.

**Problem Strategies with Words**

Although Jared scored an 8 on the dictation task, he attempted a sound analysis on only one word, s for bus. Bus was the only word he articulated slowly. For the remainder of the task, he did not attempt to say the other words slowly and recorded only words that he knew how to write: STOP, TO, and NO for on.

**Useful Strategies with Letters**

Jared identified 47 uppercase and lowercase letters by letter name. He recognized letters in contexts other than the letter identification task. On the word test, when shown the word and, Jared called out the last two letters, "n, d." When instructed to "find the little letter like this (l)," he quickly located the t. When writing, Jared wrote letters easily and fluently. On the dictation task, Jared used the letter s, to represent the final dominant consonant sound in the word bus.

**Problem Strategies with Letters**

Several of Jared's letter confusions were visually similar: a for p, b for d, n for h, i for l, and p for q. The two letters that he was unable to identify were g and typeset g. Although he demonstrated an awareness of letters, it appeared that he did not use letters as cues to detect errors in his reading.
Justin—Fall Observation Survey Results

Useful Strategies on Text

Like Jared, Justin also showed an understanding of many directional concepts in both reading and writing. On the Concepts About Print and text reading, he knew where to begin reading, the left-to-right movement, return sweep on more than one line of text, and that the left page was read before the right page. On the dictation task, Justin started writing in the upper left corner and continued in a left-to-right direction.

In text reading, when provided with the story structure, Justin was also able to continue the story’s pattern. For example, in Hats, Justin read:

Text: (The pirate) has a purple hat.
Teacher: The pirate
Justin: has a purple hat.

Text: (The sailor) has a white hat.
Teacher: The sailor
Justin: has a white hat.

Justin’s substitutions in text reading were both semantically and syntactically correct. In the story, At the Zoo, on each page, the illustrations showed a boy and girl looking at different animals in the zoo. After hearing the first page read to him, Justin continued reading the next page:

Text: The girl looks at the hippo.
Justin: The boy sees the hippopotamus.

Text: The boy looks at the hippo.
Justin: The girl sees the hippopotamus.

Text: Can you find the hippo?
Justin: Can you find the hippopotamus?
His reading was guided by the provided structure of the story, as well as the illustrations in the text.

**Problem Strategies on Text**

Even though Justin's reading was meaning driven in that his errors were semantically correct, he did not attend to the specific details of print. Instead, he relied on the picture or the provided story structure when reading, as evidenced by the reading of the final page in the story, *At the Zoo*.

**Text:** You can find the elephant.
**Justin:** The girl sees the elephant. The boy sees the elephant. Can you see the elephant?

On difficult texts, such as *The Table on the Porch*, Justin either appealed to the teacher and waited for her assistance, or omitted entire sections of the text. For example:

**Text:** Then the table broke. And they all fell down.
**Justin:** The porch broke.

Although his version matched with what was depicted in the illustration, his rendition did not match with the precise message. One-to-one correspondence was not under his control at that time.

**Useful Strategies with Words**

On the writing vocabulary task, Justin wrote one word in every detail, using both uppercase and lowercase letters: *JUSTin*. He also related some prior visual or writing experience when he attempted to write other words: *i for*
Justin articulated each word slowly on the dictation task, and was able to break up words into sounds. He differed greatly from Jared on this task. Justin recorded some dominant consonant sounds, mostly in the initial position, when attempting a sound analysis: BS for bus, C for coming, W for will, SOt for stop, Ot for to, and I for let.

Although he received a score of 0 on the word test, Justin attempted seven words. For six of the seven attempts, Justin gave a color word to represent the actual word within the task.

**Problem Strategies with Words**

On the Concepts About Print, Justin did not recognize line, word, or letter rearrangement, and was unable to locate specific words in text. In the text reading of Where's Spot?, Justin was unable to pointed and read no, no, no. He did not attend to the visual details of print when reading.

Unlike his attempts on the dictation task, Justin was not a risk-taker on the writing vocabulary task. When provided with several prompts, Justin would not write down any word unless he was certain how to "spell" it.

**Useful Strategies with Letters**

Justin attempted 35 out of 54 letters on the letter identification task. He correctly identified 29 uppercase and lowercase letters using a combination of letter names (21), letter sounds (1), and word associations (8). Four of the letters that he identified with a word beginning with a particular letter (H, E, e, G), he associated with names of family members: Hunter, Earl, and Grimes (his last name). The other three word associations were with animal names: r for rabbit, Z for zebra, and C for cat. Justin showed some familiarity with two
additional letters. Although he was unable to identify them, Justin stated that $u$ and $n$ were letters in his name.

On two of the other tasks, word test and Concepts About Print, Justin demonstrated further knowledge of letters. When he came to the word, *little*, on the word test, Justin stopped, looked at the word, and began to spell *little*, letter by letter, "l-i-t-t-l-e." When asked to identify one and two letters on the Concepts About Print, Justin responded quickly and accurately.

**Problem Strategies with Letters**

Most of Justin's seven letter confusions were visually similar: $p$ for $b$, $p$ for $q$, $p$ for $d$, $j$ for $t$, and $i$ for $l$. There were 19 letters that he did not know. In his reading, Justin did not use his knowledge of letters to identify precise details of a word.

**Students' Independent Writing Samples**

Data sources included independent journal entries, personal dictionaries, and one independent story. The major source of data was the journal for each child, representing entries across the academic year. Journal entries took place daily, immediately following whole-group storytime in the early morning. Children were invited to write about topics of their choice with no specific suggestions by the teacher. No time designations were set for writing in journals; children were given as much time as needed to write their message for the day.

Personal dictionaries were first introduced by the teacher in April. Rather than entries by letters, there were entries by clusters of letters (such as, *ing, ar, sh, ed*). The process was initially modeled by the teacher using the *ing*
cluster. Then students added the *ing* to their personal dictionaries. As they found words with that cluster of letters, either in their writing or reading, students added them to their dictionaries. Additional clusters were added by both the teacher and the students, sometimes in group interaction or during individual writing conferences. The children entered words to the dictionaries as they discovered new samples representing the cluster of letters. Each student's dictionary varied in the cluster of letters included and the examples entered.

A final data source was a personal story prepared by one child. The child created an alternative text to a book shared by the teacher for his group.

Using journal entries for all five children, analyses were based on evidence of behaviors across time. Specific behaviors that corresponded with interactive writing instructional emphases were examined across emerging categories. Findings are presented within these categories: the child's message, hearing and recording sounds in words, chunks or clusters of letters, and using what they know.

Data were analyzed within the framework of interactive writing as described in question two. Independent writing samples from daily journals were interpreted according to corresponding instructional practices within the interactive writing component of the literacy lesson. Events occurring during interactive writing in the small group provided the basis for analysis of journal entries following instructional attention. Therefore, the assumption is made that the subjects' independent writing reflects transfer of group instruction and interaction.
The Child's Message

Journal entries were the major source of data to examine the messages written by the children. While children were taking on writing independently in their journals, during the small group interactive writing component, the teacher was helping students determine what message they wanted to record for a group newsletter. The newsletter related information and events about the students in the small group.

Early writing samples revealed a common behavior across all students in the group. All children selected a starting story structure and maintained that same story structure across a period of time. Each child's structure differed in that it was unique to the individual, and the length in which he or she continued it, yet all students' early writings were organized around these established patterns. Table 11 represents structure patterns followed by each of the children for the initial period of time early in their school year.
Table 11

Story Patterns of Children's Early Journal Samples

<table>
<thead>
<tr>
<th>Student (Time)</th>
<th>Story Pattern</th>
<th>Type of Writing</th>
</tr>
</thead>
</table>
| Jared (Aug./Sept.) | This is a castle.  
This is a ferris wheel.  
This is a spider web.  
This is a dog. | labeling illustrations |
| Justin (Aug./Sept.) | I am in a spaceship.  
I am in a house that blasted off.  
I am in a haunted house.  
I am in a car. | labeling illustrations related to self |
| Jessie (Aug./Sept.) | (scribble writing)  
Mom I Jessie Mom Jessie  
I  
Mom Dad  
Mom Jessie is it | labeling illustrations—using known words |
| Heather (Aug./Sept.) | A house is a house for me.  
A house is a house for people.  
A lake is a house for water.  
The three little pigs' house. | writing from stories read aloud |
| Vanessa (Aug./Sept.) | This is a kid's house.  
This is a house.  
This is my house in my tree.  
This is my treehouse. | labeling illustrations |

To represent the behaviors of children across time as they constructed written messages, Jared's work was chosen. The behaviors of the other four subjects closely paralleled those demonstrated by Jared.

Even though a particular pattern or structure existed early and was repeated over a period of time, variations to the established story structure occurred gradually. Initially, the variation was small. For example, see Figure 14.
Figure 14. Variation of story structure. (This is Batman. This is Robin.)

The only change from Jared's beginning story structure was the omission of the word a. Prior to the October 15 example, Jared had maintained the same structure for every journal writing, beginning each writing with This is a. In the October 15 sample (Figure 14), he slightly altered the structure and extended his story, writing two sentences across a 2-page spread and repeating the structure of This is... on both pages. The manner in which he organized the writing and illustrating made it appear as if he had written two separate entries on the same day. He placed one complete thought and illustration on the left page (This is Batman) and a second thought and illustration on the opposite page (This is Robin).

In November, Jared's story structure changed slightly again. Instead of repeating the pattern in two separate sentences, Jared connected two ideas and extending his sentence with the conjunctive and. (See Figure 15.)
Throughout the month of November, Jared continued to use the conjunction *and* to extend his story ideas. He alternated back and forth between his original pattern of *This is a... and This is...* when starting each writing. The few November samples in Table 12 depict the slight variation between structures, along with the addition of the conjunction *and*.

Up through December 15, all of Jared's stories began in a similar structure. On December 15, Jared broke completely free from his story structure and wrote about the snow that had fallen while the students were in school. (See Table 13.)

On December 15, the story structure was not only altered, the content changed as well. All of Jared's other writings were a label explaining an illustration. Therefore, his writings generally came about as a result of the drawing. On December 15, however, Jared wrote about a personal
Table 12
Selected Samples of Jared's November Journal Writing

<table>
<thead>
<tr>
<th>Journal Sample</th>
<th>Standard Spelling</th>
</tr>
</thead>
<tbody>
<tr>
<td>THIS is MY HS AND IT is IN TexAs.</td>
<td>This is my house and it is in Texas.</td>
</tr>
<tr>
<td>THIS is A DoG AND IT is S.</td>
<td>This is a dog and it is Spot.</td>
</tr>
<tr>
<td>THIS is A DoG AND IT is PATCH.</td>
<td>This is a dog and it is Patch.</td>
</tr>
<tr>
<td>THIS is PATCH AND IT is LookiING up IN THE sky.</td>
<td>This is Patch and it is looking up in the sky.</td>
</tr>
<tr>
<td>THIS is My HS AND weR EiT TuRkey.</td>
<td>This is my house and we're eating turkey.</td>
</tr>
<tr>
<td>THIS is my MoMs AND JAReD Frosty THE snoMAN.</td>
<td>This is my mom's and Jared's Frosty the Snowman.</td>
</tr>
<tr>
<td>THIS is Me AND IM IN FNT FOR My HS.</td>
<td>This is me and I'm in front of my house.</td>
</tr>
</tbody>
</table>

Table 13
Jared's December 15 Journal Writing Sample

<table>
<thead>
<tr>
<th>Journal Writing Sample</th>
<th>Standard English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec. 15 IT is Snowy TodaY Dec 15. I like IT. IT is STuK oN The ROOF.</td>
<td>December 15. It is snowy today, December 15. I like it. It is stuck on the roof.</td>
</tr>
</tbody>
</table>

experience and, as noted by the teacher, his writing took place before his illustrating.

The December 15 entry appeared significant because after that entry, Jared seldom returned to the pattern of This is when writing in his journal. Only one other entry in December contained the structure: THIS is My NAM JAReD
Lee GUDiTIS (This is my name: Jared Lee Guditis.) From that point on, Jared wrote about personal experiences and each writing began differently. Occasionally, his original pattern appeared in his writing, but was embedded within the text, as Figure 16 exemplifies.

![Illustration](image)

**Figure 16.** Original story pattern embedded within text. (We are bringing our teddy bears to school. This is my teddy bear.)

Even though Jared labeled his illustration, this differed from his earlier writings, in that the writing was more than a label. First, he had written about an event that he and his classmates were going to experience. Next he wrote about his own teddy bear in relation to the event. Then, Jared used the illustration rather than words to describe what his teddy bear looked like.

An additional shift in Jared's writing occurred around February. By this time, Jared's sentence structure had become quite complex, using multiple sentences to extend his topic. For example, on February 11 he wrote: *I HAVE A Ne DoG. IT is FuN to PAly weTH AND IT is FuN to PeT. IT FeeLs like A RABIT WeN U PeT IT. his NAME is DAOVeN.* (I have a new dog. It is fun to
play with and it is fun to pet. It feels like a rabbit when you pet it. His name is Devin.)

Jared's words described that he had a new dog, what he liked to do with his pet, what the dog felt like, and what he named it. Rather than illustrating the story, Jared's description was done with words alone in this sample.

Shortly after the small group had completed an 8-week unit in which they retold the story, *The Three Bears*, Jared's writing changed again. Over a period of three days, he wrote about what he got for Christmas. Instead of using the conjunctive *and* to connect two ideas to make one sentence, *and* was incorporated in the text to extend his idea and to begin a new sentence on a new page. (See Table 14.)

**Table 14**

**Jared's February Journal Writing Sample**

<table>
<thead>
<tr>
<th>Page</th>
<th>Journal Writing</th>
<th>Standard English</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I got a cos For Crismes.</td>
<td>I got a cross for Christmas.</td>
</tr>
<tr>
<td>2</td>
<td>And I got a eao.</td>
<td>And I got a eagle.</td>
</tr>
<tr>
<td>3</td>
<td>And I got a DaFn. I like my DaFn.</td>
<td>And I got a dolphin. I like my dolphin.</td>
</tr>
<tr>
<td>4</td>
<td>And I got A Fas.</td>
<td>And I got a fish.</td>
</tr>
<tr>
<td>5</td>
<td>And A Toe MaD.SicL</td>
<td>And a toy motorcycle.</td>
</tr>
</tbody>
</table>

His writing took on the characteristics of a predictable book because each page began with the repeated pattern, *And I got a*.... Also, similar to the
format of a predictable book, Jared's new thought and repeated pattern began on a new page.

In addition to Jared's journal writing samples, an alternative story based on a book the teacher had read to the group was analyzed. After the story had been read aloud to the group, during interactive writing, they wrote a list of places the character had traveled around the school. Then, from their list, the group made a storymap charting out the character's path. Using the map, the students retold the story of the mouse's adventures.

For independent writing, the teacher asked the small group to create their own story about their class pet getting out of its cage. Jared carried over the organization of the group's writing into his independent writing. Before writing any of the story, Jared first wrote the list of places Herman, the hermit crab, would go in his story. (See Figure 17.)

Figure 17. Jared's independent writing parallels what occurred in interactive writing.
After listing the classrooms, Jared then started his story. (See Figure 18.)

Figure 18. Jared's first page of alternative text.

Table 15 on message construction shows a comparison and summation of what occurred during the small group interactive writing context and Jared's independent writing samples over time.
### Table 15

**Constructing the Message**

<table>
<thead>
<tr>
<th>Period in Time of Data Collection</th>
<th>Group Instructional Writing</th>
<th>Jared's Independent Writing</th>
</tr>
</thead>
</table>
| Round 1–Fall                     | Newsletter–consistent format  
                                    | Today is...                  |
|                                 | Story–repeated pattern  
                                    | Moo, moo went the cow.  
                                    | Baa, baa went the sheep. |
| Round 2–Winter                  | Retelling–*The Three Bears*  
                                    | Continued story over several weeks  
                                    | Once upon a time, there were three bears. One was the wee bear. One was the middle size bear. And one was the great big papa bear. |
| Round 3–Spring                  | Planning for storymap list  
                                    | oral retelling from storymap |
|                                 |                             |                             |

The messages that Jared constructed independently were similar to the messages the group constructed during interactive writing. In the fall, when the group's writing consisted of a repeated pattern and format, Jared also wrote a repeated structure, *This is a*. Later in the year, when the group was writing a retelling of the story, *The Three Bears*, their text was more complex in sentence structure, language structure, and length. Jared's stories also became more complex. He extended his ideas with the use of the conjunctive, *and*, and then later wrote multiple sentences on an individual topic. Jared's final independent
writing sample very closely resembled that of the group's interactive writing. Just as the group first listed the places the character traveled around the school, Jared wrote the list of places his character would travel in his story. The list for Jared acted as a mechanism for planning his story, which was the purpose of the group's created list. Then, after the group had done an oral retelling of their story, using the storymap to talk from, Jared's writing incorporated much of the same language that the actual book used.

**Phonological Awareness**

Throughout the academic year, the teacher attended to hearing and recording sounds in words in writing through articulating words slowly, providing boxes for frameworks, and attending to letter clusters. The journal writing samples for all five children were examined across time for evidence of hearing and recording sounds in words. Justin's journal entries were chosen to represent the patterns of behaviors across all students.

Although results from the Fall Observation Survey indicated an ability to say words slowly and record dominant consonant sounds, for the first 6-weeks of school (August 27-October 8), Justin was reluctant to write in his journal unless Marcia worked with him. Each day, he drew a picture and then met with the teacher to write his text. Most of his contributions to the text were his known words. Occasionally, he recorded a single letter to represent a dominant consonant sound. See Figure 19 for example of Justin's journal entries.
Once Justin was willing to write without the teacher present, he used a combination of known words and recorded dominant consonant sounds to represent his message, as his first independent writing sample (October 8) demonstrates: \textit{w/w to wfw} (I went to Wet and Wild.)

In addition to providing a consonant framework consisting of beginning and ending dominant consonant sounds, the next transition in Justin's writing was when he began to incorporate the use of some vowels. Along with an analysis of sounds in words, Justin continued to use words that he knew in every detail when they occurred in his story. For example: \textit{lgt to semib abksn} (I got to see my baby cousin.)

Shortly after the teacher had introduced boxing to the group, Justin developed his own framework for the sound boxes in his independent writing. Instead of using boxes for the sounds in words, Justin started using lines. The inclusion of lines indicated Justin's awareness that one letter did not constitute
a word, most of the time, and that something further was needed. Justin, however, was unable to supply the other letters.

There was a pattern to the way in which lines were used in Justin's writing. Initially, the line represented more than one sound and more than one letter. In Figure 20, the line represented the beginning and middle sounds of the word that Justin was unable to record. He heard and recorded the dominant consonant t at the end of the word.

Figure 20. Line represents missing letters. (I got some Gacky. It is mushy.)

Later, Justin used one line to take the place of one sound, much like the sound boxes represented during interactive writing in Figure 21. The following writing sample indicated that the line represented the r in braces.

Figure 21. Line represents one sound. (I'm going to get braces.)
Later in November, a third transition in the use of lines occurred where each line represented a single letter (such as, wie— for with).

By the middle of December, Justin's use of lines to represent sounds or letters completely disappeared. By then, most of the dominant consonant sounds, long vowels, and some short vowels were included in his writing as seen in Figure 22.

```
Dec. 18
Toda I go t o pat Calie.
```

![Figure 22](image)

Figure 22. Writing represents most sounds in words—December 18. (Today I got to pet Calie.)

After the Christmas holiday, Justin's writing gradually began to resemble standard spelling. Most, if not all, of the sounds in the words were represented with a letter or letter clusters. See Table 16 for the sequence over time.
Table 16

Transition of Writing Over Time

<table>
<thead>
<tr>
<th>Month</th>
<th>Justin's Writing</th>
<th>Actual Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>I am going to git mi tehastif.</td>
<td>I am going to get my teeth fixed.</td>
</tr>
<tr>
<td>February</td>
<td>I owas haf sothing on mi mind to tok obot lik foxes orre latdidi to dinosors the kind ov dinosor that es dinosor egs.</td>
<td>I always have something on my mind to talk about. Like foxes are related to dinosaurs. The kind of dinosaur that eats dinosaur eggs.</td>
</tr>
<tr>
<td>March</td>
<td>Last nit I kap gitin hurt it ol strtid win I Got in the pol I kot mi fot on somthing thn I gopt off the hl dif I hrt mi porlfit.</td>
<td>Last night I kept getting hurt. It all started when I got in the pool. I caught my foot on something. Then, I jumped off the high dive. I hurt my poor little foot.</td>
</tr>
<tr>
<td>April</td>
<td>On eStor my babe kosn is kuming to my haws for ester. My ant and ukul afta tha we wil go to my guranmols for mor ags the name of my ant is laor the name of my ukul is stef anb the name of my babe kosn is stafone</td>
<td>On Easter, my baby cousin is coming to my house for Easter. My aunt and uncle after that we will go to my grandma's for more eggs. The name of my aunt is Laura. The name of my uncle is Steve and the name of my baby cousin is Stefanie.</td>
</tr>
</tbody>
</table>

At the end of April and extending through May, a final shift occurred in Justin's analysis of sounds in words. Justin began to overgeneralize in his writing. On April 29, Justin wrote about his tee ball game. Within that writing, he incorporate ee and ll whenever the long e or l sound was needed as seen in Table 17.
### Justin's Overgeneralization—Doubling Letters

<table>
<thead>
<tr>
<th>Justin's Writing</th>
<th>Actual writing</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Tuesday I had a teeball game. We almost lost, but we won. One of the other team's batters almost got out. We have won all our games.</td>
<td></td>
</tr>
<tr>
<td>One of the other teams</td>
<td></td>
</tr>
<tr>
<td>On Tuesday, I had a teeball game. We almost lost, but we won. One of the other team's batters almost got out. We have won all our games.</td>
<td></td>
</tr>
<tr>
<td>I am going to have my birthday in my clubhouse. It is going to be a slumber party. It will be fun.</td>
<td></td>
</tr>
<tr>
<td>I am going to have my birthday in my clubhouse. It is going to be a slumber party. It will be fun.</td>
<td></td>
</tr>
</tbody>
</table>

Table 18 parallels what took place during the interactive writing instruction with Justin's development of independent writing.
Table 18

A Parallel Analysis of Group Instruction and Justin’s Independent Writing Development

<table>
<thead>
<tr>
<th>Collection Period</th>
<th>Interactive Writing Instruction</th>
<th>Independent Writing Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>• articulating words slowly</td>
<td>• dictating stories to teacher</td>
</tr>
<tr>
<td></td>
<td>• hearing and recording some dominant consonant sounds in words</td>
<td>• articulating words slowly while sharing the writing with the teacher</td>
</tr>
<tr>
<td></td>
<td>• representing most words with a consonant framework</td>
<td>• hearing and recording some dominant consonant sounds in words</td>
</tr>
<tr>
<td></td>
<td>• representing most if not all sounds in words</td>
<td>• representing most words with beginning and ending dominant consonants</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• including some vowels in sound analysis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• incorporating known words into his writing</td>
</tr>
<tr>
<td>Winter</td>
<td>• boxing words to analyze sounds (all sounds represented)</td>
<td>• developing own framework for boxes—using lines to represent the sounds in words</td>
</tr>
<tr>
<td></td>
<td>• working with letter clusters</td>
<td>• writing more closely resembles standard English (all sounds in words represented)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• incorporating letter clusters introduced during group into own writing</td>
</tr>
<tr>
<td>Spring</td>
<td>• recording sounds in sequence within text</td>
<td>• Continuing to transition in writing toward more conventional spelling</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Overgeneralizing some spelling principles</td>
</tr>
</tbody>
</table>
Clusters of Letters

Although the use of clusters of letters or chunks of meaningful language may have resulted from experiences in hearing and recording sounds in words, special attention is given to this concept because of teacher attention to their usefulness. To describe the transfer of small group attention to clusters to the independent use within journal writing, again, Justin's work was analyzed in detail.

Clusters help to organize perception as soon as they become part of the reading or writing vocabulary of the child (Clay, 1991; Gibson, 1965). "The child who is learning to differentiate letters from one another, and to associate letter sounds, will, at the same time, be using larger building blocks—clusters of letters or sounds" (Clay, 1991, p. 273). Single letter analysis is slow, requires more learning, and allows for more error. "The larger the more pronounceable units a child can discover and use, the less learning effort will be required" (Clay, 1991, p. 290).

Justin's use of letter clusters in his independent writing very closely paralleled that of the introduction of clusters in the interactive writing context. The letter clusters that Marcia addressed during interactive writing instruction, soon afterwards appeared in Justin's independent writing samples. In most instances, the cluster first appeared with one of Justin's known words. Once Justin associated the cluster with a known word, each additional time the letter cluster was needed, he used it correctly in his writing. Although the writing of the word might not have been in standard spelling, his use of the cluster(s) corresponded to the correct sound analysis for the word. (See Table 19.)
<table>
<thead>
<tr>
<th>Letter Cluster (When Introduced by Teacher)</th>
<th>When Used by Child</th>
<th>Child's Use of the Cluster</th>
<th>Letter Cluster (When Introduced by Teacher)</th>
<th>When Used by Child</th>
<th>Child's Use of the Cluster</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dec. 15</td>
<td>snoring</td>
<td></td>
<td>Jan. 13</td>
<td>thee (teeth)</td>
</tr>
<tr>
<td></td>
<td>Feb. 12</td>
<td>swimming (sledding)</td>
<td></td>
<td>Jan. 14</td>
<td>that</td>
</tr>
<tr>
<td></td>
<td>Feb. 25</td>
<td>Gitting (getting)</td>
<td></td>
<td>Feb. 2</td>
<td>thoskol (thousand)</td>
</tr>
<tr>
<td></td>
<td>Mar. 2</td>
<td>hurring (hurting)</td>
<td></td>
<td>Feb. 10</td>
<td>with (weather)</td>
</tr>
<tr>
<td></td>
<td>Mar. 23</td>
<td>saying (saying)</td>
<td></td>
<td>Feb. 11</td>
<td>toth (tooth)</td>
</tr>
<tr>
<td></td>
<td>Apr. 5</td>
<td>skating ringk (rink)</td>
<td></td>
<td>Feb. 19</td>
<td>th (they)</td>
</tr>
<tr>
<td></td>
<td>Apr. 12</td>
<td>kaping (camping)</td>
<td></td>
<td>Mar. 2</td>
<td>th (teeth)</td>
</tr>
<tr>
<td></td>
<td>May 11</td>
<td>chaising</td>
<td></td>
<td>Mar. 5</td>
<td>something</td>
</tr>
<tr>
<td></td>
<td>May 13</td>
<td>storing</td>
<td></td>
<td>Mar. 9</td>
<td>thar (there)</td>
</tr>
<tr>
<td></td>
<td>May 20</td>
<td>fishing</td>
<td></td>
<td>Mar. 10</td>
<td>nothing (anything)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>dringk (drink)</td>
<td></td>
<td>Mar. 23</td>
<td>thawsnd (thousand)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Apr. 19</td>
<td>thre (three)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>May 2</td>
<td>this</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>May 10</td>
<td>granfothr (grandfather)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>May 20</td>
<td>teeth</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>with</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>thm (them)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>sh (Nov. 1992)</td>
<td>Dec. 3</td>
<td>fish</td>
<td>s, es (Dec. 1992)</td>
<td>Jan. 6</td>
<td>bear(s)</td>
</tr>
<tr>
<td></td>
<td>Feb. 9</td>
<td>vakash (vacation)</td>
<td></td>
<td>Feb. 11</td>
<td>fox(es)</td>
</tr>
<tr>
<td></td>
<td>Feb. 12</td>
<td>shokwav (shockwave)</td>
<td></td>
<td>Feb. 12</td>
<td>eg(s) (eggs)</td>
</tr>
<tr>
<td></td>
<td>Mar. 24</td>
<td>she</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Apr. 14</td>
<td>wish</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>May 5</td>
<td>borosh (brush)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>May 24</td>
<td>rosh (rushed)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jan. 11</td>
<td>stichis (stitches)</td>
<td></td>
<td>Jan. 28</td>
<td>siter (sister)</td>
</tr>
<tr>
<td></td>
<td>Feb. 17</td>
<td>chre (cherry)</td>
<td></td>
<td></td>
<td>ester (Easter)</td>
</tr>
<tr>
<td></td>
<td>Feb. 19</td>
<td>moch (much)</td>
<td></td>
<td></td>
<td>KruGoer (Kruger)</td>
</tr>
<tr>
<td></td>
<td>Mar. 3</td>
<td>techr (teacher)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mar. 10</td>
<td>chas (chase)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mar. 11</td>
<td>pichrs (pictures)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mar. 23</td>
<td>torchcr (torture)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mar. 25</td>
<td>cach (catch)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>May 5</td>
<td>swicht (switched)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>May 12</td>
<td>chaising</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>y (Dec. 1992)</td>
<td>Dec. 3</td>
<td>RoDy (ready)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dec. 15</td>
<td>snowy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jan. 25</td>
<td>FreDDy</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Jared's personal dictionary was analyzed to determine what kinds of words students included for their entries for particular clusters. Jared entered names of his classmates for many of the clusters. He even created a special category of names for his personal dictionary. (See Table 20.)

Table 20

Samples From Jared's Letter Cluster Dictionary

<table>
<thead>
<tr>
<th>Names</th>
<th>gr</th>
<th>ar</th>
<th>st</th>
<th>sh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gina</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brice</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Josh</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kristy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vince</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amanda G.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Justin</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jared</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tzong-Tzong</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amanda Mc.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vanessa</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nicholas</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tillie</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jessica</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heather</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>green</td>
<td>start</td>
<td>Kristy</td>
<td>she</td>
</tr>
<tr>
<td></td>
<td>grurr</td>
<td>car</td>
<td>Justin</td>
<td>Josh</td>
</tr>
<tr>
<td></td>
<td>Grimes</td>
<td></td>
<td>August</td>
<td></td>
</tr>
<tr>
<td></td>
<td>grill</td>
<td>Are</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Using Known Words

This section examines how students used their known words in writing in their independent writing. One pattern of behavior, found across all students' independent writing samples, was not addressed in the other categories discussed: using the known in writing to organize one-to-one correspondence. The rate at which the students' acquired this understanding varied, but the manner in which they went about organizing this behavior was similar across
all students. Each student's writing served as an opportunity to establish an understanding of one-to-one correspondence and the concept of a word.

Most of Justin's writing samples in the early fall demonstrated the influence of oral language on his written language. For example, in his story, I am going, Justin wrote the letters as one word, leaving no space between the letters that represented the sounds he heard (See Figure 23.)
This pattern continued throughout all of Justin's writings in August and September. (See Figure 24.)

Later, in October, as Justin acquired some known words in his writing vocabulary, there was a noticeable separation in the text where Justin's known words were written. For example, in the October 5 journal entry, Justin knew how to write the words to and the, and it was with those two words where distinct spaces occurred within his text. (See Figure 25.)
Two days later in his journal, Justin again used known words to sort out the concept of a word, as well as to establish one-to-one correspondence. (See Figure 26.)

Figure 25. Two known words separated by distinct spaces. (I am going to the store.)

Figure 26. Use of known words to sort out concept of word. (I am going to carve a pumpkin.)
By the end of October, Justin's oral language no longer dominated his writing. His written language served as the organizer of his early behavior of letter word concepts, and one-to-one correspondence. Justin correctly used spaces to separate the individual words in his writing. (See Figure 27.)

\[ \text{I see a beanstalk.} \]

Figure 27. Oral language no longer dominates writing. (I see a beanstalk.)

He maintained this control of the use of spaces throughout the remainder of the year, only occasionally running into difficulty with multi-syllable words.

Table 21 is a listing of the acquirement of known words throughout an academic year, found in both Jared's and Justin's journal writing samples.
## Table 21

**Writing Vocabulary of Jared and Justin Over an Academic Year**

<table>
<thead>
<tr>
<th>Month</th>
<th>Jared</th>
<th>Justin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug./Sept.</td>
<td>I doG</td>
<td>I a</td>
</tr>
<tr>
<td></td>
<td>Go MoM Red</td>
<td></td>
</tr>
<tr>
<td></td>
<td>STOP</td>
<td></td>
</tr>
<tr>
<td>Oct./Nov.</td>
<td>is FoR</td>
<td>to It</td>
</tr>
<tr>
<td></td>
<td>It oF</td>
<td>go is</td>
</tr>
<tr>
<td></td>
<td>me my</td>
<td>going in</td>
</tr>
<tr>
<td></td>
<td>THE AND</td>
<td>the FOR</td>
</tr>
<tr>
<td></td>
<td>IN He</td>
<td>mom on</td>
</tr>
<tr>
<td></td>
<td>UP We</td>
<td>Jesus Josh</td>
</tr>
<tr>
<td></td>
<td>LOOK</td>
<td></td>
</tr>
<tr>
<td>Dec.</td>
<td>ARE on</td>
<td>fish so</td>
</tr>
<tr>
<td></td>
<td>This MoNDAY</td>
<td>and we</td>
</tr>
<tr>
<td></td>
<td>like Today</td>
<td>like me</td>
</tr>
<tr>
<td></td>
<td>Lee GuDiTs</td>
<td>on be</td>
</tr>
<tr>
<td></td>
<td></td>
<td>and in</td>
</tr>
<tr>
<td>Jan./Feb.</td>
<td>GOT went</td>
<td>not no</td>
</tr>
<tr>
<td></td>
<td>THom FuN</td>
<td>day so</td>
</tr>
<tr>
<td></td>
<td>Bear(s) one</td>
<td>GoT on</td>
</tr>
<tr>
<td></td>
<td>school GoInG</td>
<td>Sunday kind</td>
</tr>
<tr>
<td></td>
<td>will win</td>
<td>Last that</td>
</tr>
<tr>
<td></td>
<td>pet Arm</td>
<td>bad my</td>
</tr>
<tr>
<td></td>
<td>She cAr(s)</td>
<td>away six</td>
</tr>
<tr>
<td></td>
<td>BAD CAT(s)</td>
<td>clay off</td>
</tr>
<tr>
<td></td>
<td>DAD ToY(s)</td>
<td>love of</td>
</tr>
<tr>
<td></td>
<td>was likes</td>
<td>I'm</td>
</tr>
<tr>
<td></td>
<td>six</td>
<td></td>
</tr>
<tr>
<td>March/April/May</td>
<td>THey Book</td>
<td>off big</td>
</tr>
<tr>
<td></td>
<td>HaD white</td>
<td>thing soon</td>
</tr>
<tr>
<td></td>
<td>HanD horse(s)</td>
<td>got be</td>
</tr>
<tr>
<td></td>
<td>pig Rex</td>
<td>she up</td>
</tr>
<tr>
<td></td>
<td>way Miss</td>
<td>of that</td>
</tr>
<tr>
<td></td>
<td>Begin Miss</td>
<td>splash math</td>
</tr>
<tr>
<td></td>
<td>Now</td>
<td>will won</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I am</td>
</tr>
<tr>
<td></td>
<td></td>
<td>she good</td>
</tr>
<tr>
<td></td>
<td></td>
<td>loves tee</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If blue jays</td>
</tr>
<tr>
<td></td>
<td></td>
<td>most miss</td>
</tr>
<tr>
<td></td>
<td></td>
<td>win</td>
</tr>
</tbody>
</table>
Jared—Spring Observation Survey Results

Useful Strategies on Text

In the spring testing, Jared demonstrated evidence of control of all directional movements in reading and writing. He knew where to begin, to read and write from left to right, the return sweep, and the top-to-bottom directional movement. (Refer to Table 10, page 199 for table of fall and spring scores.)

Jared’s command of book language was frequently evident in the substitutions he made while reading. For example, while reading one story, he substituted *cried* for *called*.

Throughout the text reading, Jared read fluently, reading in phrases and with expression. As he progressed in each story, even at the more difficult levels, his reading became even more fluent and expressive. Many times he stopped and commented or giggled about the predicament the story characters had gotten themselves into. For example, when reading *The Hippo in the Hole*, he looked at the picture of Harry, the hippo, sticking his head over the edge of a large ditch and said, "I'll bet he falls in." Then when he read further that Harry, did indeed fall into the ditch, Jared giggled.

In addition to using meaning and structure to guide his reading, Jared also used visual sources of information. Many letters in the error matched with letters in the actual word in the text. For example, he read *will* for *well* or *your* for *you*. Jared consistently monitored his reading and was aware if he was right or wrong. At the point of error, he tried several ways to correct himself. Often when he came to a difficult part, he stopped, started the initial part of the unknown word, and then attempted the word. He then searched for more visual information, running his finger under the word and saying the word slowly, to confirm his attempt or to determine if a correction was needed. For example,
after first reading carried for carrying, Jared stopped, ran his finger under the word, and immediately corrected his attempt to carrying.

It also appeared that Jared consistently cross-checked one source of information against another when reading. In *The Mouse and The Elephant*, he first read after of and then immediately went back, corrected himself and read afraid of and then continued reading the story. His first attempt was visually similar, but not syntactically correct. Most of his self corrections occurred immediately following the error. Once the error was corrected, he continued reading. Sometimes, he reread to correct his error, going back to the phrase in which the error occurred, and then continuing with the story.

There were two instances where it appeared that Jared figured out an unknown word by analogy. In the story, *A Man and His Dog*, Jared first read get for set and then went back and self-corrected his error. On another book, *George the Porcupine*, he read white for while and again, immediately corrected his error.

Unlike his behavior in the fall testing, only after making several attempts at an unknown word did Marcia have to tell him the word. For example, when he came to the word thought in the text, Jared stopped, examined the word, started the first part of the word, th, went back and reread the sentence, and attempted the initial part of the word again. He stopped a second time and checked the picture. After a brief period of waiting, the teacher then supplied the unknown word and Jared continued reading.

**Useful Strategies with Words**

Jared wrote 55 words in the writing vocabulary and dictation tasks. On the writing vocabulary, he needed very few prompts in order to think of words
to write. One prompt led to his writing several words. For example, when prompted to write his name, Jared wrote: *Jared, GuDitis, THe, I, is, it, in, on, Stop, Go, Going.*

He demonstrated evidence of flexibility in generating words. Some words he generated by rime: *me, we, He, sHe or may, Day, play,* and *today.* Others had common meanings: *Mom, Dad, yes, no, love,* and *like.* Still other words demonstrated control of word endings: *look, looking, looked,* and *Dog, Dogs.*

Even though some of his written attempts were incorrect, Jared used some prior visual knowledge or writing experience in order to write the word. For example, he wrote *cam* for *came.* Jared not only was able to write a core of words, he also correctly read in isolation19 words on the word test. There was only one word that he did not identify correctly. For this word, he read *know* for *now.*

Another strength Jared exhibited was during the dictation task. After Jared had been told the story in its entirety, he was able to hold the story in his head while he wrote. He did not need a prompt in order to write what word came next in the sequence of the story, until he came to the second sentence. He wrote the entire first sentence independently. For the second sentence, he needed to be given only the first word, *He,* and he was able to write the rest without further assistance.

Jared heard the individual words in the sentence and articulated each word slowly, breaking up the words into individual phonemes. He used corresponding letters to represent all of the sounds that he heard in each word, for example, *vare* for *very.*
On the Concepts About Print task, Jared attended to visual features of words, recognizing the line rearrangement. As mentioned previously, in text reading, he attended closely to the visual details of print.

**Problem Strategies With Words**

On the Concepts About Print task, Jared did not notice the word and letter rearrangement within the text.

**Useful Strategies With Letters**

Jared identified 54 uppercase and lowercase letters by letter names, and did so easily and without hesitation. He wrote letters easily, using a combination of uppercase and lowercase letters. Generally an uppercase letter was written when in the initial position of a word. Letters were formed correctly; he made them from top to bottom and moved from left to right.

In reading, Jared consistently detected errors by a mismatch of visual information between what he said and what was written in the text.

**Problem Strategies With Letters**

Jared still used a combination of capital and lowercase letters when writing. Capitals most often occurred at the beginning of a word, as in *Love* or *Ball*. He wrote generally with capitals when writing the letters *B* and *D*, as in *DaD* and *Book*. Only in one instance did Jared write a lower case *d* in the initial position. This occurred when he wrote the word *dig*.
Justin—Spring Observation Survey Results

Useful Strategies on Text

Justin controlled directional movement during the spring testing. In text reading and in writing, he knew where to begin, the left-to-right movement, and the return sweep on more than one line of print.

Unlike his fall testing, Justin attended to specific details of print and read for the precise message. He consistently monitored his reading, knowing whether or not he was correct. No longer did he appeal to the teacher for help when he came to a point of difficulty. Instead, he used multiple means of solving problems in text. Often, he searched for further visual information in words. For example, in the story *George the Porcupine*, the text was *He saw*. Justin first read *He was*. He then changed *saw* to *sow*, went back to the beginning, reread, and self-corrected the error: *He saw*.

In addition to searching for visual information, Justin cross-checked one source of information against another source. For example:

Text:  ...and he petted them.
Justin:  ...and he put, putted, petted them.

His first two attempts were visually similar, but then his self-correction was probably made due to his awareness of the meaning of the story about a porcupine that wanted to be petted by its owner.

Most of Justin's self corrections occurred immediately after the error, without rereading any of the text. After the self-correction, he continued reading. On a few occasions, Justin reread parts of the story in order to correct an error, or to search for further meaning. When he reread, he usually returned to the beginning of a phrase and then continued reading.
In many of the texts that Justin read, it appeared that he was able to get to new words by analogy. For *came*, he first read *come* and then corrected himself. In the same story, he read *but* for *bet* and again corrected the error. In a third example, Justin made two attempts at the unknown word before correctly reading: *fall, fault, felt* for *felt*.

**Problem Strategies on Text**

On difficult texts, those below 90% accuracy, Justin relied mainly on visual and structural sources of information, and disregarded the meaning of the story. For example, in the story, *A Man and His Dog*, Justin attended so closely to the details of print that he occasionally created nonsense words: *fend* for *find*, *homan’s* for *human’s*, or *drave* for *brave*.

**Useful Strategies with Words**

Justin wrote a total of 57 words on both the writing vocabulary and dictation tasks combined. On the writing vocabulary, he needed few prompts in order to write words. Often times, one prompt led to writing several words. For example, when asked if he could write *my*, Justin wrote: *my, I, me, she, he, we, Be, and Bee*. Like Jared, Justin generated words by rime: *took* and *book*, *cat* and *saf*. At other times, he generated by the onset of words: *this, that, the*, or *up, us*. In addition, Justin showed great flexibility in his generating of words by vowels: *good* and *book*, or *sat* and *sit*. He quickly wrote new words by adding an ending, such as *ing* or *s*: *fish* to *fishing*, *doG* to *dOGs*. Rather than writing the core word a second time with its proper ending, Justin added the letter(s) to the word he had already written.
In the word test, Justin attempted all 20 words and correctly identified 16. The four words that he was unsuccessful in identifying were all visually similar to the actual word: *rid* for *ride*, *ate* for *eat*, *well* for *walk*, and *for*, *form* for *from*.

In the dictation task, Justin heard individual words in the sentence and articulated each word slowly, breaking up the words into sounds. He was able to analyze and represent every sound with a letter. He also demonstrated good control of word boundaries as evidenced by adequate spacing between each word on the dictation task.

After hearing the sentences he was to write, Justin wrote independent of the teacher, needing no prompts as to which words to write next in the sequence. He was able to hold the story in his head while he wrote. In addition, after completing his writing, he went back and reread what he had written and added a period at the end of the first sentence.

**Problem Strategies with Words**

On occasion, Justin overgeneralized letter patterns in his writing. For example, for *blow* he wrote *bllow*.

**Useful Strategies with Letters**

Justin identified 54 uppercase and lowercase letters by letter names. He identified the letters quickly and confidently, with no hesitation. In writing, Justin formed most letters easily and without copy. In his reading, he was able to detect an error due to the mismatch of letters between what he said and what was written in the text. He searched for more visual information, using the beginning, middle, and final letters of words in text.

Justin wrote mainly in lowercase letters, but used a capital letter for the *J* in *Justin*. 
Problem Strategies with Letters

Occasionally, Justin had some reversals in his writing.

The final six tables (Tables 22-27) compare each of the students' strategies on letters, words, and text from administration of the fall Observation Survey to the administration of the spring Observation Survey.

Table 22

Summary of Jared's Fall and Spring Observation Survey Results—Strategies on Text

<table>
<thead>
<tr>
<th>Useful Strategies on Text</th>
<th>Fall/Sept.</th>
<th>Spring/May</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Directional concepts known</td>
<td>• starting point</td>
<td>• Directional concepts known</td>
</tr>
<tr>
<td></td>
<td>• left to right</td>
<td>• left to right</td>
</tr>
<tr>
<td></td>
<td>• return sweep</td>
<td>• return sweep</td>
</tr>
<tr>
<td></td>
<td>• left page/right page</td>
<td>• left page/right page</td>
</tr>
<tr>
<td></td>
<td>• top to bottom</td>
<td>• top to bottom</td>
</tr>
<tr>
<td>• Located some known words in print</td>
<td>• Errors semantically, syntactically, and visually correct</td>
<td>• Errors semantically, syntactically, and visually correct</td>
</tr>
<tr>
<td>• yes, no</td>
<td>• Used multiple sources of information when reading</td>
<td>• Used multiple sources of information when reading</td>
</tr>
<tr>
<td>• Errors semantically and syntactically correct</td>
<td>• Demonstrated evidence of:</td>
<td>• Demonstrated evidence of:</td>
</tr>
<tr>
<td></td>
<td>• monitoring</td>
<td>• self-correcting</td>
</tr>
<tr>
<td></td>
<td>• cross-checking</td>
<td></td>
</tr>
<tr>
<td>Problem Strategies on Text</td>
<td>• Neglected visual information</td>
<td></td>
</tr>
<tr>
<td>• Appealed to teacher</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


### Summary of Jared's Fall and Spring Observation Survey Results—Strategies with Words

<table>
<thead>
<tr>
<th></th>
<th>Fall/Sept.</th>
<th>Spring/May</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Useful Strategies with Words</strong></td>
<td>• Wrote 10 words</td>
<td>• Wrote 55 words</td>
</tr>
<tr>
<td></td>
<td>• Recorded one final consonant sound</td>
<td>• Said words slowly and heard individual words in sentence</td>
</tr>
<tr>
<td></td>
<td>• Represented all sounds in words with letters</td>
<td>• Generated words based on:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- rime</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- clusters</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- meaning of words</td>
</tr>
<tr>
<td><strong>Problem Strategies with Words</strong></td>
<td>• Did not say words slowly on dictation task</td>
<td>• Did not notice word or letter rearrangement on CAP</td>
</tr>
<tr>
<td></td>
<td>• Did not recognize line, word, or letter rearrangement on CAP</td>
<td></td>
</tr>
</tbody>
</table>
### Table 24

**Summary of Jared's Fall and Spring Observation Survey Results—Strategies with Letters**

<table>
<thead>
<tr>
<th></th>
<th>Fall/Sept.</th>
<th>Spring/May</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Useful Strategies with Letters</strong></td>
<td>• Knew 47 upper and lower case letters by letter name</td>
<td>• Knew 54 upper and lower case letters by letter name</td>
</tr>
<tr>
<td></td>
<td>• Identified one and two letters</td>
<td>• Identified one and two letters</td>
</tr>
<tr>
<td></td>
<td>• Formed letters easily and without copy</td>
<td>• Formed letters easily and without copy</td>
</tr>
<tr>
<td></td>
<td>• Correctly used upper and lower case letters in his writing</td>
<td>• Correctly used upper and lower case letters in his writing</td>
</tr>
<tr>
<td></td>
<td>• Detected errors in reading due to mismatch of letters</td>
<td>• Detected errors in reading due to mismatch of letters</td>
</tr>
<tr>
<td></td>
<td>• Searched beyond first letter to use more visual information in reading</td>
<td>• Searched beyond first letter to use more visual information in reading</td>
</tr>
<tr>
<td><strong>Problem Strategies with Letters</strong></td>
<td>• Five letter confusions were visually similar</td>
<td>• Occasionally used capital letter when lower case was needed</td>
</tr>
<tr>
<td></td>
<td>• Did not know two letters</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Did not use mismatch of letters to detect errors in reading</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 25

Summary of Justin's Fall and Spring Observation Survey Results—Strategies on Text

<table>
<thead>
<tr>
<th>Useful Strategies on Text</th>
<th>Fall/Sept.</th>
<th>Spring/May</th>
</tr>
</thead>
</table>
|                           | • Directional concepts known  
- starting point  
- left to right  
- return sweep  
- left page/right page  
• Errors semantically and syntactically correct | • Directional concepts known  
- starting point  
- left to right  
- return sweep  
- left page/right page  
- top to bottom  
• Errors semantically, syntactically, and visually correct  
• Used multiple sources of information when reading  
• Demonstrated evidence of:  
  - monitoring  
  - cross-checking  
  - searching  
  - self-correcting | |

<table>
<thead>
<tr>
<th>Problem Strategies on Text</th>
<th>Fall/Sept.</th>
<th>Spring/May</th>
</tr>
</thead>
</table>
|                           | • Neglected visual information  
• Appealed to teacher  
• Omitted text | • Occasionally neglected meaning sources of information when reading |
### Summary of Justin's Fall and Spring Observation Survey Results—Strategies with Words

<table>
<thead>
<tr>
<th></th>
<th>Fall/Sept.</th>
<th>Spring/May</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Useful Strategies with Words</strong></td>
<td>• Wrote one word</td>
<td>• Wrote 57 words</td>
</tr>
<tr>
<td></td>
<td>• Said all words on dictation task slowly</td>
<td>• Said words slowly and heard individual words in sentence</td>
</tr>
<tr>
<td></td>
<td>• Recorded some dominant consonant sounds</td>
<td>• Generated words based on:</td>
</tr>
<tr>
<td></td>
<td>• Represented all sounds in words with letters</td>
<td>- onset</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- rime</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- word endings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- vowels</td>
</tr>
<tr>
<td><strong>Problem Strategies with Words</strong></td>
<td>• Did not recognize line, word, or letter rearrangement on CAP</td>
<td>• Did not notice word or letter rearrangement on CAP</td>
</tr>
<tr>
<td></td>
<td>• Unable to point and read</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Would not write unless certain he could “spell&quot; the word</td>
<td>• Overgeneralizing some spelling principles</td>
</tr>
</tbody>
</table>

Table 26
Table 27

Summary of Justin's Fall and Spring Observation Survey Results—Strategies with Letters

<table>
<thead>
<tr>
<th></th>
<th>Fall/Sept.</th>
<th>Spring/May</th>
</tr>
</thead>
<tbody>
<tr>
<td>Useful Strategies with Letters</td>
<td>• Knew 29 upper and lower case letters -21 by name -1 by sound -7 by word association</td>
<td>• Knew 54 upper and lower case letters by letter name</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Identified one and two letters</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Formed letters easily and without copy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Correctly used upper and lower case letters in his writing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Detected errors in reading due to mismatch of letters</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Searched beyond first letter to use more visual information in reading</td>
</tr>
<tr>
<td>Problem Strategies with Letters</td>
<td>• Seven letter confusions were visually similar</td>
<td>• Occasionally had some letter reversals in writing</td>
</tr>
<tr>
<td></td>
<td>• Did not know 19 letters</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Did not use mismatch of letters to detect errors in reading</td>
<td></td>
</tr>
</tbody>
</table>

SUMMARY

The transactions of six high-risk first-grade students and one teacher during an instructional method of interactive writing were examined over a period of an academic year. Data were read and categories established and
refined over time. Four categories emerged: construction of text, learning to look at print, hearing and recording sounds in words, and using the known.

There were four main findings from this study. First, the teacher's observations of what children knew determined the basis for instruction during interactive writing. The teacher assessed students' literacy knowledge, both in formal and informal measures, and used this knowledge to develop instruction at a level in which the children were able to successfully participate. Instruction was developed from what children already knew and demonstrated evidence of control about writing and reading in order to facilitate their learning about written language.

The second finding was there was an interplay of student and teacher behaviors that transpired throughout the interactive writing component. The responses of each (student and teacher) were contingent upon one another. Although the teacher was knowledgeable in what the students knew as well as in the writing and reading processes, and developed instruction based on the children's known, her instruction was dependent upon the children's responses at that particular time. Each instructional period, the teacher varied her instruction based on the children's responses.

A third finding was that during interactive writing, the instruction interrelated and integrated the reading and writing processes. Instruction was interrelated and integrated in three ways. First, interactive writing and reading aloud to students were closely related in that the story read aloud to the students became the springboard for interactive writing. Second, interactive writing and shared reading became two overlapping activities in that whatever the students and teacher wrote together during interactive writing, then became a text for shared reading. The students had opportunities to observe effective
writing and reading strategies as a result of the text they created during interactive writing. The third interrelationship of reading and writing was that the teacher used in-depth thematic units as a format for instruction; therefore, the components of the literacy lesson were interrelated. Children had numerous opportunities to practice writing and reading strategies in a variety of related activities over an extended period of time. In addition, they had opportunities to practice strategies in both supportive and independent contexts.

The fourth finding was that the children all made gains in writing. Each child's writing vocabulary grew, as evidenced by the Observation Survey scores from fall to spring. There was evidence of transfer of writing strategies from the group context to the children's independent writing. The children's story structure, phonological awareness, use of letter clusters, and use of known words paralleled what took place during interactive writing instruction to their independent use of these strategies and skills.

Chapter V summarizes the study and discusses the findings of the study. In addition, there are implications for practice and suggestions for further research.
CHAPTER V
DISCUSSION

The purpose of this study was to describe and interpret the behaviors of a first-grade teacher and a small group of at-risk students while engaged in literacy activities centered around interactive writing. Interactive writing is a method of writing instruction that is a form of shared writing (McKenzie, 1988). It is a dynamic process in which the teacher and group of children are actively involved in: negotiating the composition of texts; constructing words through analysis; using the conventions of print; reading and rereading texts; searching, checking, and confirming while writing and reading (Pinnell & McCarrier, 1993).

A descriptive account and analysis were made of interactive writing and the interrelationship with literacy components from the Early Literacy Initiative Framework (such as reading stories aloud to children, shared reading, guided reading, familiar reading, independent writing, and story extensions). In addition, the study described the reciprocal nature of student and teacher behaviors that occurred during interactive writing. Specific observations were directed toward evidence of transfer of writing strategies addressed during interactive writing to students' independent writing context.

The investigative nature of the study required a naturalistic setting. Although some quantitative data were used, the study was largely qualitative in
its approach and the role of the investigator was that of a participant observer. The five students and one teacher were observed for approximately 40 minutes every day of the week during three extensive periods of time throughout an academic year—fall, winter, and spring. Each period of data collection lasted the full length of a thematic unit (fall, five weeks; winter, six weeks; spring, six weeks).

Data were gathered through daily observations, videotapes of literacy lessons, field notes of videotapes, audio tapes of literacy lessons, and selected transcriptions of interactive writing sessions throughout the academic year. In addition, Clay's Observation Survey (1993) was administered and analyzed twice, once prior to the start of the study to provide baseline data, and again at the completion of the study to provide data for evidence of transfer of strategies. Students' independent journal writings collected throughout the academic year were also a source of data. A final source of data was the informal interviews held weekly with the teacher. These interviews provided valuable information about the teacher's observations of the students and insights into her teaching decisions.

Data were reported in Chapter IV. Analysis of three things (what took place during interactive writing and its interrelationship with other literacy lesson components, student and teacher behaviors that transpired during interactive writing, and evidence of transfer of writing strategies as introduced in or modeled during interactive writing) lead to the following four findings. First, the teacher's observation of what the children knew determined the basis for instruction during interactive writing. Second, there was an interplay of teacher and student behaviors that transpired throughout interactive writing where the behaviors of one were contingent upon the behaviors of the other. A
third finding was that the instruction interrelated and integrated the reading and writing processes. Fourth, the children all made gains in writing with evidence of taking on strategies demonstrated and taught during the small group instructional setting.

The next section of this chapter discusses the findings of this study in terms of possible implications for instructional practice. A third section offers reflections of the researcher and suggests questions for further research.

KEY FINDINGS AND IMPLICATIONS

Working from the Known

The teacher's observations of what the children knew determined the basis for instruction during interactive writing. The teacher's knowledge was based on observations of children's literacy behaviors gathered throughout the academic year by means of formal and daily or informal, ongoing measures.

It would appear that working from children's strengths supports students' literacy development in reading and writing. Research has provided evidence that children use what they know about print to analyze unknown words in their writing and reading (Baron, 1979; Clay, 1991, 1993; Goswami, 1986; Goswami & Bryant, 1990; Zutell & Rasinski, 1989). As children begin to acquire a writing vocabulary, they differentiate between a word and a string of letters (Clay, 1993). They are able to see similarities in words, similar letters, and similar letter sequences when working with words they know (Clay, 1991, 1993; Goswami, 1986; Goswami & Bryant, 1990; Henderson & Beers, 1980; Zutell, 1993).

The importance of determining what level of information the child is using and knows is substantiated by numerous research (Clay, 1991, 1993; Ferreiro...
& Teberosky, 1982; Goswami & Bryant, 1990; Teale & Sulzby, 1986; Vygotsky, 1978; Wood, 1988). The optimum conditions for effective teaching occur when a teacher not only knows what the child is trying to learn, but also understands the child's knowledge, needs, and current level of ability concerning a given task (Lyons, Pinnell, & DeFord, 1993; Wood, 1988; Wood, Bruner, & Ross, 1976).

"Developing an effective theory of 'where the learner is at' and constructing a 'workable psychology of the subject' presents formidable challenges ..." (Wood, 1988, p. 209). It is difficult to have "optimum conditions" with an individual child, yet the teacher in this study was having to orchestrate all of these tasks with a small group of children in her classroom. Wood (1988) recognizes the expertise required of the teacher to create optimum conditions for learning and even questions whether such demands can be considered realistic. In most schools, one adult is asked to achieve all these ends in a classroom of twenty, thirty, or perhaps forty children.

... being able to observe and interact with a child in order to discover what she knows, understands and can do, takes time, considerable knowledge and skill. Having sufficient knowledge not only about the development of children but also about the 'psychology of subject matter... entails daunting and in some cases impossible demands. ... putting such knowledge to work in the service of large groups of children is a formidable requirement (Wood, 1988, p. 224).

Working from the known, however, does appear to be a crucial notion in interactive writing. A critical precursor to beginning instruction to interactive writing in the fall is the Observation Survey (Clay, 1993) administered to each of the children. The results provide information about how students
strategically engage or operate with letters, words, and text. The information is needed to create a starting point for the teacher's interactive writing instruction.

For an early literacy setting, the Observation Survey (Clay, 1993) seems to provide the data a teacher needs to start instruction in interactive writing; however, the Observation Survey alone clearly does not provide enough data, because children's literacy behaviors change daily. Additional means of assessing children's literacy behaviors are needed to inform teacher's instruction.

Daily informal methods of observation are also central to interactive writing, providing additional and ongoing information about the children's literacy understandings. As the teacher interacts daily with the students across all literacy components, she makes careful observations of the children as they are actively engaged with print in both reading and writing. Information about what children know from the daily running record of children's independent reading, independent writing projects, and anecdotal notes of students' literacy behaviors all seem an important part of operating from within the known within interactive writing.

One may be surprised at the value of using the known even when the known is only one's name. A specific example from this study about the value of using what the children knew was manifested in the teacher's extension of their names. At the beginning of the year, the teacher incorporated the children's names into the actual message of their newsletters (such as, Vanessa likes to play with friends). Later, names were used to establish children's phonological awareness (such as, Justin, Jessie, and Jared all begin the same), or to establish understandings of letter clusters (such as er in Heather). Children's names and known words can be the prototypes for
developing students' literacy exploration in writing and reading, and are an important way to connect new learning from something known. In this study, the teacher linked students' known words to establish the difference between a string of letters and a word, letter/sound relationships with single letters and letter clusters, knowledge of letter clusters, familiarity with spelling patterns, and students' use of word analogies.

The importance of using children's names and other known words in any children's early literacy program cannot be ignored. Based on this study, the known items formed the impetus for their early literacy program. Even when what a child already knows seems quite small, that little bit has high value as a basis upon which to build new learning as a part of early literacy instruction.

This study provides insights into how one teacher developed a theory of the children's understandings and constructed a "workable psychology" of interactive writing instruction, not just to meet the needs of individual children, but also to meet individual needs within a small group of high-risk children.

In addition, this study provides insights into how students themselves independently use known letters and words, in particular their names, as prototypes in which they connect new learning from something already known. For example, on their own, students can and do locate known words, and then use these known words in a variety of ways, such as establishing one-to-one matching, becoming aware of relationships between sounds and single letters or letter clusters, and using word analogies.

Interplay of Teacher and Student Behaviors

The clear evidence of the interplay between teacher and children that transpired during interactive writing also raised many issues and created some
tensions with terms in common use among early literacy researchers and educators. Perhaps the word "transaction" rather than "interaction" is more descriptive of what is taking place during interactive writing. The term "transaction" emphasizes the reciprocal relationship between human beings and nature, designating relationships in which each element conditions and is conditioned by the other (Dewey & Bentley, 1949). Human activities and relationships are seen as transactions in which the individual and the social, cultural, and natural elements interfuse.

The notion of transaction has significant implications for understanding language activities, specifically reading and writing (Rosenblatt, 1989), and even as it relates to this study. "Interaction" implies a two-way relationship—a dyadic between the word and the object—in which there are already defined entities acting on one another. A transactional model, on the other hand, is a triadic formulation (Rosenblatt, 1989). In the transactional model, language and the processes involved in speaking, listening, reading, and writing are grounded firmly in the individual's transactions with the world. Language is viewed as a socially generated system of communication always internalized by an individual human being in transaction with the environment.

The term "transaction" implies that there is not a defined entity, or outcome; rather the outcome is contingent upon the particular individuals, with their particular linguistic and experiential resources, in particular transactions with particular environments or contexts. In this study, both the students and the teacher were engaged in constituting symbolic structures of understanding in a to-and-fro circular transaction with their current experiences and understandings while creating a text during interactive writing. Although the
teacher had a starting point for instruction, an outcome was not predetermined, but instead, was contingent upon the transactions of the above factors.

It appears that the transactions that occur throughout interactive writing are important for developing instruction in order to assist students' literacy learning. "Knowing what people mean by what they say, being able to interpret and act upon the symbols they employ, demands a basis in relevant, shared activities" (Wood, 1988, p. 208). Scholars have examined the child's social world in relation to how the individual develops, and the role of the adult and the impact on children's literacy learning (Bruner, 1978; Cazden & Clay, 1990; Clay, 1985, 1991, 1993; DeFord, 1993; Goodman, 1984; Heath, 1983; Moll, 1990; Nino & Bruner, 1978; Taylor, 1983; Tharp & Gallimore, 1988; Vygotsky, 1978; Wertsch, 1979; Wood, 1988; Wood, Bruner, & Ross, 1976). The adult supports the child by allowing the child to do what he or she is capable of, and then providing assistance when necessary. It is with this assistance that the child is capable of doing something that ordinarily could not have been done alone (Bruner, 1978; Tharp & Gallimore, 1988; Vygotsky, 1978; Wertsch, 1990; Wood, Bruner, & Ross, 1976).

Interactive writing then, offers support for the provisions of a cognitive apprenticeship with a more capable adult. The children's participation is sustained by the teacher assuming the responsibility for carrying out aspects of the task that were too difficult for them (Bruner, 1978; Vygotsky, 1978; Wertsch, 1979, 1990). The teacher allows the children to do what they are capable of, and then provides assistance only when necessary. Together, the students and teacher work to accomplish a task that the children could not do alone (Bruner, 1978; Vygotsky, 1978).
As in Bruner's (1978) work, support by the teacher or scaffold provided during interactive writing is contingent upon what the children know, the problem-solving processes they use, and the teacher's understanding of what needs to be learned in order to strive for the potential available to the children (Lyons, Pinnell, & DeFord, 1993). Because scaffolds are temporary and ever changing (Clay & Cazden, 1990), the task is held constant (for example, hearing and recording sounds in words); however, the teacher simplifies the children's role by means of her graduated support. Gradually, the responsibilities of the learning are turned over to the students as they gain competency over their own learning.

One kind of interplay that takes place is routines. In this study, several of these kinds of routines for scaffolds were prevalent. In this study, routines consisted of: (1) arranging the students in the various areas; (2) using the magic markers; (3) negotiating the message within the group; (4) listening and responding to group members; (5) repeating the message; (6) saying words slowly and using letters to represent the sounds; and (7) structuring the literacy lesson. Each of these routines was established within the first period of data collection. Once these routines were settled, the children were freed up from having to concentrate on these aspects, and could attend to learning about how print works.

An expert teacher, peer, or parent provides a supportive instructional environment in which children are able to build upon their repertoire of existing knowledge (Clay & Cazden, 1990; Lyons, Pinnell, & DeFord, 1993; Tharp & Gallimore, 1988). An important way to support this environment seems to be a continuity of instruction that occurs over a longer period of time. The teacher demonstrates continual follow-through of concepts introduced and addressed
during the interactive writing component. She is able to continue to address and emphasize concepts for as long a period of time as necessary for students to demonstrate independent control. Instruction is contingent upon students' level of understanding, as evidenced by the responses throughout the lesson.

This study supports the current research on adult and student transactions. It further provides detailed analyses of the transactions that occur related to the instructional method of interactive writing and the reciprocal quality of the teacher's and students' transactions during the interactive writing process. Strong evidence is provided for the notion that such transactions may occur at the very beginnings of children's understandings of print. Examples emerging from this study offer a description of the ways in which children transfer knowledge and skills learned in the supported interactive writing context to their independent use in a regular classroom setting.

Interrelation and Integration of Reading and Writing

A third pattern worthy of discussion is how interactive writing interrelates with the other components of the literacy lesson. In this study, interactive writing was interrelated and integrated with the other literacy lesson components in three clear ways: the relationship between a story read aloud and interactive writing; the relationship between shared reading and interactive writing; and the integrated nature of the literacy lesson.

The first of these factors, the important relationship of reading aloud to children and its impact on children's writing, is well documented in the literature. Studies have shown that through the interaction of storybook reading, children are actively engaged in learning key concepts about print, such as its directionality, the difference between letters and words, and that
print remains constant (Clay, 1985, 1991, 1993; Cochran-Smith, 1985; 
Goodman, 1984; Harste, Woodward, & Burke, 1984; McCarrier, 1992; Morrow, 
1989). Other studies have examined the influence of stories read aloud on 
children's writing (Bissex, 1980; DeFord, 1980; Eckhoff, 1983). Therefore, it 
was not a surprise that a story read aloud in this study became the springboard 
for the group's interactive writing.

Interrelating a story read aloud and interactive writing provides 
numerous opportunities for students to revisit the story to enhance their 
understanding. This occurs through discussions that take place during the 
negotiation of the text for the writing and/or the rereading of the story to facilitate 
the writing.

Although other studies have examined the relationship between reading 
stories aloud and children's writing, reading aloud has not been talked about in 
relationship to interactive writing. This study shows that reading stories aloud 
can also be a stimulus for interactive writing.

The second factor, the interrelationship between interactive writing and 
shared reading, provides the children opportunities to observe effective writing 
and reading behaviors modeled by the teacher and to practice these modeled 
writing strategies within the context of a supportive teacher and group.

Numerous studies have explored how reading and writing are 
twined in the learning process (Clay, 1985, 1991, 1993; Dobson, 1989; 
Holdaway, 1979; McKenzie, 1988; Sulzby, Barnhardt, & Hleshima, 1989) and 
how writing and reading are similar cognitive processes during the acts of 
composing or comprehending (Atwell, 1987; Smith, 1986; Squire, 1983; 
Tierney & Pearson, 1983). For children in the early part of their literacy 
development, writing serves as an organizer for reading behaviors (Clay,
1979, 1982, 1991, 1993; DeFord, 1991). The findings of this study support the studies dealing with the interrelationship between reading and writing, yet it also goes beyond them, in that the interactive writing was used as the forum for dealing with the functions of print and the reciprocal nature of beginning reading. Interactive writing is a vehicle in which the teacher can specifically demonstrate, prompt, and teach writing strategies in order to enhance children's reading.

Finally, the interrelated nature of the literacy components provides a variety of opportunities for the children to practice writing and reading strategies addressed during interactive writing over an extended period of time and throughout other lesson components. Tierney and McGinley (1987) view reading and writing as sufficiently overlapping activities. Together, they support a symbiosis in which the impact of the two together becomes greater than the sum of their separate impacts. Numerous studies have examined instruction that combines reading and writing (Barr, 1985; Calkins, 1983; Clay, 1975; Copeland, 1984; Dobson, 1989; Ferreiro & Teberosky, 1982; Graves & Hansen, 1983; Hayes, 1987; Kawakami-Arakaki, Oshira, & Farran, 1989; Morrow, 1988; Strickland & Morrow, 1989; Taylor, 1983; Tierney & McGinley, 1987; Tierney & Shanahan, 1991; Tierney, Soter, O'Flahavan, & McGinley, 1989).

The lesson components are integrated as a result of the thematic units developed by the teacher. The teacher reads a story to the group, which becomes the springboard for their interactive writing. The interactive writing then becomes a text for shared reading, since the teachers and students always read what they have written to add to the text or to make revisions. The completed interactive writing is then used as a model for the group's story
extensions (such as storymap or mural), which also incorporates both writing and reading. The students' completed extension projects provide additional texts for students to read during familiar reading, as well as models for their own independent writings, which in turn the students read. There is a recursive nature to the structure of the literacy components where reading and writing instruction overlap simultaneously for an extended period of time.

Other studies have examined aspects of the literacy framework. The framework of the Early Literacy Initiative, consisting of reading and writing activities, has been examined with at-risk readers and writers (Strong, 1988). Specific components within the framework of the literacy lesson have also been examined (Button, 1992; McCarrier, 1992; Pinnell & McCarrier, 1993). This study shows in-depth how interactive writing is related to these other literacy lesson components within a first-grade classroom.

Nature of Student Gains

A final finding that has far-reaching implications for practice was that all five students in the study made gains in their writing vocabulary and in their independent writing strategies. All five students could represent sounds in words with letters, had a base of known words with which to expand their understanding of new words that they encountered, and actually used their known words to problem-solve such new words. Although their gains differed, each student made gains in writing.

Interactive writing then appears to be a viable option in the classroom instruction of high-risk students. Interactive writing provides a forum for discussing and interacting with print within a supportive instructional environment. Through the interrelationship between writing and reading,
children are able to learn about the functions and form of print, to negotiate a message, to develop phonological awareness, and to attend to analogies. In addition to student gains, transactions within interactive writing are framed within sound theoretical research contexts. This study provides an in-depth look at interactive writing with high-risk students within a regular first-grade classroom. The instruction took place within the children's own classroom, and with their regular first-grade classroom teacher.

Since this was a naturalistic study that used an ethnographic research approach, the findings were related to a specific setting and its specific participants. The researcher cannot specify the external validity of the inquiry, but instead can supply only a "thick description" to enable others interested in making a transfer to reach a conclusion about whether transfer can be contemplated as a possibility (Lincoln & Guba, 1985). Generalizations must be interpreted within the limitations of this study. However, generalizations could be made that are transferable to similar settings. This is the frame within which the following summary of implications for educational practice should be viewed.

Suggestions for the Classroom

• It seems that the interrelationship and integration of reading and writing processes is a necessary part of a daily instructional program for children. Hearing stories read aloud can be the stimulus for a small group's interactive writing. Interactive writing provides a forum for instruction on writing and reading strategies and the integrated instructional framework provides a way in which children can practice reading and writing strategies in a variety of related activities over an extended period of time.
A second implication for classroom instruction is the crucial importance of observing children. To develop an instructional literacy program that will work with what writing and reading strategies which the students already control, a teacher needs to be knowledgeable not only in the writing and reading processes themselves, but also how to observe the children in order to find out what children know and can do. In other words, teachers need to have ways of observing children so they have data to inform their initial instruction, as well as observation data of students' continually changing literacy behaviors. Both kinds of observation are necessary to inform daily, ongoing instruction in reading and writing.

It appears that the teachers' active attempts to link the new with what students already know about print is a necessary part of a literacy instructional program. Once a teacher has a way of observing and developing a theory of what children know, a tremendous responsibility is placed upon the teacher as to how she will use that information to build an instructional program for the students.

The continual follow-through of instruction provided by the teacher appears to be a necessary part of a literacy instructional program for students. In this study, the teacher first introduced concepts, and then provided the students opportunities to practice the strategy with the support of the group members and a knowledgeable teacher. After a concept was introduced, instruction was continued for as long as necessary until the students could use this knowledge independently in their writing.

If teachers are to make changes in their literacy instructional programs, a commitment is needed between the university and the school districts to facilitate this change. The most recent research findings are more likely to be
known at the university level; however, an effective means of sharing this knowledge could enhance teacher's literacy instructional programs. The theoretical knowledge and implementation of ideas used by the first-grade teacher in the study were possibly enhanced by her participation in a year-long university course in early literacy. In addition to taking the course presenting the research, theory, and recommended practical teaching strategies, this particular teacher also had the opportunity to discuss her understandings and actual day-to-day classroom implementation with a knowledgeable observer. Long-term training that combines both theory and practice can help educators develop their theory base and their skills in implementing the theory in their classroom practice.

**FURTHER RESEARCH**

This study examined first-grade students who began with a few known words and the ways in which they used known words to connect with new learning about print. Additional research areas could include how children first acquire known words, how children develop their understanding about the way print works, how students vary their use of known words as they make progress in reading and writing, and, how interactive writing instruction can be instrumental in facilitating children's development of known words.

Because this study also examined how one teacher implemented her theory of how children learn in her own classroom, the following research areas also might be considered: how teachers develop their theories of learning in a classroom setting, how teachers refine their theories of learning, and ways in which teacher theories and classroom practice are congruent or differ.
This study examined only one teacher and a small group of high-risk students in a first-grade classroom during interactive writing. Categories were generated from this study that are important to areas of learning and have given insight into the writing process within an instructional setting. A larger study examining many classrooms where interactive writing is used would help to determine if these same patterns of learning and reciprocal student/teacher behaviors occur across groups or if they were unique to this one teacher and small group of students. One research area for such a study could be ways in which teachers are implementing interactive writing in a regular classroom. Another could be a comparison of gains in writing of (a) high-risk students receiving instruction in interactive writing and (b) high-risk students not receiving interactive writing instruction.

The interrelationships between writing and reading during the instructional method of interactive writing were closely examined in this study. The following three research areas would more specifically investigate the relationships between writing and reading: the parallel relationship between children's growth in writing and children's growth in reading; a comparison of children's reading and writing strategies at various stages of instruction in interactive writing; and the ways in which the story read aloud as a springboard for interactive writing influences students' and teacher's responses, as well as the kinds of writing created.

This study followed the students' progress for an entire academic year. Every student made gains in writing. Additional research areas could include a longitudinal study, such as following these same children for an additional period of time to determine if they continue to make gains in their writing, observing how these same children develop and change in their literacy
behaviors over the next five years, and/or observing how these same students refine their writing strategies over time.

REFLECTIONS ON THE ROLE OF THE RESEARCHER

Throughout the study, tension within the role of the researcher existed due to several factors. The first, and probably the most significant, was the researcher's role as university instructor in an early literacy course in which the teacher in this study participated. Although this year-long course was specifically designed to work with several classroom teachers in the area of early literacy, the researcher was always cognizant of the possibility of her influence on the study in relation to the topics addressed during weekly class sessions. It was necessary to determine whether class topics were being introduced to the whole group of teachers on the basis of what the researcher felt were the needs of one teacher, or whether topics were introduced based upon the needs of the majority of teachers within the class.

A second internal conflict within the researcher was stepping out of the role of classroom teacher doing interactive writing and moving to that of a researcher studying another teacher and group of children participating in interactive writing. The researcher had had previous experiences with interactive writing, having implemented the literacy framework within her own first-grade classroom. Frequently there were times when the way in which the teacher organized the children, the task, asked a question, and so forth, differed from the way in which the researcher would have done in her own classroom. Throughout the field notes at the beginning of the study, the researcher's observer comments reflected this tension of wanting to share with the teacher how she (the researcher) would have done it in her classroom. The
informal interviews with the teacher helped the researcher realize that there were numerous ways of facilitating the learning environment to support children's literacy learning. In addition, these sessions proved valuable to the researcher in dealing with this internal struggle as they enlightened the researcher and offered insights into the teacher's thinking about interactive writing, the transactions of teacher and students, and her observations of students. These sessions together also helped the researcher to realize that even though the researcher had been interested in and working with interactive writing for several years, it was new to the teacher and the process would be a gradual one.

The third struggle to contend with was the voice of the teacher in the study. Initially the researcher set out to analyze not only the transactions within the early literacy lesson, specifically during interactive writing, but also the informal interviews with the teacher. However, early in the study, it became obvious to the researcher that including the teacher's voice from the informal interviews would change the study significantly to one which examined and explored teacher change. Since the study's purpose was to deal with more descriptive data as to what took place during interactive writing rather than teacher change, the interviews were used only to gain insights into the teacher's understanding of the students, rather than her insights into the actual process of interactive writing. In addition, since the researcher was helping the teacher learn about interactive writing, the interviews revealed how the teacher's understandings of the process of interactive writing changed, and how her practice also changed as a result of her further understanding. Since this data would require an additional study in and of itself, the researcher
chose to examine closely, what actually happened during interactive writing
instead of the thinking process of the teacher during interactive writing.
APPENDIX A

EXAMPLE OF FIELD NOTES FROM LITERACY LESSON
Familiar Reading/Guided Reading with Heather

FN—Several times, Marcia stopped and pointed out certain features of the text, pointing to particular words and then emphasizing them during her discussion. Marcia incorporated into her discussion, the term motorcycle and scooter. When they got to the last page, "Yes" said the... Heather pointed to the word yes. Marcia acknowledged it and read the text to her and then flipped back to the beginning for Heather to read.

When Heather began to read, she immediately pulled away from Marcia, leaning toward her right side. At first she read easily, but when she ran into some bit of difficulty (first page), Marcia first moved the book closer to her (M) and then slipped her hand lightly on Heather's shoulder and drew Heather closer to her. Heather then began to read the story again. She began on the last line. Marcia then suggested, "Now, read it all together" at which point, Heather began to reread the entire page of text, beginning at the top of the page— the correct starting point, unlike her first attempt, working from bottom-to-top.

Heather then turned the page, Marcia glanced up quickly as if to check on the others in the group and the class, and then her gaze returned to Heather and the story they were reading. When Heather completed the second page, she looked up at Marcia as if to check to see if she had read
correctly. Marcia raised her index finger and said, "there's one word...is that bike or bicycle?" and as she asked the question, Marcia pointed specifically to the word, bicycle, and ran her finger underneath it while she spoke. Heather then pointed to the beginning of the text and reread bicycle while holding her finger down on the one word.
APPENDIX B

EXAMPLE OF REFLECTIVE ANALYSIS OF FIELD NOTES
Reflections on Analysis

What is foremost on my mind at this time is the fact that several routines are being established at once within one instructional setting. Marcia is having to establish the routine of the markers, getting a text started, negotiating a text, establishing a beginning format, working together on the construction (written) of a text, and listening and responding to each other. That's a great deal to deal with initially.

They are also having to get used to Marcia's subtleties (such as, tapping the chart, placing fingers, her saying words and sentences several times). It seems that this is instinctive to Marcia but do the students understand at this point in time?

Modeling-she's doing a tremendous amount of modeling. How much modeling is necessary? Need to watch this process closely and look for evidence of Marcia transferring parts of the task to the children.

Prompting-I saw some evidence of prompts being given, but will continue to observe as Marcia gets more of the mechanics down, and the kids get more used to the process.

Reflection on Ethical dilemmas/conflicts

I am not nearly as concerned (or overly concerned) about my role as participant observer because the kids seem to have accepted that I will be in the room with a video camera. My biggest problem is capturing all that
takes place. How to manage the video camera, note taking, and audiotapes?

Reflections on Observer's frame of mind

Again, I am aware of any assumptions I am making about teacher and the kids. Since I have done interactive writing in my own classroom, I am desperately trying to remain open to what I observe and not be biased by what I think I would have done in that situation. I am trying to be cognizant of this fact, but sometimes I feel that it has sneaked into an observer comment or two.

I feel that I'm not being judgmental about Marcia's decisions, but again, the teacher in me continues to come out. I am instead, wondering what Marcia was thinking about certain comments, what lead her to the decisions she made. Then, these are the issues I try to bring up during our weekly sessions to help me gain insight into her observations and her thinking.
CHILDREN'S BOOKS


BIBLIOGRAPHY


