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SIGNED: Ghetchen Marie Owoki
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ABSTRACT

This multiple-case study describes the literacy events that occurred during play in three holistic preschool classrooms over a four-month period. The data includes field notes from observations and from discourse with participants, audiotape transcriptions, interviews, and writing samples. Analytic induction was used for the analysis.

Within play, literacy was used as: a support for play themes, a frame for play themes, and as an extraneous aspect of play. Literacy events involved transactions with print, as well as social transactions. Social transactions within literacy events were analyzed for whether they involved: self-construction of meaning, joint construction of meaning, direct instruction, or challenge.

The data show that in print-rich environments, where reading and writing materials are accessible, and where literacy is an expected way of life, teachers can meaningfully facilitate literacy development. The teachers capitalized on the many teachable moments that arose during play by carefully observing children and making relevant literacy-related contributions. The children explored and developed their own understandings about literacy, and at the same time, nurtured literacy development in their peers; literacy development was both personal and social. By
themselves, and with support from peers and teachers, the children explored the functions and features of written language, they tested their hypotheses about written language, and they developed strategies used by successful readers and writers. Play was found to be a meaningful and effective medium for facilitating literacy development.
CHAPTER 1
LITERACY THROUGH PLAY

During the early childhood years, play is a natural medium for literacy development. When children in a literate society play, they often use reading and writing to support and carry out their play themes. The functions that reading and writing serve in children's play reflect the functions that they serve in real life. Sometimes they are used chiefly for pleasure, sometimes they are used to facilitate imaginative play; sometimes they are used for interpersonal communication, or to obtain information, or to express individuality. Regardless of the function that literacy serves in play, as children experience and negotiate the meanings and purposes of the print, they construct knowledge about literacy that can be applied in real-life situations (Isenberg & Jacob, 1983). The focus of this study is on the ways in which preschool children and their teachers negotiate and mutually construct understandings about reading and writing during play.

The use of reading and writing, especially at the preschool age, often occurs in combination with social transactions. It is often through the social transactions surrounding a literacy event that the involved parties come to mutual understandings about the meanings and purposes of the print they are using. For example, it is not possible
for many four year olds to write something, and have a reader interpret the intended meaning. When this is the goal, some kind of oral language transaction takes place in which the intended meaning is made clear. The same holds true for establishing the purpose of using print. When children playing restaurant use pads of paper and pencils to take orders, they make their purposes clear with their language. They say, "I'll be the waitress" or "Let me write that down."

As children engage together in reading and writing events, they support development by either confirming or challenging the ways in which other children are using literacy (Dyson, 1989; Pontecorvo & Zucchermaglio, 1990). They confirm understandings as they ask relevant questions, share ideas, and accept one another's uses of literacy. They challenge understandings by drawing attention to uses of literacy that do not make sense. Challenges often compel the language users to take a second look at the ways in which they are using or talking about written language. Through the oral language transactions that are a part of literacy events, children come to understand the conventions which are necessary for communicating through reading and writing both within the play event, and in real life. Children build new understandings, and facilitate new
understandings for their peers, as they negotiate the meanings and purposes of print in their play.

The teacher's role in literacy development through play is also important (Bruner, 1983b; Roskos & Newman, 1993; Schrader, 1991). For the teacher, facilitation implies providing a temporary framework for knowledge construction (Cazden, 1983), as, if, and when it is needed (Bruner, 1983b). Facilitation does not imply that the teacher intervenes in an attempt to teach children how to play, or what to play. (Many studies have involved play training.) It does not imply that teachers attempt to transmit concepts that they think should be mastered by a certain time. Facilitation implies that the teacher helps the child see things in new ways based on what the child is already doing, and based on the competencies that the child demonstrates in play.

To respond effectively and creatively to children's attempts at literacy "requires teachers to focus not on teaching per se-- but on the process of learning-- which belongs to the child" (Schrader 1991; p. 210). How can teachers best focus on children's processes of learning? How much support do children need in their play? What kinds of support are facilitative of literacy learning? This study addresses these issues.
Although play is generally viewed as having great potential for facilitating literacy development (Dyson, 1989; Hall, 1991; Morrow & Rand, 1991; Roskos & Newman, 1993; Schrader, 1991), many teachers do not fully understand how they can appropriately use play in their classrooms. Many find it difficult to explain how play promotes development in academic areas (Schrader, 1991). When teachers understand how they can support literacy development through play, and when they can articulate this to parents, other educators, and administrators, they have the opportunity to make the most of the learning environments in their classrooms. A major goal for this study is to develop a comprehensive theoretical and practical model of effective practices for facilitating literacy through play.

Intentions of this Study

With these goals in mind, four primary purposes emerged for conducting this study. The first purpose was to investigate the ways in which literacy events are constructed and negotiated among preschool children and their teachers during play and other child-centered activities. The second purpose was to investigate how the social transactions that occur during these events influence children's construction of knowledge about literacy. The
third purpose was to contribute to the building of theory on the nature of literacy development, and the fourth purpose was to contribute to the building of theory on teacher practices in facilitating literacy development through play. Before the research questions are presented, three key terms must be defined: literacy events, social transactions, and play.

A Definition of Literacy Event

A literacy event is an "interaction with print when the reader and writer believe that they are making sense of and through written language" (Y. Goodman 1986, p. 6). Interactions with print consist of reading or writing on the part of the teachers (with children participating and/or observing), or on the part of the children. I recognize that some researchers and educators consider sociodramatic play, drawing, storytelling, and other uses of language to be literate behaviors. My view is that while these activities are facilitative of literacy development, they are not in themselves literacy events.

A literacy event may be constructed by one or more individuals. When two or more individuals are engaged in reading or writing together, this is considered to be a single event. I make this distinction for the purpose of reporting the approximate number of events used in the
analysis, but do not wish to make it seem as if a literacy event has definite boundaries. To draw boundaries around a literacy event involves subjectivity because there is no concrete way to determine when a literacy event begins and ends. Also, deciding whether two people reading or writing together should represent one event or two events is arbitrary.

**A Definition of Transaction**

Transaction is often used interchangeably with interaction; both terms are typically used to signify a social exchange. I use transaction as do Dewey and Bentley (1949) and Rosenblatt (1969; 1991), to emphasize that learning involves a reciprocal relationship between a knower and a known. When an individual (a knower) transacts with a stimulus (a known), both the individual and the stimulus are transformed. Individuals are transformed as they experience the stimulus; the stimulus is transformed as individuals give it meaning, and make it their own. Individuals give stimuli meaning, and because individuals have unique schemata based on all they have experienced in the world (Piaget, 1952) this meaning is continually transformed; knowledge is not a static entity. Transaction emphasizes that any social exchange transforms both the knower and the known.
When individuals transact with one another, the same principles hold true. Dewey (1910) asserts that genuine communication is characterized by contagion, and produces joint construction of thought and purpose. The result of any transaction is that both parties are changed, as is the knowledge that they construct.

A Definition of Play

Explicit definitions of constructs are useful because they help researchers to discuss what is observed, and to compare results between studies (Monighan-Nourot, Scales, Van Hoorn, & Almy, 1987). One problem with studying play, however, is that there is little agreement on what constitutes play. Christie and Johnsen state that problems with definitions have created difficulties in play-related research. For example, does play only occur during play time, or can it occur during snack time or story time, too? Christie and Johnsen describe play in general terms, as an activity which is "characterized by pretense, self-generated and pleasurable behaviors, flexibility and some freedom from the extremes of pressure and anxiety" (1987, p.110).

Monighan-Nourot, et al. (1987) suggest that there are certain characteristics of play that distinguish it from other activities. These are: active engagement, intrinsic
motivation, attention to means rather than ends, nonliteral behavior, and freedom from external rules.

Bruner (1983b) describes play as: (a) a means for exploration in which there are no negative consequences for errors, (b) an agent for invention, (c) an activity which follows a scenario or a script, (d) a projection of interior life onto the world, in which we transform the world according to our desires, and (e) a pleasurable activity (p. 61).

While each of these depictions characterizes playful behavior, their content illustrates the lack of universal agreement on a definition for play. None is suitable for use in the present study, because verifying the components of any of these definitions would be difficult in a field setting. How would one know, for instance, whether a child's motivation was intrinsic, or whether an activity was pleasurable, or based on pretense? It may be that play is more easily recognized than it is defined (Linder, 1993).

For the purposes of this study, therefore, play is conceptualized using the works of Reifel (1986) and Reifel and Yeatman (1993). Based on the depictions provided by these authors, most of what children do could somehow be characterized as play. As Reifel (1986) observes, children
create play irrespective of their environment; this means that play can occur in situations across the preschool day.

Reifel and Yeatman (1993) describe play as "a family of simulations, including pretense, dramatic play (including story telling), games, arts and crafts, rough and tumble, joking and word play, and motoric exploration" (p. 353). These simulations may be exploratory, creative, based on social exchange, and based on pretense or real life (Reifel & Yeatman, 1993). This conceptualization is useful because it encompasses the notion that every play situation revolves around a unique set of contextually-based transformations, ontogenies, histories, and significances specific to that play situation.

Questions to be Answered

Three questions guided the data collection, analysis, and interpretation of literacy through play:

1. How do literacy events unfold within the play of children in preschool classrooms?
2. What are the characteristics of the literacy transactions (among children and teachers) that take place during these events?
3. How do these transactions influence children’s construction of knowledge about literacy?
The Impact of this Study

This study contributes to growing bodies of knowledge in the areas of play, emergent literacy, and teacher practices in facilitating literacy development. The study provides a descriptive model of the ways in which literacy events take place during play in three exemplary preschool classrooms, and the ways in which the transactions that take place during these events influence literacy development.

Although there has been considerable research on adult contributions to literacy development in activities such as language, writing, and reading (Clay, 1975; Clay, 1991; Heath, 1986; Ninio & Bruner, 1978; Thomas & Rinehart, 1990; Unsworth & Williams, 1990; Wells, 1986), there is a need for greater in-depth exploration of the contributions that adults make to literacy development during play. Many researchers of young children believe that children learn best when their activity "reflects or slightly stretches the current cognitive abilities of the child" (Johnsen, Christie, & Yawkey 1987, p. 18). In reading, writing, and oral language, certain types of interactions, prompts, and encouragement from teachers have been found to be useful (or not useful) in bringing about these conditions, and in helping children extend their understandings in the area of literacy. Researchers are just beginning to understand effective adult roles for bringing about these conditions,
and for encouraging literacy development through play (Roskos and Neuman, 1993). This study contributes to this new body of knowledge.

Current Contexts for Development

In the 1990s, the number of children attending preschools, and receiving institutional child care in the United States is rapidly increasing. Stone (1993) notes that "...more than 55% of mothers of young children are in the workforce, and the fastest growing arrangement for the care of their children is enrollment in child care centers" (p. 12). Many young children attend school for 40 to 50 hours per week. For many children, therefore, life at preschool has a major influence on the ways in which they will come to know literacy.

Children develop understandings about the meanings and purposes of print within the culture of their surroundings; early literacy development is inextricably linked with the wider events of a child's life. In a literate society, children "learn to organize and make sense of print just as they learn to organize the rest of their world" (Goodman 1983, p. 69). They construct knowledge about literacy as they experience the values, actions, and routines of the members of their sociocultural communities (Kantor, Miller & Fernie, 1992). This means that in the school community,
literacy should not be confined to certain areas of the classroom or to certain times of the day. It can be used like it is in the greater society: throughout the day, and for a variety of purposes. It is important that teachers understand how they can support literacy development as they work with large numbers of children in classroom settings.

Because children spend so much time at school, and because their literacy development depends on real transactions with the people in their sociocultural environment, and real transactions with print, it is worthwhile to understand and document situations in which children are meaningfully and actively engaged in literacy. Not only does this help clarify effective practices for the teachers involved in the present study, it can also be useful for other teachers who wish to facilitate literacy learning through play.

The Need for Research

Many of the researchers who have studied the ways in which literacy events unfold during preschool children’s play have not addressed that which occurs when adults and children interact under natural circumstances, in real settings. Roskos and Neuman (1993) report that many studies on literacy through play have been conducted in settings in which the researchers have acted as the adult partners in
play; other studies have involved short-term interventions or interventions that may not be easily carried out after the study ends. This type of research often provides valuable information for teachers, but it may not capture what happens over time and may not reflect what happens in real-life settings. Further, the interventions may only have effect during the course of the actual study (Lovinger, 1974; Morrow & Rand, 1991; Schrader, 1991; Smilansky, 1968; Smith & Syddall, 1978; Vukelich, 1991).

Much of the Piagetian research on play has been conducted in clinical settings in order to purposely isolate and observe a variety of actions and behaviors. This isolation of play from the social context in which it normally occurs provides information on how children construct knowledge, but contributes little to our understanding of how real-life play contributes to learning (Nicolopoulou, 1991). When play is observed in a contrived or isolated setting, many of the typical social influences are absent. It is true that much can be learned from laboratory studies, but these studies only provide a part of the information needed for thoroughly understanding how children learn through play.

Roskos and Neuman (1993) highlight the current need for research that focuses on the actual processes that occur as children and adults interact during play, rather than only
the effects of these interactions. It is information on these processes that gives insight to teachers who are trying to create practical and effective conditions for literacy development in their classrooms. To understand how play can be used effectively in classrooms, it is necessary to observe the complexity of the transactions that occur during play in real environments. It takes time and attentive involvement in a real-life setting to develop thorough understandings about what children do as they learn.
CHAPTER 2

FRAMEWORK AND RESEARCH FOR
UNDERSTANDING LITERACY THROUGH PLAY

Over the past 30 years, two major theoretical frameworks have been used to organize and understand much of the research on play. These frameworks are based on the work of Jean Piaget and Lev Vygotsky. Because both of these frameworks are necessary in framing and understanding play in the present study, they are explored in this chapter.

Following the presentation of the theoretical frameworks is a section on how children construct knowledge about literacy. This section includes an exploration of the similarities between oral and written language development, and the implications that these similarities have for schooling. The nature of children's literacy development outside of school is also explored, again with a consideration of the implications for schooling. Concepts of written language development are presented last, using the work of Ferreiro (1990), Ferreiro and Teberosky (1982), and Goodman (1980). Woven throughout the discussion is a focus on the special roles that social transactions fulfill in facilitating literacy development through play.

The last section of this chapter includes a review of studies that have focused on play, and particularly, on literacy development through play. The last section is
divided into three categories: The Play Environment, The Role of Peers, and The Role of Adults.

Two Major Theoretical Frameworks

From Piaget and Vygotsky we learn that play is a process which facilitates the incorporation of external stimuli into cognition (Adelman, 1987). Piaget understands play as a medium through which children interact with the external world, and internally construct knowledge. Vygotsky believes that play itself, as well as the social transactions that children experience through play, are major sources of cognitive development.

The Piagetian Framework

Piaget's work (1952; 1955; 1962) has contributed a great deal to teachers', teacher educators', and researchers' understandings about the ways in which children construct knowledge. Piaget (1952) views learning as a process which is dependent upon conceptual change. This change requires action on the part of the learner; children learn by actively taking in, or assimilating and accommodating the new stimuli that they continuously encounter through their transactions with the world.

It is through assimilation and accommodation that an individual's cognitive schema develops. In assimilation,
new information is incorporated into the existing schema, or into the existing mental structures, creating an expansion of an individual's categories of knowledge. When the new information does not quite fit with what is expected, accommodation occurs. In accommodation, existing mental structures are reorganized, or new structures are created. This reorganization or re-creation facilitates the child's making sense of, or accommodating the new information.

As an example, consider one-year-old Jordan, who pointed to an apple and said "ball." Jordan had probably assimilated apple into his existing ball schema. When he eventually recognizes that there are significant categorical differences between apples and balls, then accommodation will have occurred, meaning that he has either developed a new schema (for apples), or that the existing schema (for balls) has been reshaped.

Children often use phrases such as, "Debbie taught me how to draw a cat," or "Marlie waked me up," even though they have never actually heard the terms taught or waked used in conversation. Chloe, one of the children in the study, brought a copy of Mary Wore Her Red Dress to her teacher and said, "I found Mary Weared Her Red Dress," even though she had not heard the title read that way before. Chloe's treatment of the verb in the title of the book, and the other children's choice of tense were not arbitrary;
they were rule-governed constructions based on what the children knew about language- that ed transforms a word into its past tense.

Another child in the study, Errin, said, "We’re making presents for Cindy’s mom because she is laying a baby." In all of these children’s statements, there is evidence for reconstruction of social knowledge. These children did not simply repeat or copy what they had heard other children and teachers say. Children use what they know to construct their own representations of what they need to say, but as they receive feedback from others, experience, and many opportunities for conversation (Wells, 1986) they make accommodations, and eventually move toward more conventional uses of language.

Disequilibrium occurs when experiences with the physical environment induce cognitive conflict, or, when the child experiences an unfamiliar or unexpected stimulus that puts the schema temporarily off balance. The adaptation to this type of experience is referred to as equilibrium, which is the result of accommodation and assimilation working together. Equilibrium serves as a balancing mechanism between these two processes, and is important for the following reasons: if individuals were to assimilate all new stimuli, they would develop very broad schematic categories, and would have difficulty recognizing
differences between things; if individuals were to accommodate all new stimuli, they would develop very narrowly defined schemas, and would have difficulty recognizing similarities between things (Piaget, 1952).

Pontecorvo and Zucchermaglio (1990) address the notion of disequilibrium as it pertains to literacy development in early childhood classrooms. They support Piaget's supposition that disequilibrium is an essential part of learning as they describe the value of teachers attempting to instill cognitive conflict as they facilitate literacy development. They also discuss the importance of arguing among children, which may also contribute to disequilibrium. These ideas are considered extensively in Chapter 5, and are pertinent to understanding how children develop literacy as a result of their interactions during play.

Piaget on Play

Piaget (1962) views play as progressing from individual processes and the use of private symbols, to social processes and the use of cooperative symbolism. (Symbolism refers to the notion that ideas and belief systems are conceptually organized, or symbolic, rather than concrete in nature). Piaget describes this progression from private to cooperative play in terms of three major stages: practice play, symbolic play, and play with rules.
Practice play involves repetitive actions and repetitive manipulations of objects. Eventually, these repetitions become purposive, and the practice is transformed into actions with goals. Although Piaget did not study literacy development, his ideas about play can be considered in the context of literacy development. Marie Clay (1991), for example, describes practice as it applies to writing (which is symbolic). She suggests that early on, "children may play around with letters, make lists of words, repeatedly make the same words or invent new ones..." (p. 111). In other words, they use what they know to extend their thinking. Wells (1986) contends that the repetitive actions of children allow them to make sense of their environment by giving them a chance to make connections between relevant people, objects, and events.

Elements of practice play can also be observed in children's use of oral language (which is also symbolic). Bruner (1983a), for example, stresses that games between children and adults provide important opportunities for children to explore the ways in which goals are accomplished with words. Games are familiar territory for children. Their deep structure often remains the same time after time, while the surface structure of games can vary. This maintenance of the deep structure is like practice for
children. The changes in the surface structure allow children to extend their language into new domains.

According to Piaget, practice and actions with goals become *symbolic* in nature some time during the second year of life. That is, they take on characteristics that are no longer necessarily concrete and real, but rather, are make-believe. Symbolic play facilitates children's understandings not only of their own, but also, of others' experiences with the world. Like practice play, symbolic play can be considered in terms of literacy development.

*Symbolic play* is characterized by a progression from egocentrism to an awareness of others. Children make an analogous progression in their literacy development; they develop understandings about literacy as they use written language to communicate; they learn that there are conventions in written language that help people to communicate (Goodman, 1980). Over time, they come to understand that a cooperative symbolism is necessary for individuals to communicate through reading and writing.

Piaget's *play with rules* emerges around the age of four. The rules of play may be constructed between children, or they may be predefined, or, dispensed from above. Play with rules involves at least two players, and is a rule-governed extension of the earlier practice play and symbolic play.
Like practice play and symbolic play, play with rules can be considered in terms of literacy development. The rules (or conventions) of communicating through written language, like the rules of play, can be constructed between children, or they can be dispensed from above. If a child who is writing loops on a piece of paper says to a friend, "I'm writing your name," and the friend accepts the writing, the rules are constructed between children. If the friend rejects the writing, and says, "That's not my name," the understanding is still jointly constructed, but the rules are defined by others, or carried down from above.

According to Piaget, symbolic play, which eventually includes play with rules, is characterized by the dominance of assimilation over accommodation. During play, children predominately incorporate new objects and situations into existing ways of thinking, rather than reorganizing the existing schema.

Although assimilation is dominant in play, accommodation also serves an important role. Piaget explains that imitation (of adults' or others' behaviors), which often occurs during play, is a manifestation of accommodation—of constructing thought by making adjustments to reality. If play were based solely on imitation, then it would not be a medium for the expansion of schematic categories, but only for the development of new categories.
It is the assimilative nature of play which leads to expansion of schematic categories, and the accommodative nature of play which leads to adjustment to reality. From the Piagetian perspective, both of these processes enable children to modify old schemas.

One frequently cited problem with Piaget's model is that the sequential stages of development do not explain individual variation in children, and do not take into account the fact that children have been observed to move back and forth (among the stages) in what they are able to do at a given time (Nicolopoulou, 1991). Also, while the social aspects of learning are not completely ignored in Piagetian research, as the above model demonstrates, they are not a central concern. While Piaget's work provides information about the ways in which individual children come to know about their world, Vygotsky's work sheds light on the social processes that influence learning.

The Vygotskian Framework

Vygotsky (1978) believes that children construct knowledge about the world through transactions in the social community. Children internalize the language of their social experiences, and use this language as a tool for thought. For Vygotsky, learning is the individualization and internalization of social experiences.
Although Vygotsky does not provide a systematic framework for research (as does Piaget), his theories about development offer a different perspective than Piaget's model. Much of the Piagetian research has focused on the kinds of behaviors children exhibit as they engage independently in child-centered activities. While both theorists advance the notion of children as active constructors of knowledge, Vygotsky's work is most useful in providing perspective on the influence that the sociocultural environment has on learning.

Vygotsky (1962; 1978) theorized that children operate within a zone of proximal development. The zone of proximal development encompasses all of a child's learning potential at any given time, whether or not this potential is reached. Vygotsky explains that when children engage in problem solving on their own, they are functioning at their actual level of development. Under adult guidance, or in collaboration with a more capable peer, they are able to function at their potential level of development. With guidance, children have the potential to function at a higher level than they might function on their own at any given time. The difference between the actual and the potential defines the zone of proximal development.

Vygotsky held the position that learning involves being introduced to the symbolic world of adults. From the
Vygotskian perspective, knowledge is believed to be constructed when children engage socially in talk, activity, and problem-solving tasks. Nicolopoulou (1991), speculating on Vygotsky's use of the zone of proximal development, suggests that: "In his use of this notion, which attempts to capture the process by which the social world guides and stimulates the child’s development, Vygotsky in effect justifies theoretically the special role that society assigns to teachers" (pp. 134-135).

Further speculating on Vygotsky’s work, Nicolopoulou (1991) suggests that in interacting with children, as well as in structuring their learning environment, teachers are crucial because of their role in "providing the mediating and enabling frameworks from the adult culture" (p.135). As Vygotsky (1978) suggests, adult guidance facilitates connections between the known and the new, and helps children internalize the cultural tools that make it possible for them to exist in their sociocultural environment.

Much of the research conducted within the Vygotskian framework has focused on the influence that language, communication, and instruction have on learning. It follows that much of this research has focused on the roles that teachers take in facilitating children’s learning, as well as in facilitating their play. The notion of Vygotsky’s
zone of proximal development is discussed in Chapter 5 with specific reference to the learning experiences of the children in the study.

Vygotsky on Play

For Vygotsky (1978; 1967), play is a social symbolic endeavor, even at an early age, because it reflects sociocultural themes. This is somewhat different from Piaget's perspective that early play is primarily egocentric. For Vygotsky, play contributes to, rather than reflecting, development. Vygotsky argues that play becomes more imaginative only as children get older; rather than eventually coming to terms with reality through play (as Piaget suggests), Vygotsky asserts that very young children know about reality. It is only through exploration of the real world, that children learn to explore the world of symbols and make-believe. From the Vygotskian perspective, make-believe play emerges between the ages of three and five. It is at this time that children begin to use imagination and make-believe to explore their social realities (Vygotsky, 1967).

Sutton-Smith (1979) supports this notion in her description of children as young as two who are capable of playing in the role of another person. For example, young children may act out the role of a mother by pretending to
feed, and care for a baby doll. This kind of representational play would not support Piaget's notion that young children play from an egocentric perspective, and are unable to recognize others' realities at the age of two. 

Representational play is a term usually used to describe play activities that represent realistic activities.

For Vygotsky, play situations involve both imagination, and a system of rules whose meaning is defined by the play situation. The characteristics of the rules and the presence of imagination may not always be explicit, yet they clearly exist. For example, children playing as if they are bank tellers try to follow rules for bank tellers as they understand them. "What passes unnoticed by the child in real life becomes a rule of behavior in play" (p. 9). The rules may not be explicit in the play, but they clearly exist.

Similarly, imagination is not always an explicit component of play, but it is viewed by Vygotsky as essential. For example, in a game of chess, players follow explicit rules. This is clear on the surface, and accepted by both players. While imagination in the game of chess may not be clearly present, it is implicit in the players' use of kings and queens and knights (Nicolopoulou, 1991). These understandings become important in Chapters 4 and 5, where
Vygotsky's ideas about rules and imagination in play are considered in depth.

How Children Construct Knowledge About Literacy

The focus in this section is on the dynamic relationships that exist between play, oral language development, and written language development. Throughout the section I consider implications for schooling that are related to the ways in which oral and written language develop.

Oral and Written Language Development

Several writers have drawn attention to the parallels between oral and written language development (Halliday, 1975; K. Goodman, 1986; Y. Goodman, 1980; Hall, 1987; Potter, 1990; Weininger & Daniel, 1992). The consensus is that these two modes of communication develop in similar fashions. Both are used to communicate; both are social. Both are processes of learning through experience. Both are purposeful; they have many uses and functions (although their uses and functions vary). Both are most easily learned in familiar, predictable settings, and both are embedded in concrete experiences. Both are learned naturally as children communicate with the people in their environment.
Schrader (1989) investigated preschool children's uses of written language during play. She used an adapted version of Halliday's (1975) seven functions of oral language as coding categories. To summarize, each of the seven functions are presented with a brief explanation of its meaning:

1. Instrumental  'I want'
2. Regulatory  'do as I tell you'
3. Interactional  'me and you'
4. Personal  'here I come'
5. Heuristic  'tell me why'
6. Imaginative  'let's pretend'
7. Informative  'I've got something to tell you'

Schrader found that as children used writing during play, they engaged in all but the heuristic and imaginative functions of language. Schrader reported that oral language was used when children wished to engage in heuristic activities, and that the lack of imaginative writing activities may have been due to the realistic nature of the enriched play environments. (The environments were a housekeeping area, a post office, an office, and an animal hospital.) In any case, Schrader suggests that the data support "Halliday's contention that written language learning is an extension of the functional potential of oral language development" (p. 195). Much like children develop oral language, children develop written language as they use it for meaningful, real-life purposes.
With the similarities between oral and written language development in mind, it is interesting to think about the ways in which adults sometimes handle these developing modes of communication. When children are very young, oral language development is not pushed; children learn to use language because it makes sense to them and because it facilitates communication. They naturally learn to talk as they are exposed to language in a meaningful environment.

The repetitive nature of early learning environments helps young children make sense of language. Children interact often with the same people. They play with, and are exposed to the same objects. They experience similar events time after time. This repetition allows children to negotiate meaning in social contexts as they make connections between the known and the new (Wells, 1986). Language is not learned because it is directly taught; language is learned because it is experienced.

Bruner (1983b) argues that it is not instruction in language and thinking which heightens language learning, but an opportunity to play around with language and thinking. This "playing around" is enhanced by the encouragement of an adult or other relevant individual who helps the child tie prior knowledge to new stimuli. "We know by personal experience that often we only understand something when we have verbally articulated it, tossed it around, played with
Ervin-Tripp (1991), in investigating the effects of play on language development, found that three general conditions of learning are necessary for the initial development of language: 1) salient and motivating exchanges, 2) comprehensible input slightly in advance of the learner's knowledge, and 3) one-on-one exchanges. All of these conditions suggest that learning is social, and that children must therefore have the opportunity to interact as a part of their learning.

Implications for Schooling

If, as Piaget (1962) contends, children are shapers of their own knowing, and if learning is social, and dependent upon meaningful interactions (Bruner, 1983b, Ervin-Tripp, 1991; Wells, 1986), then reading and writing events that are highly teacher-directed will not be as useful as those that are child-centered. Play is an ideal medium for literacy development because it enables children to use what they know, to play with it, and to try it out on and with other children. The parallels between written and oral language development suggest that language is easily learned.

In some classrooms, however, oral and written language are not treated as if they can be learned in a similar
fashion. Neuman and Roskos (1991) lament that in many cases, children's experiences with literacy in preschool and kindergarten are not related to their personal experiences. "Skills are taught in a systematic, sequential manner and measured in decontextualized settings apart from any functional purposes" (p. 167).

Harste, Woodward, and Burke (1991) describe the school experience of first grade Alison, who, although she had been a writer and reader since the age of three, was given underwriting (copying) activities, had her errors marked on her worksheets, and was left to copy and recreate, while the teacher made all of the creative decisions about writing and reading. This kind of teaching does not recognize that oral and written language develop in similar ways.

Schrader (1991) describes a preschool classroom in which the teacher consistently ignored the themes of the children's play activities, often suggesting, during sociodramatic play, that they engage in a writing activity. While the teacher's intention was to facilitate literacy development, the contribution was unrelated to the children's interests and play themes. Some of the children reacted by ignoring or rejecting the teacher's requests; others participated to the extent that they could understand the meaning of the activity. This teacher's requests might be equated with asking a child who is learning to say "mama"
to say "Grandfather Bill." The requests had no relevancy for the children, and did not make sense within the context of their play.

Graves (1991) describes the plight of third grade Billy, who had been diagnosed by his school as having visual-motor problems. The child had been placed in a special classroom in which visual-motor skills, letter formation, and fine-motor tasks were emphasized and directly taught. "Billy's program was skill-based, disconnected from meaning, and filled with positive reinforcement about his ability to form letters on good days. There was no attempt to connect his writing with his communication of ideas" (p. 67). Imagine asking a young child to learn oral language in this manner. Oral and written language development were treated as if they do not develop in similar ways, and as if one is easy to develop, and the other difficult.

Many schools in the United States use basal readers to facilitate literacy development. Calfee, Henry, and Funderburg (1988) report that most teachers who use basals start the school year at the beginning of the reader, and move toward the end as the year progresses. They rely on the activities and suggested questions from the teacher's manual. "As children read, they are interrupted frequently with literal questions from the teacher's edition...Teachers rely on workbooks and worksheets for practice in reading,
with little classroom discussion or direct instruction in reading" (p. 122). Imagine following a rigid teacher's manual when helping a young child to develop oral language.

In contrast to these kinds of situations, Heath (1991) describes a classroom in which talk about personal experiences, stories, and expository textbook materials abound. Children talk about ideas, and about their own and others' talk. "Their teacher gives no reading or writing task which is not surrounded by talk about the content knowledge behind the task and the kinds of language skills-oral and written- needed to tackle the task" (p. 79).

If it is true that challenges, or cognitive conflict are important parts of learning (Dyson, 1989; Piaget, 1962; Pontecorvo & Zucchermaglio 1990) then it seems important that children be allowed to experience interesting reading and writing, to engage in dialogue, to argue (Pontecorvo and Zucchermaglio, 1990), and to verbally confirm and verbally challenge the validity of what their peers are doing with writing and reading.

Morrow and Rand (1991) describe a classroom in which the curriculum had been thoughtfully and knowledgeably considered, and the environment had been carefully prepared, to be facilitative of literacy learning. "Some children worked alone, others with single friends, and still others in groups. The variety of activities...[was influenced
by]...the directions and encouragement of the teachers, who supported children in independent work—urging them to explore, experiment, and solve problems" (pp. 158). Other examples of child-centered learning are presented in some of the following sections of this chapter, as well as in Chapters 4 and 5, where the classrooms in the study are described.

**Children’s Literacy Development at Home**

Several case studies have documented the kinds of literacy experiences that occur within families (Bissex, 1980; Delgado-Gaitan & Trueba, 1991; Taylor & Dorsey-Gaines, 1988; Teale, 1986; Wells, 1986). The results of these studies indicate that in many homes, scaffolding behaviors between parents and children occur naturally as they go about their daily lives. As parents and children prepare meals, watch television, run errands, and visit with friends, opportunities to use print, and to talk about print, naturally arise. The intention of the parent may not necessarily be to teach about literacy, but the facilitation of literacy naturally occurs.

Teale (1986) investigated the influence of the home background on preschoolers' literacy development. The goal in conducting this research was to describe the early literacy experiences of 24 pre-school children from low-
income families. Teale focused on what children learned about reading and writing in out-of-school contexts, and the ways in which this learning took place.

The data demonstrated that every child in the study was involved with reading and writing daily, although the amount of time spent in literacy events varied considerably. Teale comments that perhaps the most striking feature of what was observed was the social nature of the literacy that occurred in the homes. In about 80% of the observed activities, reading and writing took place for functional purposes. Literacy events consisted of more than reading and writing as ends in themselves; literacy was used as a mechanism which helped to mediate and organize daily life. Teale comments that, "...there is more than one way to be literate...the ways in which literacy enters into the social life of a family will affect how it is incorporated into the mental life of the members of the family" (p. 184). It follows that the ways in which literacy enters the social life of a child will affect the nature of the child's control over literacy. Teale noted that this has important implications for the kinds of literacy, and the various ways of knowing which are valued (or not valued) in schools; often the kinds of understandings that children develop from daily uses of literacy at home are not valued in schools.
Implications from these studies point to the importance of allowing children to use what they already know about literacy in the school setting. To assume that literacy starts in school, or that all children do not have experience with literacy is unfounded. Studies such as those conducted by Ervin-Tripp (1991), Heath (1991), Wells (1986), and Teale (1986) are leading many early childhood educators into more non-traditional teaching roles. Now, rather than taking on the duty of preparing children for literacy, teachers are beginning to value what children already do as readers and writers, and to help them build upon these competencies (Roskos & Neuman, 1994).

**Written Language Development**

Children come to understand and act on the literate forms in their worlds in much the same way that they come to understand and act on everything else that is significant in their worlds (Ferreiro, 1990; Y. Goodman, 1980; Y. Goodman, 1984). They develop written language as they participate in a variety of meaningful, functional, relevant literacy events.

Ferreiro (1990) and Ferreiro & Teberosky (1982) describe literacy development as a *psychogenetic* process in which understandings about literacy evolve within learners. "*Psychogenesis* can be defined as the history of an idea or
concept as influenced by the learner's personal intellectual activity" (Goodman 1990, p. 6). To study the psychogenetic process of literacy development in English or Spanish is to explore the interpretation systems that children assemble as they come to understand the alphabetic system of representation. Ferreiro and Teberosky studied the psychogenetic processes of Spanish speaking children. While Spanish and English are different languages, the same basic principles hold true across languages (Ferreiro, 1990).

Ferreiro (1990) distinguishes between three main developmental levels through which children progress as they develop literacy. At level one, children come to understand that there is a difference between drawing and writing; they understand that letter forms are arbitrary, or, in other words, are not shaped like the objects they represent. They conclude that strings of letters function as substitute objects. Another characteristic of this level is that children recognize that letters are written in a linear fashion. Although they may not be able to articulate these understandings, they demonstrate them in their writing and reading (Ferreiro and Teberosky, 1982).

Once they have made the distinction between writing and drawing, they still must discover the ways in which the two are related. They have already discovered that letters function as substitute objects; now, they must discover that
letters represent a property of these objects which drawing cannot represent. For example, letters, not drawings, can be used to represent a name. At level one, children begin to look for conditions in pieces of writing that make them interpretable.

Before they move to level two, children conclude that for a piece of writing to be readable, it must contain a certain number of letters (more than one or two), and that the letters within the string must vary. They begin to recognize that some strings of letters (including those in their own writing) are not readable, although they have not yet discovered the actual criteria that makes something readable. At this level, a child might use the same letter string to represent two different objects. The mere intention to represent different objects is satisfactory to the child.

At level two, this intention alone is no longer satisfactory. Children begin to seek out graphic differences in strings of letters that will support their different intentions. They discover that in order to represent two different objects, the letter strings must be different. They look for both quantitative and qualitative ways to represent these differences. An initial quantitative attempt to represent differences might be, for example, using long strings of letters to represent big
things (father) and using shorter strings to represent small things (son). This is a quantitatively different way to represent two different objects.

Qualitatively, they may use different letters to represent different words, or they may change a few of the letters in one word to make it represent a different word, or they may change the linear order of the letters in the words. For example, Aster (a child in the present study) wrote three words on her paper, and then read them to her teacher:

<table>
<thead>
<tr>
<th>Written</th>
<th>Read</th>
</tr>
</thead>
<tbody>
<tr>
<td>P R i W</td>
<td>&quot;Pencil&quot;</td>
</tr>
<tr>
<td>R P i</td>
<td>&quot;Paper&quot;</td>
</tr>
<tr>
<td>P E i O</td>
<td>&quot;Envelope&quot;</td>
</tr>
</tbody>
</table>

Aster used graphic differences to represent different intentions. It may be that her current stock of graphic letter forms is limited, so she changes the linear order of the letters. Ferreiro believes that this is the most striking solution that children come to at this level of literacy development (Ferreiro, 1990).

At level three, children find a way to control the phonetization of their written representations. Usually starting with their own names, children begin to hypothesize about rationales for the lengths and patterns of various
letter strings. They begin to use, and look for similar letter patterns to represent similar sound patterns in words. Spanish speaking children explore a syllabic hypothesis, or, in other words, they begin to use one letter to represent each syllable of a word. They may or may not have knowledge about the precise letter with which the sound of the syllable begins.

Ferreiro (1990) hypothesizes that the syllabic hypothesis is less frequently explored by English speaking children (as compared to Spanish speaking children) because monosyllabic nouns are more prevalent in English. This presents an obstacle because children develop the idea that the minimum quantity of letters needed to make a word is at least three. A syllabic representation for many English words would only contain one letter. Ferreiro speculates, however, that the similarities between Spanish and English speakers are stronger than the differences. Both groups of children choose one letter to represent a part of a word with more than one sound. For example, Errin, one of the English speakers in the present study wrote while speaking:

```
Written: O Y R i
Spoken: Put away jour nals
```

This example (and others) from the present study provide evidence for Ferreiro's supposition that English speakers do
explore the syllabic hypothesis. More examples are provided in Chapter 4.

As children begin to notice more and more detail in the writings of other children and adults, and as they begin to notice the details of the print they see in the environment, their syllabic hypotheses are continually invalidated. They do not abandon their syllabic hypotheses, but they do begin to explore syllabic-alphabetic principles. At this level some letters may used to stand for syllables; others may be used to stand for smaller units of sound. This brings children to the alphabetic level, where they have discovered the basic nature of the alphabetic system. At this point they understand that similar letter patterns are used to represent similar sound patterns, and that different letter patterns are used to represent different sound patterns. They begin to explore their *alphabetic hypotheses* at this level. In the context of the present study, as in Ferreiro and Teberosky’s work, children who provide evidence that they are exploring alphabetic hypotheses, will be referred to as alphabetic. For example, "Kerry was alphabetic, but often used inventive cursive writing to tell a story."

One major concept of importance that can be gleaned from Ferreiro and Teberosky’s work is that phonological processes and spelling do not develop as precursors to literacy. It does not make sense, therefore, to teach
children to read and write by starting with these elements in kindergarten or preschool. Understandings about the alphabetic system of representation develop as children experience real transactions with print, and as they explore by using what they already know about reading and writing. Play is one medium for this exploration.

Harste, Burke, and Woodward (1981) suggest that children are strategic in their approach to literacy learning. As they encounter written language, they continuously develop and test new hypotheses about the ways that written language works. They use knowledge from many sources to analyze situations in which they are exposed to print, and as they do so, they refine their ideas about print.

Harste et al. (1981) suggest that four central strategies are used by successful readers and writers of all ages. Textual intent involves the expectation that print will make sense, and the expectation of what the sense will be like. Not only is there "an expectation for the meaning and function, but also an expectation for the kind of print, the style of print, the semantic and syntactic structure of print, the lexical form of print- in short, and for a lack of a better term, the shape of print..." (p. 49). In any reading or writing event, there is context; it is the
context which provides an expectation of what the sense will be like.

**Negotiation** involves making pragmatic and semantic shifts in interpreting and creating text. In a general sense, negotiation involves selecting what will be represented, how it will be represented, what can be assumed, and what kind of context is important to make the representation clear.

*Using language to fine-tune language* involves building upon what is already known by using it in different ways (reading, talking, writing).

**Risk-taking** involves experimenting with how written language works. It is influenced by both the attitude and the actions of the language user. Willingness to explore and test hypotheses is of central importance. Children often drop this strategy when they are exposed to instruction that demands that they use conventions or attend to correctness of form.

In Chapter 5, I describe the ways in which the children in the study test the hypotheses laid out by Ferreiro and Teberosky, and develop the strategies laid out by Harste et al. (1981), as they engage in literacy events within play.
Research on Literacy Through Play

With my framework for understanding the development of literacy through play established, and the concepts of oral and written language development presented, I now further consider the research that has been conducted in these areas. First, I discuss the kinds of preschool play environments that are facilitative of literacy development, then I discuss the role of peers, and then the role of adults in preschool children’s literacy development.

The Play Environment

A number of studies have shown that a carefully designed play environment with familiar objects and accessible reading and writing materials can have a highly facilitative effect on children’s literacy development (Hall, 1987; Neuman & Roskos, 1992, Woodward, 1984). Educators in preschools and kindergartens worldwide (including all of the teachers in the present study) are building play environments that are filled with print. A print-rich preschool classroom contains reading materials of all types. Storybooks and other children’s literature are important, but do not take precedence over the other types of print that a child sees throughout the day outside of school.
A typical print-rich classroom includes items such as packages from foods and toys, recipes, receipts, postcards, letters, lists, games, puzzles, magazines, newspapers, signs, posters, and any other documents that are meaningful to children. Writing materials such as paper, envelopes, notepads, pencils, crayons, and markers are also available. Even very young children can participate in creating a literate environment by dictating stories or labels, or by helping put a display or a bulletin board together (K. Goodman, 1986). With help from their parents, they can bring in literacy materials from the home that are relevant to their personal lives. A print-rich classroom is furnished with the kinds of print that children see throughout their daily lives.

Thematic centers in a preschool classroom might include all of the types of print that would be found in a post office, a veterinary office, a hair salon, a fast food restaurant, or on a neighborhood street. Woodward (1984) found that when thematic play materials were introduced into a preschool classroom, children played for longer periods of time, and engaged in more elaborate play themes.

Hall (1987) conducted an investigation in which literacy objects were embedded into the sociodramatic play area of a preschool classroom. The goal was to make the environment as representative of the real world as possible.
The play area was filled with cookbooks, recipe pads, a recipe notebook, writing utensils, envelopes, newspapers, letters, diaries, planners, telephone books, books, catalogs and other print material. Videotaped observations occurred over a period of four days. A total of 290 literacy events were counted.

Hall notes that the children in the study demonstrated knowledge of the purposes of print, and of the social contexts in which these purposes are typically embedded. (All of the teachers in the present study have designed print-rich play areas.) The children in Hall’s study read and wrote for a variety of purposes. They used written language to establish ownership and identity, to build relationships, to remember, to request information, to record information, and to fantasize and pretend. The print-rich play environment allowed children to use literacy in real-world ways.

Hall wanted to see if the same behaviors would occur in other contexts, so an office area was set up in another preschool classroom. Although the children demonstrated that they were not quite familiar with the general purpose of offices, they eventually developed a literacy-related play script in which they used and talked about the materials that had been provided. Hall describes four levels of play in which the children engaged. They became
involved in physical exploration of the office materials as they banged staples, pushed buttons, and used the stamp. They engaged in symbolic exploration, which was characterized by writing and talking. They used script-related language as they organized the context of their play. And finally, they engaged in their play as literate people, by using the literacy materials in appropriate and meaningful ways.

Neuman and Roskos (1992) also investigated the effects of the play environment on children’s literacy behaviors during play. They compared children’s play activities in two different preschool classrooms. One of the classrooms’ play areas was outfitted with literacy objects, the other remained as it was before the study.

The children in the classroom into which the literacy objects had been incorporated engaged in more literacy activities during play, and engaged in qualitatively different literacy activities than the children in the other classroom. The authors suggest that this difference is linked to more than the rudimentary availability of literacy objects. The key element in enhancing the play environment was that familiar literacy objects were incorporated into familiar play environments. The determinant for the increase in literacy activity was in having the play objects be reflective of the life and culture of the children. This
encouraged meaningful uses of literacy in naturally
developing play themes.

The mere creation of a print-rich play environment, however, is not sufficient for completely supporting a child's literacy development. The ways in which teachers and children transact, and mutually discover connections between print, classroom activities, and reading and writing, ultimately determine whether a classroom is highly conducive to literacy development (Teale & Martinez, 1989; Kantor et al., 1992). The provision of materials with which children might play neither engenders play nor guarantees that play will occur (Adelman, 1987). While the physical environment influences play, what is important is that children experience a "talk-filled and playful social world in which literacy-- and children's capacity for naming, expressing, and collaboratively imagining ways of living--can grow" (Dyson 1991, pp. 114-115). In the next sections, social transactions and collaborative inquiry among peers, and among children and teachers, are considered.

The Role of Peers

In Vygotsky's theory of development (1978), the sociocultural experiences of children have a great influence on their cognitive activity. Children's social experiences (with other children, and with adults) shape their ways of
interpreting the world and transacting with the world. Language plays a central role in children’s social experience (and, therefore, in their cognitive development) because it is the primary means for communication among individuals. According to Vygotsky, "children solve practical tasks with the help of their speech, as well as their eyes and hands" (p. 26). Vygotsky characterizes language as a tool for thought, and argues that all higher forms of cognitive activity are social, and transferred to children through dialogue.

Halliday (1975) identified seven functions of oral language that children use when "learning how to mean." Children use language for instrumental, regulatory, interactional, personal, heuristic, imaginative, and informative purposes. (See the section on Oral and Written Language Development above for more detail on these functions.) Children learn language as they use language for these purposes. The same principle holds true for literacy learning. "The child learns how to mean through written as well as spoken language. Initially, as children interact with the literacy events and implements in their culture, they grow curious and form hypotheses about their functions and purposes" (Goodman 1984, P. 102). They discover that written language makes sense, and that they can make sense through written language.
Kantor et al. (1992) investigated the different ways in which literacy was constructed, participated in, and used by the teachers and children in a preschool classroom. Their specific foci were school culture literacy (teacher-planned), peer culture literacy (child-dominated), and the ways in which both were interwoven into the routines and events of the classroom.

The researchers collected their data in a laboratory preschool for three quarters on a university quarter schedule. The children's ages ranged from 3-5. The researchers used video recordings, daily field notes, interviews with the children and their parents, retrospective journals kept by the two teachers, and notes recorded during the weekly meetings of the research team. The researchers separated their investigation into two phases. In Phase 1 they searched for the ways in which literacy was constructed and used across the day. This led to Phase 2, in which they located four contexts (two school culture and two peer culture), in which a high amount of literacy was used. Each of these contexts was eventually analyzed first to determine the structure of the literacy event (who initiated it, who served as author of the message, and who served as scribe), and second, to determine the function and purpose of each literacy event.
A structural analysis revealed that the children were usually the authors of the messages and writing, with the teachers acting as scribe. The structure of the event (who initiated the message writing) depended on the context and the situation.

A domain analysis revealed the function and purpose of each literacy event. Much of the literacy in the classroom was opportunistic, meaning that it was used to meet individual, social, and academic needs for the children and teachers. For example, in the school culture, literacy was a way to establish limits and procedures, individual ownership and identity, and community membership and group affiliation; it was used to accomplish goals, to facilitate representation of objects, and to demonstrate technical and literacy knowledge. In the peer culture it was also found to be opportunistic. Here, it was used to signal autonomy and friendship, to situate and proclaim issues of hierarchy, to establish inclusion in and exclusion from a group, to make connections with others, and to control, direct, and enhance play.

In sum, the researchers found that the children were learning about the ways in which literacy could serve group purposes. They were learning how to use literacy to meet the real needs arising in their everyday lives. Literacy was an integral part of classroom life; it was a way of
dealing with the real events and circumstances that were daily occurring in the preschool culture.

Cannella (1993) researched the nature of learning through social interactions. She studied joint construction of concepts and joint problem-solving among five- to six-year-old peers. First, the children were given individual pretests. Then after problem-solving in pairs, they were given individual posttests. The children in the study demonstrated cognitive growth after having correctly constructed concepts together. Correctness was determined by whether the children could replicate various spatial transformation tasks set up by an adult. In many cases, joint problem-solving was more productive than independent problem-solving. Cannella concluded that it is the nature of the interaction, more than the actual ability of the partners, that is important in problem solving. Also, "the most favorable conditions for cognitive growth through social interaction appear to be those in which sociocognitive shared experience is constructed" (p. 442); when the children worked with one another, they were most successful in constructing knowledge.

Graves (1989) suggests that the ordinary conversations and talking-through procedures of young children are very important to literacy development. Talking transactions teach children the processes they will need when they
participate in a wide variety of writing experiences. To help develop oral forms, Graves suggests encouraging children to recount events, to interpret events, to reason and negotiate with one another, to display their skills, to share the process of how they do things, to use language to structure the future, and to encounter and understand the logic behind different points of view. Graves suggests that being able to use these oral forms is very important for entry into school, and ultimate success in reading and writing.

Vukelich (1993) conducted a 4-month observational study of the writing-related peer interactions that occurred in the play of a group of kindergartners in one classroom. For the purposes of the study, the adults in the classroom intentionally stayed out of the play area. The data demonstrated that in an enriched environment, peers provided one another with information about the functions, features, and meaning of print. (This information was not always accurate.)

Dyson (1985) conducted an investigation focusing on the kinds of writing in which children engage socially. Dyson writes that the children she observed "played together using print, just as they joined together using other cultural objects" (p. 637). They used writing for a variety of child-determined functions and purposes in their play. A
major implication from the study is that teachers may benefit from observing children in the variety of contexts and situations in which they choose to write. This is useful in creating constructive writing contexts for individual children, and in creating meaningful opportunities for children to use literacy, to share their current understandings of print, and to share their written products.

Pontecorvo & Zucchermaglio (1990) also inquired into the social context of classrooms and the influences of the social context on the ways in which children construct knowledge about literacy. They found that the social interactions surrounding literacy events in preschool classrooms are characterized by tutoring, co-constructing, conflict, and arguing. *Tutoring* is characterized by an asymmetrical learning situation, in which an adult or more capable peer helps a child focus attention, and scaffold toward solution. *Co-constructing* is characterized by children merging their individual cognitive work, and building knowledge together as they talk their way through literacy events. *Conflict* is characterized by a teacher attempting to induce cognitive discord so that the child will experience disequilibrium, which is a necessary part of learning. *Arguing* is characterized by a temporary dispute in which the children dialogue toward elevated
understandings. All of these types of interactions facilitate literacy development in different and important ways.

In the present study, the work of Pontecorvo and Zucchermaglio was used to develop the categories for the analysis of the data. As their research questions were different from mine, however, their framework could not be directly applied to my data. This will be discussed further in Chapter 5.

The Role of Adults

Adelman (1992) discusses play as a "quest for vocation." According to Adelman, children learn not by actually doing something, but by reflecting on what they are doing. The teacher’s role should therefore be to help students reflect and to help them express their thoughts. The teacher does not select what the child should see in any situation; the teacher does not dictate what the child should learn; the teacher does not dictate the direction of the child’s reflections. As audience to the child’s play and discovery, the teacher asks questions from an adult’s perspective, and encourages the child to "make connections with the language of description used by adults" (p. 142). Adelman believes that it is through this type of interaction that children learn about their individual strengths. He
suggests that this reflective type of teacher-child interaction in classrooms is highly conducive to integrating play, teaching, and learning. He also adds that the implementation of this type of curriculum is possible in a class of 30 children.

A somewhat large body of research has addressed the effects of adult presence during children's play. It has been observed that adults have a desirable influence on children's play situations in a variety of ways (Bruner, 1983b; Christie & Johnsen, 1987; O'Reilly & Bornstein, 1993; Smilansky, 1968; Sylva, Roy, & Painter, 1980). Sylva et al. (1980) examined the ways in which teacher proximity to the play area affected various quantitative aspects of the playful activities of preschool children. They found that children played for longer periods of time when adults were present, even if the adults did not interact with the children. The average length of a play situation without an adult present was 1 1/2 minutes. When adults were nearby, the play situation lasted twice as long.

Bruner (1983b) found that the presence of an adult in the play area elevated the quality of play. When adults were present, children's concentration was prolonged, and the play was more elaborate. More elaborate play was characterized by more extensions of a particular theme, longer conversations, and play episodes that had means that
led to related ends. Bruner also found that children who participated in a teacher-supported intellectual activity during some period of the day played later in a more elaborate way. He suggests that teachers and children having played together served as a model for spontaneous, child-initiated play at a later time.

Vukelich (1994) examined the effects that the social conditions of play in three kindergarten classrooms had on literacy development. The study was designed to explore the effects of 1) exposure to environmental print during play with peers, and 2) exposure to environmental print during play with peers and an adult. The children in one classroom experienced the first condition described above; the children in a second classroom experienced the second condition. The children in a third classroom served as a control group, and received no intervention. At the end of the study, the children who experienced exposure to print while playing with peers and an adult were able to read more environmental print than the children in the other two classrooms. The implications are that in a literacy-enriched play setting, adults can effectively facilitate literacy development.

Morrow and Rand (1991) obtained similar results when they investigated various changes in the settings and conditions in preschool classrooms. They examined the
effects of physical design changes, the introduction of new 
props, teacher-guided thematic play, and unguided thematic 
play on literacy events. They found that the settings most 
successful in increasing voluntary literacy activity were 
those in which teacher guidance was a clear component. 
Teacher guidance did not imply that teacher-centered 
activities were occurring. Guidance implied that teachers 
introduced materials to the children’s play and made 
suggestions for how the materials could be used. In these 
conditions, children exhibited more literate behavior, and a 
greater variety of literate behavior than was observed in 
the settings in which teacher was not present.

Roskos and Neuman (1993) investigated the literacy­
assisting roles that teachers take in facilitating literacy 
development through play. They found that teachers engaged 
play in the roles of onlooker, player, and leader. In the 
role of onlooker, the teacher was the audience to the play, 
and occasionally acknowledged children’s attempts at 
literacy. In the role of player, the teacher engaged in the 
play as a genuine participant, almost like one of the other 
children. In the role of leader, the teacher deliberately 
introduced literacy props, modeled literacy behaviors, and 
demonstrated functional uses of print. The three roles were 
found to function effectively together in elevating the 
quality of children’s play; by moving in and out of each of
the roles, the teachers supported the children’s play, and their developing understandings of literacy, in a variety of ways. Goncu (1987) refers to very similar adult roles in play in terms of spectator, co-player, and director.

Roskos and Neuman (1993) found that early childhood teachers could effectively facilitate literacy development during children’s play by building upon child-initiated play. They found that this was possible without the imposition of formal instructional techniques. Even a teacher who just observed children at play could stimulate literacy attempts by being present and expressing appreciation.

Vukelich (1991) investigated the effects of adult modeling of literate behaviors during play. Dramatic play areas were transformed into a bank and a flower shop. Research assistants modeled literacy behaviors, taking special care to model, rather than direct play. Children were observed in the two settings both during modeling, and after modeling was discontinued. Vukelich found that the frequency of literacy-related play increased during modeling. This increase was not maintained after modeling was discontinued.

O’Reilly and Bornstein (1993) caution that children will employ what they have learned from modeled play only when it is not too far beyond what they can do on their own.
They also warn that most studies of this type have only examined short-term effects of modeling. Similarly, Linder (1993) suggests that "modeling must build on what the child initiates and has a desire to master" (p. 109). Cazden (1983) contends that the important goal in modeling is not that children imitate adults, but that they generalize beyond the situation in which instruction was provided.

Schrader (1991) investigated the ways in which teachers use play as a tool for teaching and facilitating literacy development. She investigated whether teacher interaction patterns were extending or redirecting. In extending play, the teacher attempted to enrich play based on cues from the child. In redirecting play, the teacher suggested activities, but ignored the child's focus. As would be expected, extending styles on the part of the teacher were found to be more effective than redirecting styles in encouraging children to incorporate literacy into their play. This emphasizes the importance of what Monighan-Nourot et al. (1987) refer to as the interpretation of play. As interpreters of children's play, teachers become aware of children's play themes before they enter the play.

All of these studies demonstrate the special role of teachers in facilitating literacy development through play. It is important, however, that children do not see their teachers "...as the source of the only, or all, truth and
the dispenser of unchanging facts and rules, but as an expert learner, a person who continues thinking and exploring..." (Weininger & Daniel 1992, p. 14). These studies demonstrate that teaching through play prevents this view on the part of children when the teacher acts as a fellow learner who allows the child to dictate the course of the play. In the studies cited, effective teaching through play involved the kinds of scaffolding or facilitating that were described in Chapter 1.

A characteristic supposition of all of the authors of these studies is that children best learn things that make sense to them (Wood, 1988); to assume that some preconceived set of plans or objectives will meet the needs of each student in a preschool classroom is to assume that all children learn in similar manners. Another thread which weaves throughout these studies is that adults can and do support literacy development through play.

It is also important to recognize that teachers are not the sole facilitators of learning in early childhood classrooms. In the section on The Role of Peers above, it was demonstrated that children have a strong influence on their peers' literacy development. As Christie and Johnsen (1987) state in a review of studies which have been conducted on play, "preschoolers exhibit higher social and cognitive levels of play when playing with familiar peers"
(p. 127). Both teachers and peers have been found to effectively facilitate children's construction of knowledge about written language.

The studies discussed in this section provide evidence that play is an effective medium for development during the early childhood years. In order to enact the most enriching and effective preschool curricula, it is necessary to develop further understandings regarding the nature of literacy interactions during play experiences. In this society, which places such a high value on literacy, it is pertinent to learn as much as possible about ways in which preschool teachers can promote purposeful, meaningful literacy experiences in the lives of young children.
CHAPTER 3

METHODS FOR INVESTIGATING LITERACY THROUGH PLAY

Two of the primary purposes for conducting the study were to investigate the ways in which literacy events take place in preschool classrooms during play, and to investigate the ways in which the interactions that take place during these events influence literacy development. These major purposes led to a third goal, of building theory regarding the nature of literacy development in preschool, and a fourth goal, of developing insights about the kinds of interactions and practices that are effective and practical in facilitating literacy development.

Participants and Settings

I used a multiple-case design to organize the collection and analysis of the data. In the context of this study, a case is defined as a community of learners (children, teachers, and others) who share a classroom. Yin (1989) suggests that the logic behind using a multiple-case design requires that cases are selected for either literal or theoretical replication. The goal of theoretical replication is to select cases that would produce contradictory results. The goal of literal replication is to select cases that would produce similar results. Literal
replication was used in selecting the cases for the present study.

Criteria for the Selection of Participants

It was important to achieve literal replication for several reasons. First, the kinds of comparisons that one could make by obtaining contradictory results are not relevant to answering the questions of this study. A major goal of the research was to build theory related to the relationships between play and literacy. Hall (1991) stresses that in order to study the relationship between play and literacy, it is necessary to observe children in situations where they are able to demonstrate what they do when they play with literacy. This made it necessary for the situations to be similar, at least with respect to classroom activities pertaining to play and literacy. Classrooms where both play events and literacy events are treated as important to development were selected.

Second, it was important to observe in classrooms where play and literacy are treated as mutually supportive, rather than as separate entities. This meant that the children would have to have many opportunities to use literacy as part of their play.

I selected three classrooms after visiting an initial pool of six. I inquired into the teachers' practices and
views related to literacy by engaging in a brief interview, a brief visit to each classroom during play, and a visual inspection of the physical environment of each classroom. This was executed in the following manner.

To gain access to the schools, I explained my purposes to the directors and participating teachers at each school. I informally interviewed them to determine whether literacy is encouraged in their school (as opposed to the philosophy that literacy facilitation should not occur until kindergarten, or in the case that the school functions primarily as a facility for child care.) Next, I visited each classroom with the purpose of determining whether the environments were rich in different types of print and writing materials, and whether the children had access to these materials during play.

These criteria helped me to select the 3 classrooms that I believed would allow me to most productively answer the research questions, and eventually, to meet the goals of the study. Four teachers, 2 teacher assistants, and approximately 60 preschool children participated in the study. The 4 teachers were working in 3 separate classrooms, in 3 separate schools. Two of the teachers shared a classroom.

The number of adults in each classroom were as follows. At Unity Desert School, there were two teachers (1 male, 1
female). At St. Joseph's Preschool, there was one teacher (female) and one assistant (male). At West Elm Children's School there was one teacher (female), and one assistant (female). All of the teachers and the female assistant were Euro-American. The male assistant was Hopi.

Throughout the dissertation, I use the term Euro-American to describe individuals who are, or who are apparently of European descent. Similar terms currently being used by other researchers are: Anglo American, Caucasian, European American, and White. I did not inquire into the specific backgrounds of the children in the study beyond what the teachers told me.

The following is a description of each setting, and of the participants in each setting. As the teachers engaged more often, and more actively than the assistants in most of the recorded events, they receive special attention. In this section, the children are described in terms of their group characteristics. They are not described on an individual basis at this point because there are so many. In the next chapter, when specific scenarios are described, more detailed information on certain children is provided as it is relevant. Pseudonyms are used for the all of the children, teachers, and schools.
Unity Desert School

Unity Desert School is part of a home. The school/home is situated in a quiet, middle-class neighborhood in central Tucson. The school is operated by Trina and Kevin, who live in a separate section of the building. Trina and Kevin are the head teachers at the school. One other teacher is employed part-time, but usually works only in the late afternoons.

The Teachers

Trina is in her early forties. She usually wears casual dresses and skirts, comfortable shoes, and little jewelry or make-up. She has medium-length brown hair, and sparkling green eyes which often well with tears when she talks about the children at her school. Based on the substance of our conversations at these times, it is evident that the tears reflect the pride and affection she feels for the children. While Trina is soft-spoken, reserved, and quietly reflective in conversation, her movement about the school is full and energetic.

Kevin is also in his early forties. He has dark curly hair which he sometimes keeps in a pony tail. He usually dresses in blue jeans and t-shirts or flannel shirts, and usually wears hiking boots or just stockings. Kevin is at ease in his interactions with parents and children, and is
deeply reflective as he discusses his ideas about children, learning, and teaching.

When Trina and Kevin work together, they sit apart from each other on the floor, or at low tables with the children. When they speak with each other, they speak softly, usually whispering about a child, or about how they will organize the day. Most of their attention, however, is directed at observing the children, carefully listening to what they are saying, and responding in language that is notable for its extremely non-authoritative tone. Kevin and Trina’s classroom is one in which children are treated as interesting people with important ideas, feelings, and experiences.

Trina received her bachelor’s degree in special education in 1974. When she left school, she was not comfortable with the way that she had been taught to teach; she was not sure why, "...it was just a feeling." When she took a special education job with a public school system, she felt that it would "...be okay. I don’t have to follow-I don’t have to use this basal, I can do what I want. So I felt like, I’ll have the freedom and flexibility...that I want, which wasn’t true."

Trina taught special education for two years, and then taught for one year at a school where the philosophies of Maria Montessori were being incorporated. "To me, at that
time, that meant child-directed, individualized learning."

When Trina moved to Tucson, she worked primarily in preschools. Eventually, she and Kevin were teaching in the same school. Kevin graduated from college with an art degree, but soon after, he became interested in education. After Kevin and Trina were married, and their son Joshua was born, Trina decided to stay home and offer child care.

Kevin kept teaching, and eventually came across a High/Scope Manual (1992). He began to share the information with Trina; Kevin believes strongly in the High/Scope philosophy. Said Trina about the philosophy, "What it did for me was help me be even more child-directed."

Kevin took training to learn more about the High/Scope philosophy. In our interview, he reflected that "...the whole idea about High/Scope, and how kids learn is from experience...They have to do things hands-on to really understand things...The play part is, they're bringing things from their own experiences, either from home, what they see, what they hear, literally, what's part of their own social life. And they're going to incorporate it somehow in their play...for a child to really learn something, they can't be told how it's done. It can't be explained to them. They have to have the experience with it. And it's all trial and error. It's all trial and error for kids the same way it's trial and error for adults to
learn something new. It’s easier to touch it and to play with it and to use it, than to have somebody tell you how to do something." Trina says that, "philosophically, we are very similar. You know, our thinking about what you should do with kids."

The Children

The children at Unity Desert School range in age from 2 to 6. As there is only one classroom in the school, all of the children are together throughout the day. The group size usually ranges from 10-15 children. Most of the children in the school are Euro-American. One is Equadoran.

The Classroom

The west wall of the classroom is the entryway from outside. Various signs and notes are hanging on the big yellow door. Wooden cubby shelves sit to one side of the door. The shelves are labeled with the children’s names and special symbols. To the other side is a large wooden climber. The climber sits on a rug which is strewn with several large pillows. At group story time, children who would rather read by themselves sit in the climber by themselves or with a friend, and look at individual books. Kevin often sits with this group as Trina reads to the large group.
On the north wall is a computer, and a book shelf filled with children's literature. Two steps down into a smaller room lead to an easel, a large shelf with art materials, and two small tables with small chairs around them. On the other side of the step-down is a large shelf holding a stereo and records up high, and large blocks and some assorted toys down low. Several of the shelves in this area of the room are stocked with pencils, markers, and a variety of kinds of paper. The children have access to this material during play time.

The east part of the classroom is an arched entryway into Trina and Kevin's home, but it is blocked off by the back of a couch and a stand-up mirror. There are boxes of blocks and toys along this wall.

The south wall of the classroom has two large, low windows. There are shelves full of toys along this wall, as well as a menagerie of animals, including two rabbits, a rat, and a guinea pig. The housekeeping area is also along this wall. Throughout the classroom, there are labels, signs, and samples of children's writing on the walls. Many of the toys, packages, and other play materials also contain print.
St. Joseph's Preschool

St. Joseph's Preschool is housed in a Presbyterian Church located one block from a frequently travelled street in central Tucson. (The preschool does not provide religious instruction.) The school is in a middle-class neighborhood with several bus stops and businesses within short walking distance.

The Teachers

Candy is the lead teacher in her classroom. She has medium-length blonde hair, which is tidily curled under to frame her face. She is thin, and dresses in stylish outfits which are coordinated from jewelry to shoes. Candy smiles a lot. She is in her early forties.

Preston is the assistant teacher in the classroom. He is dark in complexion, and has long black hair which is always held in a low pony tail. Preston is Hopi, and spent part of his youth on an Indian reservation in New Mexico. He has had some training in early childhood education. Preston is in his late twenties.

Candy and Preston joke with each other often. Usually Preston teases Candy, but Candy always responds with a taunting of her own. As they go about their routines, they often talk to each other about the children, particularly about the amusing or clever things that they do and say.
Candy is certified to teach kindergarten through eighth grade. She says that although her degree is technically for older grades, she enjoys teaching children during their early childhood years. She has taken some continuing education courses for early childhood, and reports that since obtaining her degree, she has "learned a lot and taken a lot of classes geared for early childhood, and whole language." Candy started her teaching career as a substitute at St. Joseph's, became an assistant, and then took her current teaching position. She has worked there for ten years.

Candy believes that her role as a teacher, particularly with reference to literacy development, is to be a guide. "I think children should be encouraged to read and write. They don't need to be taught to read and write. They learn themselves. I think [a teacher should be] there to be their guide."

The Children

The children in Candy and Preston's classroom are referred to, within the context of the school, as The Alligators. The Alligator room at St. Joseph's Preschool is one of three classrooms for 4-5 year olds. Most of the children in the class were four at the beginning of the study.
Usually, 15-18 children are present for the morning session. Approximately half of these children are present for the afternoon session, when they are joined by other children. Candy and Preston teach together during both sessions. I focused primarily on the children that were in Candy and Preston’s morning session.

Approximately 1/3 of the children in the classroom have at least one Mexican American parent. One child has a Greek parent. In the afternoon session, one child is Chinese-American. The other children are Euro-American.

The Classroom

On the west wall of the classroom are three large windows framed with colorful curtains and blue blinds. The wall is yellow. A paper "Birthday Train" hangs on the wall, with a colorful car for each month. All of the children’s names and birthdates are printed on the train. Under the windows is a shelf at eye view for the children. The shelf is stocked with pencils, puppets, books, games, and other toys. The children have free access to these materials during play times.

Beneath the shelf three large pieces of poster board, on which a story is written, are hanging. The children dictated the story; it is printed in Candy’s handwriting. There is also a wooden shelf by the wall containing toys and
games. Many of the toys and games contain print in some form.

The north wall of the classroom is green. Near the ceiling there is a row of paper bears numbered from 1-65. (The numbers extend on to the east wall, where they are approaching 100.) Beneath the bears a large alphabet which the children have painted in water colors extends across the wall. A pink bulletin board covered with children's art work and a purple bulletin board covered with children's art work and stories hang from this wall. A brown bulletin board holds a large piece of poster board with the children's names on it, and a yellow bulletin board is holding a piece of poster board with a poem called Vegetable Soup and more children's art work.

A long counter extends across the east wall of the classroom. There are two sinks; one is low for the children. There are some posters on the cupboards, and some labels indicating what can be found in the cupboards.

The south wall of the classroom is blue. Large letters which have been painted by the children hang from the wall. There is one letter for the beginning of each child's name. A bulletin board holds some of the children's photographs, and some of their art and writing. There is also a housekeeping area in this corner.
A few large paper leaves painted by the children hang from the ceiling. Also hanging is a poem on a large piece of poster board. Five low tables in the classroom are used for multiple purposes including snack, writing, centers, lunch, play dough, and art.

A large blue rug and a smaller blue rug are used for activities such as circle time, block play, and large floor games. There are two easels in the room, and a cardboard castle which was constructed by the teachers. There are several toys, games, books, writing materials, puzzles, and blocks all around the room. All are within reach of the children, and are used during play without permission from teachers.

West Elm Children’s School

West Elm Children’s School is located in a quiet residential neighborhood less than a mile from the central campus of the University of Arizona. Several busy streets, bus stops, and businesses are within short walking distance from the school.

The Teachers

Karen is the lead teacher in her classroom. She often wears colorful clothing and multi-colored suede boots or
leather sandals. She has short, dark hair with a grey streak near her brow, and large brown eyes which she lines with dark make-up. Karen is in her mid-forties. At school she is often engaged in dialogue with her children. She has an air of business about her as she moves purposefully through the school from child to child, room to room.

Martha, the assistant teacher in the classroom, is a recent graduate from the University of Arizona with a degree in early childhood education. Martha plans to go back to college to obtain her teaching certificate. She is in her early twenties.

Karen received a degree in art education, and taught art for one year at a Junior High School in Rocksbury, Massachusetts. Karen refers to this area as "the ghetto of Boston." Karen recalled in our interview that "I had plenty of experience for one year to know that I was out of teaching (laughs). And I've been, you know, twenty years out of it." Karen owned a shop in Tucson for several years before she decided to go back into teaching. "Now I'm back to the situation, where I come to understand teaching in really its purest form. As they get into grade school, it becomes so written and rectangular. Here, teaching is providing environments for play, and learning through play. And I feel that's how Sue's trained me to understand it, and
I'm so happy with it and comfortable with it." (Sue is the director at the school.)

The Children

The children in Karen's classroom are referred to within the context of the school as the Rainbow Kids. The Rainbow Room is designated primarily for the 4-5 year old children at the school. As the children are permitted to visit other classrooms when they wish, and permitted to choose whether they will play inside or outside, the group-size in the classroom can range from 1-15. Usually, there are 8-10 children in the classroom with one or two teachers.

Approximately 2/3 of the children in Karen's classroom are Euro-American. One child is Korean (adopted). Another has one parent who is Chinese (raised in Sri Lanka); the other parent is from India. Another child is Korean and Mexican.

The Classroom

Three arched windows decorated with transparent paper art projects take most of the space on the west wall of the classroom. The children have written their names on their art work. Two bulletin boards are hung on the other part of this wall; the teachers change the art work here occasionally. In one corner, an area with stuffed animals
and a small fish aquarium has been blocked off from the rest of the classroom to provide a private refuge for the children. A book case is used to separate this corner from the rest of the classroom. A sign on the top shelf of the book case reads, "A teacher can help you with these books." A housekeeping area is set up in the other corner.

The north wall has one large arched window, and two arched entryways. There is a large bulletin board on this wall with a calendar, its numerals, a name chart with the children's photographs, and two flags which the children have decorated. There is also a small Bamboo Terrace Restaurant calendar, a China poster, and other items of interest, which are frequently rotated.

The east wall is used as a passageway for the entire school. It is divided from the classroom by low shelves which are stocked with several art materials, games, and a few toys. The children are permitted to use these materials whenever they wish. A large iguana cage is also used to block off the hallway from the room. On the iguana cage are several teacher-written quotes from the children. In the passageway there is a bulletin board and a fireplace which is not usable as such, but which is painted gold and black, and holds some rugs, a blanket and some stuffed animals.

The south wall of the classroom has an arched entryway with French doors which lead into the kindergarten
classroom. The doors have glass windows, with pink and white curtains. There are two bulletin boards on this wall; both are used to hold children's art work and writing. There is also a computer against this wall, which the children frequently use to play language or picture games.

There are two small, round tables in the classroom, and some other tables which serve a variety of purposes. The room's wooden floor is covered with a large, blue rug.

Six large felt banners hang from the ceiling. They are all different colors, and there are different pictures on each. The pictures are of a sun, a dinosaur, flowers, the moon and stars, clouds and a small bluebird, and a large bluebird.

Data Collection

In this section, I describe the techniques I used to gather the data from the three classrooms. Because the strategies I used to ensure that the conclusions would be reliable and valid are embedded in these techniques, they are also discussed here.

Logistics

I observed in the three preschool classrooms over the course of 16 weeks, beginning in January, 1995. I visited each of the classrooms two to three times per week. The
length of each of these visits ranged from one-and-a-half to three hours. The total amount of time I spent observing in each classroom ranged from 70 to 85 hours; a total of 230 hours were spent observing in the classrooms. Erickson (1986) asserts that in order to warrant key assertions, it is very important for researchers to obtain adequate amounts of evidence. I specifically chose to collect the data for 16 weeks, as I believed that this amount of time would enable me to observe a sufficient amount, and a wide enough range, of literacy events to gain an understanding of how the interactions during these events influence children's literacy development.

According to Erickson, it is also important to obtain a variety in kinds of evidence. Triangulation (obtaining a variety in kinds of evidence) was achieved through observations, interviews, consultations with the participants in the study, the collection of writing samples, and the collection of other relevant documents from each school.

The purpose for collecting data from several sources (for triangulating) is to ensure that the inferences and interpretations coming from the research are warranted (Erickson, 1986), and to allow researchers to rule out as many rival interpretations and inferences as possible (Sevigny, 1981). Triangulation also increases the
researcher's chance of coming across information that might disconfirm key assertions. This is important because when disconfirming evidence is found and examined, the researcher is less likely to make only favored, or expected interpretations of the data (Erickson, 1986).

**Observations**

Throughout the process of data collection I specifically attended to the interactions that transpired among the children and teachers as they engaged in literacy events during play. I used a laptop computer to record my observations, as well as an audiotape recorder. On occasion, the audiotape recorder was fitted with a battery-operated microphone, which the teachers connected to their collars. Field notes were taken during all of the observational sessions.

I did not limit my note-taking and recording to literacy events; I also recorded the children as they engaged in activities such as coloring, drawing, block play, and sociodramatic play. Sometimes, the literacy interactions were brief enough that I could record them accurately by laptop. At other times, I relied heavily on the audiotapes. All of the audiotapes were transcribed, regardless of whether they contained literacy events.
It was important to document play experiences as they progressed with and without teacher participation. This was crucial to understanding the kinds of changes that occur when teachers enter children's activities, and allowed me to develop insight about the ways in which teacher participation influences children's play events.

My goal during each observational session was to record all of the literacy events that I could see happening in the classroom. Every time a literacy event began, I turned on the recorder and described what was happening in my notes. As I took notes, I attempted to use only low-inference descriptors. In other words, I tried to record verbatim accounts of the events I observed, rather than using evaluative terms. I recognize that even verbatim accounts are not totally objective. Even "thick description" (Geertz, 1973) reflects the particular understandings and biases of the researcher as well as the theoretical goals and definitions upon which the researcher approaches the investigation (Ochs, 1979).

Because of this, it is important to make my own position on certain issues as clear as possible. First, I believe that children actively construct knowledge as they experience the routines, actions, and values of the members of their sociocultural community. This general philosophy is widely accepted within the educational community (Y.
Goodman, 1986; Kantor et al., 1992; Rogoff, 1990; Teale, 1986; Vygotsky, 1978). I also believe that children learn to read and write in much the same way as they learn about the rest of their world- not from being taught directly, but through active, meaningful experiences.

As I discussed earlier, my choice of participants reflects these beliefs. I purposely chose teachers who had similar ideas about the ways in which children learn, and who seemed to be putting their beliefs into practice. This was important to the goals of the study, as I wanted to describe situations that I thought to be effective.

A potential dilemma with my choice of participants is that from my perspective I was observing highly effective teachers. This bias may have led me to partiality in making my interpretations; I may have focused more on observing what I believed to be constructive ways of facilitating learning than on situations which were less effective. Erickson (1986) suggests that this kind of threat to the validity of findings can be reduced by searching for disconfirming evidence. So, in each literacy event I consistently looked for situations in which teachers were directly teaching instead of facilitating learning. In fact, part of my coding scheme was designed to seek out such situations.
When I was designing the study, I knew that it would be impossible to record, or even notice all of the literacy events that occur in a classroom each day. I determined that this would not prevent me from meeting the goals of the study as long as I recorded as many events as I could, and as long as I recorded every event that I saw, rather than choosing which events to record.

During the periods of time when no literacy events were apparent to me, I recorded the actions and interactions of children who were playing in areas of the classroom where literacy events were most likely to take place. For example, if I had to choose between a block area and a housekeeping area, I usually chose to record events in the housekeeping area because this area of each classroom contained more print, and more writing materials. When this was the situation, however, I usually made an attempt to survey the rest of the classroom, listening and looking for literacy events.

Writing Samples

Writing samples were collected as a supplement to the field notes. They are used in Chapters 4 and 5 to make the nature of certain literacy events clear and concrete, and to demonstrate the kinds of writing that occur in preschool classrooms.
Interviews with the Teachers

All of the teachers were interviewed at the beginning of the study. From the start, I wanted to know about their views on play, literacy, teaching, and learning. The following questions are representative of the initial lines of inquiry I pursued with each teacher.

1. What do you do when your students are playing?
2. Do you ever join their play? If so, what do you do when you join the play?
3. Do your students ever engage in reading or writing during play? Do you ever become involved with your students when they read or write during their play? If so, what do you do? If not, why?
4. Do you think children should be encouraged to read and write?
5. Do you think children should be taught to read and write?
6. Who initiates the reading and writing that might occur during play?
7. Would you like to talk further about the process of learning to read? Learning to write?
8. What are your beliefs about how children learn? What are your beliefs about teaching, considering what you believe about learning?
9. How do reading and writing influence children's learning to read and write?

**Interviews with the Directors**

I used the same set of questions to interview the director of each school (In the case of Unity Desert School, the two teachers acted as the school directors). I interviewed the directors to gain an understanding of the overall philosophy for the schools, and because I thought their beliefs would reflect the teachers' beliefs, or at least have an influence on the their practices.

**Talk with the Children**

I did not formally interview the children, but I often asked them to tell me about their play or their literacy events. In considering the goals of the study, this was more appropriate than trying to learn about what they were doing with literacy outside of play events. I did not become directly involved in their play; my goal was to remain as unobtrusive as possible so that I could observe literacy events as they took place without an outsider's participation. I moved around each classroom often, and either sat on the floor, or at a table next to the children, holding the computer in my lap. I avoided eye contact when possible, in order to further remove myself from the play.
LeCompte and Goetz (1982) warn that various reactions to an observer distort the kind of information that is shared, and influence the way participants act in the presence of the observer. Also, perceptual biases on the part of the researcher may not be as thoroughly examined when the researcher participates in events, leading to a possible misunderstanding and misrepresentation of meaning.

From experience I knew that if I became involved with the children, they would begin to rely on me to perform the same kinds of actions and responsibilities as their teachers. I felt that this would detract from my responsibility as a researcher to accurately record events. Moreover, part of my goal was to learn about teachers, and if I were to participate in an activity, it would probably have changed the ways in which the teacher would have participated.

**Consultations**

Throughout the process of inquiry, I consulted with the teachers about various aspects of their work, and about the kinds of interpretations I was making about the events in their classrooms. In the early weeks, most of our discussions centered around my getting acquainted with the children and the programs, and my learning about the teachers' philosophies related to working with young
children. Two of the teachers initially felt tense about my presence, and told me that they were carefully monitoring much of what they said and did when I was present. It did not take long, however, to build trust with these teachers; trust seemed to develop as we experimented with frankly communicating our ideas, and as we discovered that we could learn from each other.

As the research progressed, all of the teachers began to provide me with accounts of literacy events that they had observed; they saved examples of children's writing; they reported on the different kinds of progress that various children were making. We discussed the children's play activities both with and without teacher participation, and how these activities were influencing their literacy development.

I gave each of the teachers copies of the field notes I had taken in their respective classrooms. As suggested by Bogdan and Biklen (1992), I had expanded the notes with "observer comments" that reflected some of my ideas and interpretations about what was happening. I also included my written accounts of various ideas that the teachers had shared with me through our consultations. I wanted the teachers to become familiar with the nature of what I was trying to learn so that our conversations could focus on issues relevant to the study, and so that they could provide
me with relevant insights about the events in their classrooms.

One of the teachers read the transcripts as she sat with the children at nap times. Others read them in the evenings, or during the short windows of free time that they could find during the day. It was often difficult to find times to talk, but over the course of the study, I was able to interact with the teachers on many occasions and talk with them about their children, their philosophies, and their ideas about the literacy events in their classrooms.

Toward the end of the study, I gave the teachers copies of the categories I was beginning to develop, and asked them to respond. The categories showed the patterns of interactions between children and children, and children and teachers as they engaged in literacy events. LeCompte and Goetz (1982) suggest that participant confirmation of key interpretations of the data enhances the reliability of the conclusions.

All of the teachers thought that the categories made sense and represented the kinds of interactions that were occurring during literacy events in their classrooms. Candy and Trina made no further comments on the categories. Karen reflected that the way I had laid out an earlier set of categories would make more sense to a visual learner than the latest, revised set. She believed, however, that both
sets accurately reflected the events in her classroom. As I developed the final lay-out of categories, I kept Karen's contribution in mind, and continually worked toward a visually appealing diagram.

Kevin made a suggestion that ultimately led me to revise the titles of my major categories. The revision made the titles more accurately describe the focus I was taking in my analysis, and helped me to direct my attention to this focus. This revision is further discussed in the result section, where I describe the development of the categories.

Kevin and Trina helped me to establish coding reliability. After the data were collected, and the final set of categories had been developed, I located all of the literacy events in the field notes, and coded them as to whether they involved children with children, or children with teachers. My characterization for a literacy event was any interaction with print. I was fairly certain that I could accurately locate and code these events by myself because of the straightforward characterization.

I was also certain that I could describe the unfolding of literacy events in a clear and accurate manner. I developed some categories to facilitate this description, but the categories did not need to be exhaustive or mutually exclusive in order to describe the unfolding.
My concern in coding was with a set of categories that required me to decide whether interactions were characterized by self-construction of understanding, joint-construction of understanding, direct instruction, or challenge. I wanted to be certain that my way of coding would make sense to others, and that others would interpret these interactions like I did. After discussing the final version of the categories with Kevin and Trina, we each coded all of the data from three of my March visits to each classroom. This constituted approximately 5% of the data, or 71 literacy events.

I had intended to obtain an interrater reliability index so that I could determine the percentage of literacy events that we coded similarly. As Kevin and Trina started coding, however, they began to encounter some of the same difficulties I had encountered while coding. It was difficult to analyze some of the events in the detail for which I had initially aimed, and it was difficult to decide whether certain interactions were characterized by joint-construction or self-construction of understandings. I decided that at this point, our time would most fruitfully be spent discussing and clarifying the categories, instead of trying to obtain an interrater reliability value.

We discussed ways in which we could consistently code the data; we discussed what the categories meant and we
began to analyze each event together. We refined the category definitions as we worked our way through the first events. Eventually we developed an efficient system of distinguishing between self- and joint construction. Soon we were able to move quickly, and code without much discussion, agreeing upon categories for virtually all of the events.

As a result of this initial meeting with Kevin and Trina, I changed my way of grouping the children in a literacy event. I had initially planned to code each child's experience with all of the individual events going on at any one time. I subsequently decided that I might be drawing imaginary lines by trying to divide an event simply because it occurred on two pieces of paper or because it involved two separate books. When children were talking and writing, or talking and reading together, I characterized the situation as a single event because of the influence they undoubtedly had on one another.

This exercise resulted more in enhancing the validity than the reliability of the findings because it allowed me to obtain further insights about how two of the teachers in the study perceived the events I was to analyze. As for reliability, I decided to treat this initial meeting as a training session, and asked Kevin and Trina to analyze a new set of data without my presence. There were 39 literacy
events to analyze in the second session; the events were taken from the last three February visits in each classroom. We coded 84% of the events with consistency. After the meetings with the teachers, I reanalyzed all of the events that I had coded previously.

My overall goal for engaging in all of the consultations with the teachers was to develop a more emic perspective than I would have developed through the observations alone. Erickson (1986) suggests that in working toward validity, researchers should come to an understanding of the both the *explicit* and *implicit* aspects of the social transactions in the field settings. *Explicit* information is knowledge that participants can readily articulate. Polanyi (1966) refers to this as *propositional* knowledge. In the context of this study, the teachers readily provided me with *explicit* information as we talked about various aspects of their work, and as I asked them questions about their beliefs, understandings, and practices.

*Implicit* information is knowledge of which the participants are consciously unaware—what they know or do automatically, without conscious realization (Erickson, 1986). Polanyi refers to this as *tacit* knowledge. To gain an implicit, or tacit, understanding of events in the field, it was necessary for me to ask the teachers questions, to
articulate what I thought I was seeing, and then to contemplate their responses. For example, I talked with both Candy and Trina about the meaning of the term developmental delay. When I asked Candy about the term, she readily articulated a definition, demonstrating her explicit knowledge. When I asked Trina about the term, she knew what I was asking, but was more ponderous in her explanation. To capture Trina's perspective, it was necessary to discuss the concept on a few occasions, and to probe, and share ideas.

The children were also sources of both explicit and implicit information. They provided me with explicit information as they told me about their school routines, what they were playing, and what they knew about literacy.

I was also interested in learning about their implicit understandings, or about how they thought about themselves as readers and writers, and about how they perceived themselves as having learned to read and write. Most of my information about the implicit understandings of the children was obtained not as I asked them questions, but as they talked with one another, and even probed one another for information. The following two examples illustrate how I came to what I consider to be implicit understandings on the part of the children. (Throughout the dissertation, I refer to myself in the transcripts as G.O.)
Aster: Could you read this, Aimee? Aimee, could you read this?
Aimee: 'From Aster to Mom?'
Aster: Yeah. My brother taught me how to write 'from,' he taught me how to write 'to,' and 'mom' and 'dad.'
Aimee: You didn’t know how to write 'to'?
Aster: No.
Karla: No one had to teach me, I learned when I was two or one years old... I learned when I wasn’t born yet.
Aimee: I learned when I was in my mom’s stomach.
Karla: I learned when I was in my mom’s stomach.
Aimee: I learned even before I was in my mom’s stomach.
Karla: I did too. I learned when I was in heaven.
Aimee: I learned when I was nowhere.

Another example:

Harry: That’s writing. That’s that scribble-writing. It may not really spell something, but it’s scribbles.
Karla: Nobody taught me that kind of writing I just knew it when I was two.
G.O.: (to Harry) When you do that kind of scribble-writing, does it say something?
Harry: No, it’s just scribbles.
G.O.: Karla, which kind did you learn when you were two—the scribble kind or the other kind?
Karla: The scribbles.
G.O.: You just knew it and nobody taught you?
Karla: Yeah. Yeah, but my mom needs that other kind of writing. Maybe when I’m in first grade I’ll learn that kind of writing.

As an example of a child’s implicit understandings about literacy, consider Karla’s statements about writing. On both occasions, she claims that she has known how to write for a long time. By conventional standards, Karla is not yet writing; most of her writing consists of invented characters mixed with capital N’s. It is evident, though, that Karla has many implicit understandings about writing.
She demonstrates the understanding that writing can be used to communicate; she demonstrates understanding that a certain "kind of writing" is "needed" to communicate, but that she does not yet use that kind of writing; she demonstrates understanding that her own writing is not like that of adults, but that she will eventually "learn that kind of writing."

These kinds of observations and interactions with both the teachers and the children helped me move toward an emic perspective of the learning communities in each of the classrooms. Erickson (1986) suggests that to inquire into what is happening in specific social transactions, and into what these actions mean to the actors helps the researcher develop understandings necessary for accurate interpretation of the data.

**Other Sources of Information**

In order to supplement the understandings I was developing through the observations, writing samples, interviews, and consultations, I also collected curriculum manuals, newsletters, letters to parents, and other written documents that were being used in the schools. These were useful in helping me to understand the goals and philosophies for each school. These documents are not part of the analysis of literacy interactions per se, but have
been useful as references. In any kind of research, it is essential to understand learning activities in terms of the wider cultural context in which these activities are embedded (Erickson, 1986; Rogoff, 1990).

**Generalizability of the Findings**

This study is characterized by a focus on three exemplary preschool classrooms. Focusing on *what could be* involves breaking apart and evaluating a situation we believe to be ideal (Schofield, 1990). This has been the case in the present study; a major goal was to illustrate what is possible in facilitating literacy development in preschool classrooms. If this type of situation is desired by others, then the understandings that have come from this study will make that ideal more obtainable.

The settings to which the present results can be generalized need not be similar to the three classrooms in this study, except that they should be early childhood classrooms. Individuals generalize as a result of personal experience (Donmoyer, 1990). As individuals experience new situations, they take in the parts that are relevant at the time, and apply them to new situations. The new situations need not be like the setting where we gained the information as long as there are some similarities to which prior knowledge can be tied.
Data Analysis

I used a process of analytic induction, as described by Bogdan and Biklen (1992), to analyze the data. Analytic induction is often used when research is based on specific questions. My specific questions focused on the ways in which play could be used as a medium for literacy development. In analytic induction, data are collected and analyzed with the purpose of constructing a descriptive model that is inclusive of all cases of a phenomenon. This process enabled me to develop a descriptive model of the many kinds of literacy events that occur in preschool classrooms, and of the social transactions that carry these events forward. This model is not only based on other theories; it also contributes to theories about literacy development, and about effective teaching practices.

Categorizing the Data

To categorize the data, I used a technique suggested by Guba and Lincoln (1981), who describe three steps which can be taken to facilitate the organization of data into systematic categories. Guba and Lincoln suggest first patterning the data, then prioritizing the patterns if there are too many categories to examine, and then determining the completeness of the categories. I conclude this section by describing the ways in which I implemented these techniques.
to categorize the data; in the next chapter I describe the categories.

My first step in analyzing the data was to look for patterns. *Patterning* involved determining whether observations among classrooms yielded any related themes. I used the first month of field notes from each setting to pattern the data. As I went through the notes, I first coded all of the literacy events as to whether they involved only children, or children with teachers. Then, using the research questions to suggest the patterns, I made a list of 1) the ways in which literacy events unfolded (Question 1), and 2) the characteristics of the literacy transactions (Questions 2 and 3). This yielded a list of approximately 15 categories for each question. This was too many categories to deal with effectively. I did not need to prioritize in order to reduce the number of categories, however; I reduced the number of categories by combining those that were related, and by choosing those that were most pertinent to my goal of describing effective and practical ways for facilitating literacy development.

Throughout the patterning process, I recoded the data approximately fourteen times, continuously making systematic checks to ensure that items within the categories encompassed a single concept, and to ensure that the categories were logically related. As I discussed earlier,
it was not until after my first meeting with Trina and Kevin that I finally emerged with a set of categories that I believed to meet these criteria.

Determining whether the categories were complete involved determining whether they had internal and external plausibility. "Viewed internally, the individual categories should appear to be consistent; viewed externally, the set of categories should seem to set forth a whole picture" (Guba & Lincoln 1981, p. 96). I verified these issues by coding a certain amount of data with Trina and Kevin (described earlier), and through somewhat less rigorous collaboration with the other teachers. Although I did not analyze every possible aspect of the data, I believe that the categories set forth a whole picture, and fit together logically.
The data for the analysis and interpretation of literacy through play were collected in three classrooms over a four-month period. Four teachers, two assistant teachers, and approximately sixty children participated in the study. The analysis is based on approximately 426 literacy events, all occurring within the context of play. I use the term approximately because, as I discussed in Chapter 1, determining when one literacy event ends and another begins is a subjective decision.

I actually observed many more than the 426 literacy events that I report, but in some situations, I could only record what the children appeared to be doing with literacy. This usually happened when more than one event was occurring at the same time, or when I did not begin to observe events until they were already in progress. Most of these situations were not included in the data analysis.

Three questions guided the analysis and interpretation of literacy through play:

1. How do literacy events unfold within the play of children in preschool classrooms?
2. What are the characteristics of the literacy transactions (among children and teachers) that take place during these events?

3. How do these transactions influence children’s construction of knowledge about literacy?

In this chapter I answer Question 1 by describing the ways in which literacy events unfold within the play of the children in the study. (Questions 2 and 3 are answered in Chapter 5.) Two sets of categories (which I explicate fully below) facilitate my answering of Question 1. The first set represents the ways in which the children and the teachers experience literacy in their play:

1) As a support for play themes
2) As a frame for play themes
3) As an extraneous aspect of play themes

The second set represents the ways in which the children and teachers construct and negotiate literacy events within play:

1) Through transactions with written language
2) Through talk about reading and writing
3) Through talk about linguistic forms and other sign systems
At the end of the chapter I draw conclusions based on both of these sets of categories, and I discuss the theoretical and practical implications of the ways in which literacy events unfold within play. I also suggest several ways in which teachers can use this information in their preschool classrooms.

Premises for the Analysis and Interpretation

Because the terms writing and reading can be ambiguous, particularly when speaking about preschoolers, it is necessary that I make my use of these terms clear. When children write with letters from the alphabet, I refer to the product as writing regardless of whether the letter patterns that they use correspond conventionally with their respective sound patterns. The following are examples of writing using alphabetic characters.

Figure 4.1 is a page from a storybook written by Aimee, a child in Kevin and Trina's classroom. Although Aimee did not read her writing aloud, from the context of the entire story, and from previous research on children's invented spellings, I was able to determine that the script reads: "Do you want to take a ride?" In Aimee's writing, the letter patterns correspond closely with their respective sound patterns:
Often, there is little or no correspondence between the letter patterns and sound patterns that children use in their writing. For example, Harry was engaged in a dinosaur play theme when he wrote the following sign, and then read it aloud as "Beware of Dinosaurs in this Country."

Figure 4.1  Aimee's Use of Alphabetic Characters

Figure 4.2  Harry's Use of Alphabetic Characters
When children write with invented characters instead of alphabetic characters I also refer to the product as writing because their intention is to communicate. Ferreiro and Teberosky (1982) distinguish between early cursive writing, "graphic characters-- closed or open curves-- linked together by a wavy line," and early printing, "separate graphic characters composed of curved and/or straight lines" (p. 180). When it is relevant within the context of this study, I distinguish between cursive writing (see Figure 4.3) and printing (see Figure 4.4). The following is a sample of Kerry’s cursive writing. Kerry did not read the writing aloud, but when asked later, she said that she had written a story:

Figure 4.3  Kerry’s Invented Cursive Writing

Karla was sitting at the writing table, talking with her friend Angie, when she wrote the following invented print characters, and then read them aloud as "rat."
When children use a combination of conventional letters and invented characters, I refer to the product as combined invented/alphabetic characters. Karla was playing restaurant, taking orders when she wrote the following combination of invented and alphabetic characters:

All claims and returned goods MUST be accompanied by this bill. Thank You
Although *scribble-writing* and *pre-writing* are commonly used to describe what I refer to as *writing*, neither term adequately describes the writing of the children in the study. I cannot use the first term because *scribble* implies that the writing is hurried or meaningless. Evidence from this study suggests that although the product may look to adults like a scribble, the process is precise and meaningful to the children. *Pre-writing* implies that children are not yet writing, when in actuality, they are not yet writing conventionally. Even the children in the study who have internalized very few conventions of the alphabetic writing system write to make sense "of and through written language" (Y. Goodman 1986, p. 6).

In a similar vein, I use the term *reading* even when a child is not reading conventionally. If a child writes a string of invented characters, or a string of alphabetic characters in which there is no apparent relationship between letter patterns and sound patterns, and then reads them, this is reading because the child is in the process of making sense of and through written language. The same holds true when, for example, a child tells the story of a book while turning through its pages. Even the children in the study who were not yet reading conventionally often moved their finger along the lines of print while making up the words. I consider this evidence that they are beginning
to make sense of written language whether or not they show an observer that they are attending to, or thinking about, print. Viewing children's early written language experiences as real reading and writing events is relevant when considering the unfolding of literacy events within play.

Throughout Chapters 4 and 5, the teachers' names are italicized both in the transcripts and in the text. I also use italics (in the transcripts) to show when the children and teachers emphasized or stressed a word or a phrase in their oral language. I use three periods (....) to signify a brief pause in dialogue. When I use two separate examples in a row, without commentary to divide them, I show the division with three asterisks (***)

When children spell aloud, or when they name letters, I separate the letters by a dash (-). For example, if a child conventionally spells the word cow, the transcripts read: C-O-W. When children write aloud, and orally divide their words into syllables, I also use a dash (-) to separate the syllables. For example, if a child writes (with accompanying oral language) the word yourself, and pauses between the two syllables of the word, the transcripts read: your-self.

The examples that I use throughout the dissertation are representative of many situations in which similar actions
and dialogue took place. The inferences that I make are based not only on the examples cited herein, but on many analogous situations. I purposely chose examples that represented commonly occurring situations. In some cases, I use examples that are not representative of commonly occurring situations, in order to provide elements of disconfirming evidence (Erickson, 1986). In these cases, I make it clear that the type of situation I am reporting is not common.

When it was possible, I used examples coming from the same children, as opposed to making random choices. My purpose was to help the reader come to know certain children more intimately than would be possible through reading only briefly about all of the 60 children who participated in the study.

The Unfolding of Literacy Events Within Play

In the section which follows, I provide the descriptive information that is needed to answer Question 1: How do literacy events unfold within the play of children in preschool classrooms? Figure 4.6 displays the relationship between all of the categories used in the entire analysis. The part used to answer Question 1 is printed in bold face:
LITERACY EVENTS UNFOLD AS WRITTEN LANGUAGE IS USED (Question 1):

| To Support Play Themes | To Frame Play Themes | As an Extraneous Aspect of Play |

As literacy events unfold, they are constructed and negotiated as children (Question 1):

- Transact with written language
- Engage in talk about reading and writing (plans, purposes, abilities)
- Engage in talk about linguistic forms/other sign systems

Their transactions are characterized by (Questions 2 & 3):

- self-construction
- joint construction
- direct instruction
- challenge

As literacy events unfold, teachers participate in construction and negotiation as they (Question 1):

- Transact with written language
- Engage in talk about reading and writing (plans, purposes, abilities)
- Engage in talk about linguistic forms/other sign systems
- Contribute appropriate materials/props/ideas

Their transactions are characterized by (Questions 2 & 3):

- self-construction
- joint construction
- direct instruction
- challenge

Figure 4.6 The Unfolding of Literacy Events Within Play
Figure 4.6 shows that literacy was experienced within play as the children and teachers used reading and writing to support play themes, to frame play themes, and as they encountered literacy as an extraneous aspect of their play themes. These categories are mutually exclusive.

Regardless of how literacy was experienced within play, literacy events were constructed and negotiated: 1) through transactions with written language; 2) through talk about reading and writing; and 3) through talk about linguistic forms and other sign systems. Whether literacy was a support, a frame, or an extraneous aspect of play, the events were constructed and negotiated through the transactions themselves, and through the two kinds of talk. As can be seen in the bottom half of the figure, the teachers took on a special role. They contributed appropriate materials, props, and ideas.

In the following sections, I define each set of categories, and I describe the categories using portions of the transcripts for examples. Conclusions, theoretical issues, and implications related to Question 1 are presented at the end of this Chapter.

How Literacy is Experienced In Play

In each of the classrooms, literacy was an integral part of daily life; it served a variety of functions both
within and outside of play. My initial criterion for choosing these classrooms, that literacy would be an important part of the preschool day, was verified in what I observed. In play, the children and teachers used literacy as a support for play themes and as a frame for play themes. They also encountered literacy that was extraneous to the play themes.

Children Use Literacy to Support Play Themes

The children engaged in play themes which ranged from the highly imaginative (e.g. spirits, dinosaurs) to the life-like and realistic (e.g. post office, doctor). When literacy was used to support a play theme, the theme determined the ways in which the literacy would be used. For example, restaurant was often a play theme in Kevin and Trina's classroom. Within the context of restaurant play, the children wrote orders, read orders, read menus, and talked about what they had read and written. The teachers usually participated as customers, reading menus and placing orders. As is characteristic of this category, the play theme (restaurant) prompted the children to using literacy in a particular way (reading menus and writing orders).

In this way, written language served a function in play in much the same way that it serves functions in real life: people who go to restaurants use written language to find
out what is in menus; people who work in restaurants use written language to remember what customers have ordered.

Consider another example of children using literacy to support their play theme. As in the restaurant example, the children are playing with workplace literacy: Cindy and Errin are sitting together in the office center. They have been looking at a phone book, talking on a telephone, and pressing buttons on an adding machine. Cindy writes a note to inform someone that she is going to the airport; Errin writes a fax to notify someone of a friend's death.

Cindy and Errin referred to themselves during this play as "officers." Both the fax and the note served an informative function in their officer play; they let other players know what was happening. Both of these pieces of written language also served an interpersonal function; they provided a means by which Cindy and Errin could communicate with individuals who were not immediately present. In real life, faxes and notes serve these same functions; they inform people about imminent events, and they provide a means for interpersonal communication. As in the restaurant example, the play theme prompted the children to using literacy in a particular way, and the use of literacy was functional. In both cases, the use of literacy extended the play into new directions and carried the play forward.
Because of the often imaginative nature of play, however, the themes were not always realistic, or reflective of life-like situations. Even in the highly imaginative play events, the themes suggested the functional nature of the literacy event, and the children's use of literacy reflected real-life uses of literacy.

Consider some examples. Harry, while engaged in dinosaur play, used literacy to serve an informative function; he wrote a sign: "Beware of dinosaurs in this country. They could hurt you very badly." Karla, playing with anthropomorphism, used literacy to serve a communicative function; she wrote a letter to a mole: "Dear Mole, I'm sorry that I can't buy all the jewelry because it won't be fair to the other animals. Karla". Heather was doing the same when she wrote a card to a dog: "Dear Dog, I hope your valentine's day was very good." Despite these highly imaginative contexts, the children's use of literacy was functional, and it reflected the ways in which literacy is used in real-life: people really do write signs; people really do write letters; people really do write cards.

When the children used literacy to support their play themes, they revealed their awareness not only of the functions of written language, but also of its various genres. The style, form, and content of their writing often reflected the style, form, and content of real-life pieces.
of written language. For example, restaurant workers wrote lists, which is an appropriate format for taking restaurant orders; the notes written by Karla and Heather contained many of the conventions of real-life notes (both used dear, both wrote in the first person, Karla signed her name); Harry's dinosaur sign read like a real-life warning sign. By engaging in a diversity of play themes, the children explored diverse aspects of the functions and genres of written language.

The children's pragmatic knowledge about function and genre was both limited and expanded by their fantasy play. It was limited by the play themes themselves, as the themes provided boundaries for the ways in which literacy could be used. For example, when the children engaged in restaurant play, they followed rules for restaurant workers, and used literacy in ways that they believed restaurant workers should use literacy. Vygotsky (1978) finds this simulation of adult behaviors to be a typical tendency among children, and writes that this tendency allows children to intimately explore a variety of complex, culturally-patterned adult roles.

Fantasy play also enabled the children to expand their pragmatic knowledge. As they played, they experimented with a variety of functions and genres, and tried out these functions and genres on their peers, teachers, and parents.
They played as police officers, pediatricians, post office workers, mothers, fathers, and teachers, and in each of these roles, they experimented with the functions and genres that they expected these individuals to use.

Each literacy event provided an opportunity to share and develop pragmatic understandings about written language. In many ways, the children's pragmatic knowledge was both limited and expanded by their fantasy play. Both the limits and the expansions fostered literacy development.

In sum, when literacy was used to support a play theme, the play event suggested the nature of the literacy event. Literacy was brought into play as it served a function in play, just as literacy is brought into real-life situations as it serves a function in real-life situations. Even when the play themes were highly imaginative, the literacy was used in context-appropriate ways that reflected real-life uses of literacy. These functional uses of literacy carried play themes forward, led play into new directions, and enabled children to experiment with various aspects of function and genre.

The teachers made such spontaneous uses of literacy possible by having a variety of reading and writing materials available in the areas of their classrooms where sociodramatic play typically occurred. Such materials included paper, markers, pencils, notebooks, pads of paper,
environmental print, and workplace literacy materials. The ready availability of these materials made it feasible for the children to spontaneously use and explore written language as it served a function in their play.

Children Use Literacy to Frame Play Themes

The children also used literacy to frame their play themes. When literacy was used to frame a play theme, the literacy event constituted the play event. In other words, the literacy event provided the context for the play. In this category (as in the previous category), the literacy usually served a function, and usually reflected the ways in which literacy is used in real life.

A unique characteristic of this category is that literacy events were often initially used as a support for the children’s play themes, or they were brought into the play extraneously. When the literacy became the focus of the play, however, the event fit into the frame for play category.

The following scenarios illustrate the nature of literacy events that are used to frame play themes. In the first example, four-year-old Bowen is reading aloud from a familiar book. Diego (also four years old) and Patty (two years old) are sitting nearby, watching and listening.
Bowen: ...Silly Sally went to town, dancing backwards upside-down. (turns the book upside-down because one of the pictures is upside-down, then addresses Patty) Want to see this right-side-up?

Patty: (holding two books, but watching Bowen) I'm reading books...Can I read it?

Bowen: Yes. (Bowen gives her the book)

Patty: Silly Sally went to town, walking backwards, upside down. That's the end.

Diego: On the way she met a pig, a silly pig-

Patty: Silly Sally went to town, walking backwards, upside down.

Diego: On the way she met a dog, a silly dog who played the frog.

Patty: Silly Sally went to town, walking backwards, upside down.

They continue together in this pattern for a while, with Patty reading the main rhyme, and Diego reading the follow-up lines. Then, Diego finishes reading the book as Patty turns the pages.

Bowen, Patty, and Diego's literacy event framed their play together. The theme of their play (reading the book) was shaped by the literacy event itself (reading the book). The literacy event provided the context for the children's play.

A major function that literacy served in this event was to bring pleasure. Incidentally, the event also provided opportunities for talk about written language. The children used the terms "reading books" and "right-side-up" during this event. In many ways, talk about written language helps children to share and develop implicit understandings about how written language works. Consider some further examples of talk about written language:
Brian: What do you think you’re doing, Mario?
Mario: I’m making a copy of books.
Brian: That’s not how you make books.
Mario: I’m making a copy of a book.

***

Katie: (pointing to the title of a book) What does this say?
Kevin: If you had to make the words up, what would you say?

***

Karen is reading a book to some children.

Sabrina: Karen, can I turn the pages?

***

Cindy and Errin have been discussing the possibility that they may become blind when they are older. Cindy places her hands on a piece of paper, as if she is reading braille, and says:

Cindy: Oh, I know. You can read with your hands from a piece of paper— from typing-dots. Little dots.

In these scenarios, (and in others like it) the children used terms such as copy, books, say, words, pages, reading, and typing to refer to the ways in which certain aspects of written language work. The materials were referred to and used as cues to understanding; the materials provided the pragmatic constraints that helped the children to make their implicit understandings clear: Bowen, Patty, and Diego used their books to show one another what they meant by “right-side-up” and “reading;” Brian could see that Mario was using one book to copy into another, or to make “a
copy of a book." Sabrina could use context clues from the pictures on the book to "make the words up," as her teacher, Kevin, suggested. Errin could see that Cindy was "reading" with her fingers. Pragmatic constraints within a social context help the participants in a literacy event to understand one another's implicit meanings.

Goodman (1980) found that children who could proficiently use oral language to talk about written language in context, used this language less appropriately when the written language is taken out of context. That is, when they were placed in formal settings, and asked for definitions using a question-answer format, children used literacy-related terms less adeptly. One inference that can be made from this finding is that play may be more valuable than direct instruction in helping children to develop understandings about implicit concepts of written language, and the labels that are related to these concepts. In play, children have ready access to the materials that help them to talk about written language in an informal context.

Consider another scenario, in which Aster and Aimee used a literacy event to frame their play theme. (Note that they use the term spell in this scenario, that they spell aloud, and that they name letters. All of these utterances provide further examples of children using oral language to talk about written language.) Aster and Aimee's scenario
represents a situation in which the literacy event was
initially extraneous to the play theme, but then provided
the context for the play:

Aster, Aimee, and Trina are sitting at the writing table.
Both of the children have markers and paper, and are working
on individual drawings. Neither child is writing. Then:

Aster: Do you know how to spell 'no'?
Aimee: S-O (smiling, obviously teasing).
Aster: No (smiling, knowing that Aimee is teasing).
Aimee: I know how to spell it.
Aster: I know you know how to spell it...Do you know how to
spell 'yes'?
Aimee: H-T.
Aster: No (again, smiling at Aimee's teasing).
Aimee: I know how to spell it.
Aster: I know you know how to spell it.
Aimee: Do you know how to spell 'zoo'?
Aimee: Do you know how to spell 'on'?
Aster: A-D.

Aster and Aimee's literacy event was initially
extraneous to their individual play themes, but then turned
into a mutually experienced play event in which literacy was
the focus. The literacy was not used to support either
child's drawing. The oral transaction stood on its own, and
framed the children's play together.

This scenario also illustrates that children at play
sometimes play with written language. Aimee knew very well
how to spell the words she pretended to misspell, and Aster
was well aware that she was being teased. The children
rarely engaged in this type of talk when it might have
interrupted a sociodramatic play theme (like restaurant or office). Literacy served other purposes at those times, and, as discussed earlier, it was the children's play themes that provided the pragmatic constraints that kept play with written language from interfering with those purposes.

Play with written language usually occurred when the sociodrama was less prevalent, like at snack time, during transition periods, or when children were drawing or writing together. One obvious function that play with written language serves is that it brings pleasure to the children. And, incidentally, it brings about opportunities for children to use and develop what they know about written language.

Other examples of children using literacy to frame play themes are: Hannah and David reading a map with Karen, finding places they know; Brian writing a book, making sound effects as his friends listen; Bobbie pointing to the words of a song on a poster while a group of friends sing the words. Reading maps, writing books, and reading the words of a song all reflect real-life uses of literacy, and all serve functions in real life. The use of oral language to talk about written language often played a part in these events.

In sum, when literacy was used to frame a play theme, the literacy event provided the context, or the purpose, for
the play experience. In this category, as in the first, literacy was used for functional purposes, serving many of the same functions in play that it serves in real life.

In both categories, (as well as in the next category) oral language was used to talk about written language. I expanded on this notion in the present section, however, because the examples I chose for this section lent themselves most readily to this topic. In further examples, included throughout the dissertation, children can be seen using oral language to talk about written language in each of the three categories presently being discussed.

Literacy as an Extraneous Aspect of Play

Often, the literacy events that the children and teachers brought into play situations were extraneous to the play themes. In this type of situation, the literacy event did not become the play theme, and did not support the play theme (as in the previous sections). Instead, the literacy event was experienced as a sort of intermission to the play. After the intermission, the children were likely to return to their play themes. As in the previous categories, the children’s use of literacy was functional, but rather than serving a function in the play, it served a function outside of the play.
Consider the following example, in which Aster and Karla are sitting at a table, drawing and talking. Aster directs a question to Kevin, who is in another part of the room:

Aster: Kevin, what's for snack?
Karla: It might be popcorn.
Kevin: No, I looked at the-
Karla: The schedule?
Kevin: I looked at the schedule for snack. It wasn't popcorn. I read it on the wall. I'll go read it again. I'll look on the calendar. (Reading from the schedule) Cheezits.

Kevin, Aster, and Karla say a few more words about the snack, and then Aster and Karla go back to their drawing and talking.

In this scenario, the literacy is experienced during play, but it is extraneous to the children's play theme. It does not support the play theme. It does not become the play theme. Karla and Aster pause in their play, observe a literacy event that serves a real-life function, and then go back to their previous activity. The function that literacy served in this situation was to provide information about one aspect of daily life at preschool.

Kevin's teacher-role is noteworthy here. He purposely shows the children a way to use literacy while preserving the relevancy of the situation for the children. Note that he uses oral language to talk about written language. He says, "I looked at the schedule for snack...I read it on the wall. I'll go read it again. I'll look on the calendar."
In a similar teacher-child transaction, which occurred between Jonah and Karen, Jonah asked Karen if he could play with the remaining plaster in a bowl. Karen read (aloud) the warning label on the side of the plaster package, and then told Jonah that plaster contains lye, and that it could be dangerous to children. Jonah accepted Karen's explanation and went to another part of the play area. Both teachers modeled a literate behavior that served a real-life function.

**Unfolding: A Summary of the Notable Characteristics**

Five important characteristics extend across the three unfolding categories. First, literacy events within play were almost always driven by function. Second, the functions that literacy served in the children's play (and in their lives at school) reflect the functions that literacy serves in real life. Third, a variety of functions and genres of written language were explored in play. Fourth, oral language was used to talk about written language as many literacy events unfolded. And last, the teachers' roles in these events were to provide a print-rich environment, and to capitalize on opportune moments for teaching that were inherent in the children's play. This last characteristic is further considered in the following section.
A Special Role for Teachers

Within each of the three unfolding categories, the teachers took on complex literacy-facilitating roles. They did much more than providing the print-rich environments and making the literacy materials available. (Although these were important components of their roles.)

Their more complex roles as literacy-facilitators were embedded within the actual play events. As the teachers observed the children, they contributed materials and ideas to the play during the play. These contributions were based on what the children were doing or discussing at the moment. Kevin's reading the snack schedule and Karen's reading the plaster package provide examples of this teaching strategy. In both of these events, the teachers capitalized on the teachable moments that were inherent in the children's conversation and play.

Teachable moment strategies are characterized by the adult observing the child's activity, searching for relevant opportunities to teach. As teachable moments arise, the adult helps the child try out new ideas and see things in new ways, following the child's lead. Teachers who are successful at using this strategy show children that their own contributions to their learning are valued, and at the same time, provide relevant input from the adult perspective.
Consider another example of a teachable moment: Kevin had been observing some of the children in his classroom as they set up a store one day. Kevin brought literacy into the play by suggesting the need for a shopping list. Chloe (age 2) decided to make the list. She got a marker and a piece of paper from the shelf, and then began to write:


Kevin observed Chloe writing the list, and then further capitalized on the moment:

Kevin: I'm going to go to the store and buy something. Bring the list, Chloe.

Kevin and Chloe go to the "store." Chloe gives the list to Aster, the store clerk.

Aster: Let me read it (Aster unfolds the list and looks at Chloe's combined alphabetic/invented characters). All right we'll give you that (she gives them some play food). Is this what you needed? Is that all you needed?

Kevin's participation in this play event led the children into using literacy to support their play theme. By observing before participating, Kevin discovered a way to expose the children to an adult perspective on the use of literacy (shopping lists are helpful), yet to maintain the children's focus. Consequently, the children had an opportunity to use literacy in such a way that it served a meaningful function in their play.
Consider another situation in which Kevin again capitalized on a teachable moment: One afternoon, Todd, Angie, and Karla had been playing king, queen, and princess. Kevin was sitting nearby, occasionally observing, but also transacting with other children. Then, he brought a mailbox and a note to where Todd, Angie, and Karla were playing, and said, "Pretend this is a mailbox and I have a letter for the king and queen and the princess". Angie and Karla pretended to read the note, making up content that sounded like a letter.

In both of these scenarios, Kevin contributed to the play by making the children aware of a possibility for using literacy that was already inherent in their play. In both scenarios, he joined the children as a play partner who had taken on a suggestive play role; through his role, he suggested a literacy event. His contributions were based on observation first, and then on providing materials and ideas that were immediately connected to the children's play themes, or to their conversations.

In sum, the teachers' roles in facilitating literacy were twofold. First, they provided a print-rich environment and made literacy material available so that the children could spontaneously use it as it served a function in their play. In other words, the teachers seeded the environment so that it was ready for possibilities. Second, the
teachers engaged in careful observation that led to their participating in play, and extending play without intruding on the children’s play direction or intent. Teachable moment teaching occurred in all three of the unfolding categories.

To summarize the categories discussed so far, the three ways in which literacy events were experienced within the children’s play were:

1) As a support for play themes
2) As a frame for play themes
3) As an extraneous aspect of play

And, as a special contribution to play, the teachers used the strategy of teachable moment teaching, in which they contributed suggestive props and materials, and took on appropriate play roles.

How Literacy Events are Constructed and Negotiated

As written language was used to support play themes, to frame play themes, and as an extraneous aspect of play themes, great effort went into the construction and negotiation of the literacy events. Literacy events were constructed and negotiated as the children and teachers engaged in 1) transactions with written language, 2) talk about reading and writing, and 3) talk about linguistic
forms and other sign systems. (See figure 4.6, above.) This set of transactive and dialogic categories facilitates the completion of my answering of Question 1.

All of these components of construction and negotiation may be present within any one literacy event; the categories are not discrete, but they provide a way to discuss three important aspects of literacy within play. It would be futile to attempt to develop a discrete category system. The oral and written language that is used in play involves much more than the utterances and written products themselves. The context of the event, the purposes and goals of the individual children, the relationships among children and between teachers and children, the social roles that are established in the classrooms, and the children's individual backgrounds, all influence (and are influenced by) each literacy event.

Transactions with Written Language

Transactions with written language are characterized by children or teachers reading or writing silently or aloud. As the examples in the previous sections show, transactions with written language are often surrounded by talk about reading or writing, and/or by talk about linguistic forms and other sign systems. (These are the next two aspects of literacy to be discussed.) All three are used together in
the construction and negotiation of literacy events. I have already begun to discuss transactions, because I have already presented many examples in which transactions with written language occur. In this section, however, I specifically focus on the understandings that children demonstrate, and therefore exhibit for their peers, through their language and thinking in transactions with written language.

Consider the following example, in which Karla and Angie are sitting at the writing table, using markers and paper. Karla is telling Angie about a dog who has been taken by animal control. She begins to write using combined alphabetic/invented characters. She writes one character for each articulated syllable, showing that she is syllabic:

Karla: (writing with accompanying oral language) If you don't believe in animal control go there some day and see for your-self.

Karla continues to write and talk; later, she reads back what she has written. (The language and content changes, but she reads the same characters that she had written and read aloud earlier):

Karla: (reading) One morning three curious cats and dogs got tooken to a wonderful place called animal control. They all got tooken in cages that early morning in the summer.

Karla moves her finger across the page (left to right) as she reads.

In Chapter 2 I discussed the notion that children develop literacy as a result of having many experiences with
written language. Karla's literacy event in Angie's presence is an experience with written language for both children.

As Karla negotiates this event (with Angie observing), she demonstrates her knowledge of many conventions of written language: In the writing, she uses an if clause, and then makes a shift to the first person when she reads the story aloud. In the reading, she uses other typical story conventions: She begins with "One morning...," (a typical story beginning); she sets up an initiating event (the trip to animal control)-- and thereby introduces a problem for the protagonists-- two further conventions of stories. Her language sounds like story language, not like typical conversational language of a five-year-old. Both the oral and written stories are of literary quality and both contain typical story conventions.

As Karla composes in writing, she reveals her exploration of the syllabic hypothesis (Ferreiro & Teberosky, 1982): She uses one character to represent each articulated syllable in her story. In this single event, Karla explores both functions (telling a story, sharing knowledge with others) and features (syllabic hypothesis) of written language. This event contributes to both children's stores of experiences with written language. Although not explicitly, Karla is providing Angie with information about
written language. It is through other kinds of talk, discussed earlier as well later in this chapter, that implicit understandings are brought to a more explicit, or conscious level.

As a final example of transactions with written language, consider Joshua and Bowen's experience in the following scenario:

Joshua and Bowen are pretending to be on a rocket ship in outer space. Both children are looking at newspapers.

Joshua: (reading from the newspaper) They're sending another rocket ship.

Later, as a part of this same play theme, Joshua reads from an informational children's book:

Joshua: Okay, let's read about Saturn. (reading) It's made out of gravity, and rocks and sand. Saturn's the only planet that has rings.

Joshua and Bowen were exploring the informative function of written language (Schrader, 1991) and were using the language of exposition. They know that newspapers and some kinds of books contain factual information and they are able to use appropriate language forms to discuss this information. They discussed (imagined) current events as well as some the characteristics of Saturn.

Rosenblatt (1991) suggests that sophisticated readers bring a particular stance to each reading event. This stance influences the way that the reading is approached,
and therefore, the meaning that is constructed within the event.

Joshua and Bowen took a predominantly *efferent* stance in this event; they focused their attention on obtaining information that they could carry away from the reading experience. According to Rosenblatt, the efferent stance usually predominates in the reading of textbooks, recipes, or scientific reports. Joshua and Bowen’s taking of the efferent stance in their reading event was context-appropriate; they were reading non-fictional materials and they were seeking real information.

Although neither child was visibly attending to the print, both were exploring the possibilities for the kinds of language and information that could be found in these materials. In so doing, they provided each other with information about what they knew about informative material, what they knew about the typical language forms in this type of material, and about taking the kind of stance that would help them meet their reading goal.

Karla, on the other hand, in reading her story, took a predominantly *aesthetic* stance. When readers take an aesthetic stance, they focus on what they are seeing, feeling, and thinking while they are immersed in text; they make more personal connections than they do when they take an *efferent* stance (Rosenblatt, 1991). When Karla read her
story, she was not seeking information. She was focused on a real and personal experience. In her writing of the story, however, Karla took a more efferent stance as she discussed the reality of a place called animal control.

According to Rosenblatt, all readers engage in a process of selection and synthesis when they read, so that even the same text will be different for each reader. Indeed, if another child were to read Karla’s story, the experience might be quite different, because the child would concentrate on and remember different components of the writing. The stance that the child chose would have a great influence on the way the text was experienced.

Every reading event falls somewhere along the continuum between the efferent and the aesthetic. Which stance to take is determined by the reader within the context of the reading event. Rosenblatt argues that mature readers are automatically able to select the appropriate stance, but that this act of "selective attention" must be learned by children. Evidence from this study suggests that even four-year-old children are capable of exploring both stances in their play, and that they are able to choose stances that are appropriate to the context of the play.

In a sense, Joshua and Bowen, like Angie and Karla, were socializing each other into real-life uses of literacy; they were using literacy to serve real-life functions, and
their use of literacy was a natural part of their play. These are two examples of the ways in which the children in the study demonstrated and shared their understandings about written language as they engaged in transactions with written language. Next, I consider two kinds of talk that often surrounded children’s transactions with written language.

Talk About Reading and Writing

Through talk about reading and writing, the children and teachers established the plans and purposes of literacy events, and commented upon the children’s abilities as readers and writers. I focused on three subcategories of talk about reading and writing:

1) plans
2) purposes
3) abilities

These are not all the possible subcategories, only the ones I chose to analyze. I chose plans, purposes, and abilities, because these aspects of literacy were discussed often, and because understandings about the talk that is related to these entities are particularly useful for teachers who wish to facilitate literacy development in holistic contexts such as play.
These subcategories are not mutually exclusive. For example, a plan and a purpose could be established at the same time:

Candy: (talking to Daniel) Write your name on your paper so we know whose it is.

Or, in referring to abilities, the plan for an event could be formed:

Ronnie: (talking to Mark) You can write your name because you’re a big boy.

In this section, each subcategory of talk about reading and writing is explained, and examples are provided.

Plans

In constructing and negotiating a literacy event, the children and teachers often talked about their plans for the event. Discussions about plans helped the participants to set up literacy events, and to establish the actions to be taken with the print. Incidentally, planning was also a way for the children and teachers to provide one another with information about how they perceived and understood various aspects of written language.

In the following example of planning, Karla, Kevin, and Aster are playing restaurant. Kevin is the customer; the children are the waitresses. As Kevin orders items from the
menu, Karla and Aster take turns writing his order on pads of paper. This necessitates some planning:

Karla: (to Aster) No. You write down drinks and like... like ice cream and stuff, if they want ice cream. And I write down cake and dinner.  
Kevin: What do you think the best drink is?  
Aster: The best drink is Coke, and- or Ginger Ale.  
Kevin: I’ll take the Ginger Ale.

Karla starts to write, but Aster is supposed to take the drink orders.

Aster: No, remember? I do the drinks.  
Karla: Yeah, I’m writing down what he wanted to eat.

As Karla and Aster negotiated their duties as waitresses, they constructed a distinct set of plans, providing each other with pragmatic information about how they perceive waitresses to use literacy. Later, when they were joined by Piper, they further apportioned their responsibilities, and explained to Piper what she should write on her pad of paper. This set up the literacy event for Piper, and provided her with the pragmatic knowledge that is not only necessary for participating in this play event, but that is also a part of many real-life restaurant events (as Karla and Aster understand them).

Consider another example, in which Chloe and Angie are playing hospital. Chloe is watching Angie write on a small pad of paper.

Chloe: Can I do (write) something after you?  
Angie: Yes. I just have to write a check.
Chloe reaches to take the pad from Angie.

Angie: Chloe. Chloe! I have to write a check down!

By talking about her plans, Angie helped Chloe know what she expected (enough time to write a check). She also set up the event for Chloe (who eventually took the pad and wrote a medical prescription). As Chloe and Angie planned for this event, each provided the other with information about how they perceive literacy to be used in real-life hospital settings. Literacy events often provided frames through which pragmatic understandings could be shared.

By talking about plans, Angie and Chloe also established limits for the ways in which literacy could be used in this situation. The hospital setting and the pad of paper limited the possibilities; they provided pragmatic constraints which helped the children understand each other, and understand the ways in which literacy was being used. For example, one would not be expected to make a poster, or to write a shopping list, or to take down a restaurant order in this context. Thus, planning for the event sets up the context and helps each child understand the other's use of literacy. Because of the pragmatic constraints and the context of the play, the children did not have to guess what the other was writing, and it did not have to be explained. The context supported the literacy understandings.
Now consider two final examples of planning, in which teachers are directly involved. In the first example, Gigi brings a piece of paper to Kevin:

Gigi: (handing the piece of paper to Kevin) Write my name on it.
Kevin: You want me to write your name on it? I could write your name on it. Could you pretend to write your name on it?
Gigi: No.

Through their planning, Gigi and Kevin set up the literacy event, and they let each other know what was expected.

Kevin gleaned information about what Gigi is willing to do with literacy. Some time after this event, Kevin expressed that in this kind of situation he learns about what his children are capable of doing, and then changes his behavior to be in accordance with their needs. He demonstrated this strategy in this event; immediately following the transaction reported above, Kevin and Gigi talked more about Gigi's and others children's names. Kevin's goal was to help Gigi develop the tools she needs to write her own name.

In a final example of planning, Brian and Julie are approached by Candy, who has noticed that the children have been writing. Candy obtains information from Julie that she will put to use later:

Candy: Lots of writing over here, huh?
Julie: Uh-huh (yes).
Candy: You making stories to read to us?
Julie: Not me.
Candy: Not you? You’re just writing.
Julie: I’m too - I’m too scared to go up there (and read a story).
Candy: Oh. You’re too scared to read stories? Oh, I didn’t know that. I’ll be up there, I’ll help you if you want to try.
Julie: No, thanks.
Candy: Okay, all right. When you’re ready.

At circle time, Candy often asks individual children to read their stories to the whole group. Julie never participates in this activity. Candy obtained information from Julie during this transaction which may help her understand, and later, address, some of Julie’s literacy-related concerns.

Through planning, limits were created for the ways in which literacy could be used. Planning helped the children and teachers to set up literacy events, to know what was expected of them as they participated in these events, and to set up the context for the play. Understanding the context of the event facilitated understandings of both the ways in which peers were using written language within the play, and the ways in which written language is used in real-life contexts.

Through planning, the children provided one another with information on how literacy is used in various real-life situations. In this way, each literacy opportunity
provided a frame through which teaching (the passing of the conventions of culture, pragmatics) took place. Teachers used what they learned from participating in and observing planning to understand children’s capabilities and understandings, and to address their literacy-related concerns.

Purposes

In constructing and negotiating a literacy event, the children also discussed their purposes for taking literacy-related actions. It was through discussions about purposes that the participants explained their reasons for doing what they did with written language. The children usually set their own purposes, and often shared these purposes with their peers and teachers. It is important to consider the purposes that the children set for themselves, especially since teachers are often told to set purposes for their students.

In this section, I first present some examples of children talking about purposes that are related to language functions. Then I present some examples of children talking about purposes that are related to language features. Often, the children talked about functions and features at the same time, but I have chosen to separate these entities for the sake of discussion. In all of the following
examples, the children are talking about reading and writing, although much more than just acts of literacy are involved in their discussions.

**Purposes related to functions.** Most of the time, the children set their own functional purposes for engaging in literacy events. For example, one day, Aster announced, "I wrote my name, because then everybody knows that I wrote this." In this brief literacy event, Aster described a purpose that was related to a *labeling* function; the function that writing her name served was to let others know that this paper belonged to Aster.

Consider two further examples that involve the establishing of functional *purposes*. The following statement was made just after Karla overheard Angie discussing her (Angie’s) mother’s birthday. Karla began to make a birthday card and said:

Karla: I’m making this because yesterday was my mom’s birthday. And Angie just reminded me of my mom’s birthday, because she just said, ‘my mom’s birthday was in June.’ That’s what reminded me of my mom’s birthday.

Karla established that her *purpose* for the literacy event was to make a card for her mother’s birthday. She set her own purpose for this event, and consequently, it was immediately meaningful to her in her personal life. Karla’s
literacy event in this example served an interpersonal function; written language served as a medium through which Karla could communicate with others.

In the final example of purposes that are related to functions, Karla has just written a book about "animals that eat at night." Kevin comes to where she has been working, and they discuss the pictures and the writing that Karla has put into her book. As they turn to the last page, Karla points to some invented characters, and tells Kevin the purpose that her writing serves on this particular page:

Karla: And this says um, who, um, took the pictures--because I'm pretending those are real pictures.
Kevin: Oh, so you're pretending they are real pictures of the animals. And this (pointing to the written characters) is telling about who took the real pictures. You know a lot about animals that eat at night.

As Karla talks with Kevin, she explains her purpose for including a section that acknowledges her book's photographer (as opposed to, say, her book's illustrator). The function that written language serves in this part of the book is informative; it lets the reader know who took the pictures. In this event, Karla demonstrates her ability to take an efferent stance in her writing; she has written an informative book which contains factual information on animals.
It is important to recognize that Karla has her own purposes in these events. In the first scenario, she writes and illustrates a card for her mother, and then she reads it aloud: "Look at what I wrote. 'Happy birthday.' Is that how you write 'happy birthday'?” In the second scenario, she writes and reads a book, and discusses it with her teacher. Without a teacher having set a purpose for her in these events, she read, wrote, and used oral language.

In the book-writing event, Kevin's purposes are not at cross-purposes with Karla's. This is ensured, because he listens and supports, but does not attempt to set purposes for the child. In the following scenario, Candy's purposes are at cross-purposes with her students'. This was a rare occurrence for Candy, and indeed for all the teachers, but I include this example because it helps to illustrate the value of letting children set their own purposes for literacy events.

Brian and Mario have been shuffling through papers, cutting, folding, and tracing with stencils. They are talking quite loudly, telling each other "you're doing it wrong," and "that's not how you do it." Candy has been working with other children, but she notices Brian and Mario's activity, and she goes to where they are playing.

Candy: Hey, I like this kind of work you're doing.
Brian: I'm making a newspaper.
Mario: I'm making a book.
Candy: Books and newspapers?
Brian: Uh-huh (yes).
Candy: What's your story about? [Neither child is writing a story.]
Brian: I'm making a newspaper. [Meaning that he is making the shape of a newspaper, but not writing a newspaper.]

Candy: Neat.

Candy goes to another part of the room.

Mario: I need to find out what my story's called.

As a result of this transaction, Mario felt compelled to "find out" what his story should be called. Neither child was writing a story, but, nonetheless, their transactions were facilitative of literacy development. As they argued, they were using oral language to talk about written language. They were refining their ideas about the physical properties of newspapers and books, and about how these objects are made. When Candy left the area, the course of the play changed, but neither child began to write. Brian and Mario had their own purposes for this event, and Candy's contribution did not make sense to them within the context of their play.

Candy attempted to extend the event by encouraging the children to write; perhaps she was also attempting to help the children lower their voices, and find a focus in their boisterous play. The key to successful extension, though, is to take the time to listen, and to understand the children's focus, and to then make contributions (as Kevin did in the previous scenario).
Wells (1986) argues that the secret to promoting school success is to respond to children's language. When teachers try to set up artificial situations in which language can be used, they fail to support and recognize the capabilities that children already have as oral language users. They fail to recognize children's abilities to set their own purposes for literacy events. Children are best able to pick up on what teachers are attempting to teach when they initiate the topics, when the topics are familiar and in context, and when the topics stem from what they already know. In child-controlled play, talk stems from what is known.

**Purposes related to features.** In their talk about purposes, the children not only referred to the functions, but also to the specific features of written language. Consider the following statement, made by Brian: "I don't know how to make the letters, so I just write waves." Brian had just written an entire book, in which he had used "waves," (invented cursive writing) to tell his story. In this statement, he was establishing his purpose for using waves instead of letters.

Brian does not avoid writing because of his inability to write with conventional characters. He does what he needs to do to tell a story, and thereby exercises the
strategies that he will eventually need as a successful reader and writer; by telling a story, he is developing expression and comprehension strategies. By using "waves" he explores a new symbol system, and shows his peers that there is more than one way to write a story. Candy and Preston encourage these kinds of transactions in their classroom by offering their children time to write together every day, and by treating each attempt at writing as a real literacy event.

In the next scenario, Karla is reading aloud from a dinosaur book. A few children are sitting nearby, also reading books. When Karla comes to a barrier in her reading, she solves her own problem, and then establishes her purpose for taking this literacy-related action:

Karla: Tyrannosaurus Rex bones. Triceratops bones. Platytaurus bones. Brachiosaurus bones. Long neck bones. Um...Frassataur bones, and...(20 second pause) Tyrannosaurus. We lock them up, and we dig for them with shovels and hammers and...plungers. I said that (plungers) because I don't know what that is (pointing to a pickaxe).

Karla took an efferent stance in her reading, which makes sense, because she was reading a fact-based book on dinosaurs, and she was reading for information, rather than for aesthetic purposes. She was labeling the pictures in the book, and using the language of exposition. This is
further evidence that very young children explore efferent and aesthetic stance-taking in their play.

Not only is Karla developing her ability to shift stances (an important strategy for reading), she is also developing efficiency and effectiveness (K. Goodman, 1986), as evidenced by her willingness to substitute "plunger" for "pickaxe." Children often use placeholders such as this to maintain language and meaning. It is probable that in Karla’s use of "Frassataur" in place of a legitimate dinosaur name, she was also using this strategy. Proficient readers do not get overly-concerned with words that they cannot read; proficient readers continually seek meaning, and attend to only enough graphic information to get the meaning that they are seeking (K. Goodman, 1986). Karla did not get stuck when she could not remember the word pickaxe. She made a substitution, and read on, knowing that the substitution did not keep her from understanding the story. Karla did not have to be taught this strategy. She developed it because it made sense within the context of her reading, and she could even articulate her reason for using this strategy.

By talking about purposes, the children reflected on their actions, and provided one another with information about their reasons for taking these actions. This kind of talk provided information for teachers as well, who were
often present to observe and contribute to children's talk about written language, and therefore, to their developing control over written language. Since teachers are often told to set purposes for children, it is important that they evaluate whether their purposes may be at cross-purposes with their learners'.

Abilities  
In constructing and negotiating literacy events, the children often referred to their own and others' literacy abilities. The children were very aware of, and interested in, discussing and monitoring the literacy expertise in their classrooms. Reading and writing were viewed as important competencies (Dyson, 1989). On many occasions, the children talked about what they knew, about how competent they were, or about what they could do with written language. Consider two brief examples:

Piper, pretending to be a waitress who is taking an order, writes a string of invented characters. Karla is observing her, and comments:

Karla: Piper! You really know how to write that down? Wow, she's good.

***

Aster and Karla are sitting in the housekeeping area, writing on pads of paper.

Aster: Karla, you're good at your N's.
Karla: Yeah, see? (She holds up her writing)
Aster: Yeah.
Discussions about abilities served to confirm what the children could do with written language. Through their interest in their peers’ activities, the children unintentionally (Dyson, 1991) helped one another learn to read and write. By responding socially to strengths, as well as to shortcomings, the children analyzed their peers’ work, critiqued ideas and written products, and confirmed or questioned one another’s understandings.

The children were also very aware of and interested in what their peers could not do or did not know about written language, and when attention was drawn to one’s shortcomings, vivid discussions ensued. The children’s responses to others’ shortcomings were particularly useful in that they encouraged a reconsideration of what was being done or said.

To illustrate the nature of references to shortcomings, I use some of the transactions which occurred between two children in Candy’s classroom, Brian and Julie. During my visits to Candy’s classroom, Brian and Julie often sat together arguing for whole play periods. Their arguments were not spiteful, and did not appear to be unpleasant for either child. In fact, both children seemed to relish these transactions. Their arguments frequently involved dialogue about their abilities with using various aspects of written
language. Brian and Julie (as well as other children) engaged in many arguments like the following:

Julie: I’m going to write letters.
Brian: Bet you don’t know how to write a perfect B.
Julie: Oh yes I do.
Brian: You can’t write a B like this (writes a B).
Julie: That is not a perfect B.
Brian: Uh-huh (meaning, yes), this is a perfect B.
Julie: This is not! (referring to Brian’s B.)
Brian: Uh-huh. (meaning, yes)
Julie: (writes a B) This is a better B. This is a better B. That’s a B.
Brian: No, it’s not.
Julie: YE-AH!
Brian: (writing) This a good B.
Julie: (pointing to her ‘B’) This is a B.

Brian writes a third ‘B.’

As Brian and Julie engaged in this event, they carefully studied each other’s writing of the letter B. Julie wrote only one B, but Brian reconsidered his work, and wrote the letter three times, seemingly trying to improve his writing on each attempt: He traced over his first B, scribbled on his second, and his third looked much like Julie’s.

Arguments about abilities often prompted the children to take a second look at what they were doing with written language. Like the other children, Brian and Julie were very candid in their reflections about their own and others’ abilities, and these reflections, especially when they referred to shortcomings, helped them to carefully focus on various aspects of written language.
Consider another situation in which Brian and Julie again discuss their abilities:

Julie: Do you know how to write a 'R'? Bet you don't.
Brian: I bet you don't know how to write...my name.
Julie: No, but I know how to write a 'R.'
Brian: You don't know how to write my name.
Julie: (chanting) I know how to write a 'R.'
Brian: You don't how to write my name.
Julie: This is a 'R.' (writes an R)
Brian: You don't how to write B-R-I-A-N. Brian.
Julie: R (looking pleased with her writing). Do you know how to write 'Julie?'
Brian: I'm not going to write it today.
Julie: My brother does much more than you do.
Brian: My brother knows much more than your brother knows.
Julie: He can beat yours up.

In consequence of defending their abilities, and trying to prove themselves to be literate, opportunities for talking about language naturally arose. The children attended to the features of written language. They talked about writing letters, writing names, writing words, and writing stories. Their verbal competition propelled them into spelling aloud, naming letters, articulating the syllables of what they were writing, and articulating what they were writing in whole words. In justifying what they were doing, and in explaining it to others, children were often provoked into articulating what they knew about written language.
The teachers too referred to the children's abilities with using written language. Unlike the children's comments, however, the teacher's comments were always aimed at confirming what the children could do with language.

Three examples follow:

Brian: That's the 'ifting truck.
Candy: That's the what?
Brian: The 'ifting truck. (Ben does a lifting motion with his hand.)
Candy: Oh, the lifting truck.
Brian: I don't know how to do the L's. That's the problem.
Candy: You're getting better and better all the time.

***

Ivy: I need to write something.
Karen: Okay, there's crayons, markers, pencils.
Ivy: I can't write.
Karen: (sounding surprised) You can write!
Ivy: I can not.
Karen: I can help you.

***

Brian and Candy are sitting on a large piece of plastic that has a small town printed on it.

Brian: This is a hospital (pointing to one of the buildings).
Candy: Hey, that's good reading. How did you know that was the hospital?
Brian: Because it has an X on it (referring to the hospital cross).

In each of these scenarios, the teachers support and validate the children's abilities, even though the children's attempts are not conventional, or in Ivy's case, are not willingly made. All of the teachers' comments in
these scenarios convey respect for the children's abilities, and for their capacity to explore language.

In sum, it was through talk about reading and writing that children and teachers established the purposes and plans of literacy events, and verified the abilities of the children. By discussing plans and purposes, children orally reflected on their own and others' actions, they got information about the ways in which other children organized literacy events, they set up the pragmatic constraints for the event, and they learned about the reasons for which others made certain literacy-related decisions.

The social transactions that occurred as a part of each literacy event provided an opportunity for knowledge to be shared and questioned. Many of the discussions about abilities confirmed for the children that they were capable of reading and writing. The children's attention to the lack of expertise on the part of themselves and their peers actually supported literacy development, because it encouraged them to reconsider their existing hypotheses about written language, and to examine print in new ways.

The teachers, understanding that literacy is a developmental process, did not question or draw attention to the children's shortcomings with written language. Their roles were consistently to support any kind of exploration of print. The teachers believed that if they corrected
shortcomings, the children would not be as willing to explore written language in future literacy events. It was only peers, being equally vulnerable to the effects of criticism, who facilitated learning in this particular way.

By observing, and by participating in the oral language that surrounded literacy events, the teachers obtained information about their children's concerns and understandings about written language, and contributed to their growing confidence as literate members of society. They left it to the children point one another's shortcomings.

Talk about Linguistic Forms and Other Sign Systems

The second major category that I analyzed in order to describe the construction and negotiation of literacy events involves talk about linguistic forms and other sign systems. This type of talk was used when children or teachers were referring to specific features of written language. Linguistic forms refers to the meanings, sound patterns, shapes, or forms of print. Other sign systems refers to non-alphabetic symbols, such as a hospital cross or a picture of a cigarette enclosed by a circle with a diagonal bar. Several examples follow:

Harry and Karla are sitting at the writing table, using markers and paper.
Harry writes M-O-M.

Harry: That spells 'mom,' I think.
Karla: If that's the way you think you spell 'mom,' then spell 'mom.'
Harry: You know what? I think that's really how you spell 'mom.' You know why? Because at kindergarten today we had to spell 'mom,' and I think I remember how to spell 'mom.' M-O-M. (Then, using sounding-out strategies as he writes) Mah...oh...mom.

In this event, Harry and Karla discussed both the graphic and sound forms of the word 'mom.' Harry explained his reason for thinking that he had found the correct spelling, and even tried to confirm that it was correct by orally sounding-out the word. Karla encouraged Harry to go with his instinct. This kind of "exploratory talk" (Barnes, 1992) about language helps children to make their existing understandings more clear because it brings these understandings to a conscious level.

At the time that this event occurred, Karla had not yet begun to sound out words; she was still exploring the syllabic hypothesis. Because Harry was alphabetic (he demonstrated testing of the alphabetic hypothesis), he was able to expose Karla to a hypothesis which she is likely to test in the future. Whatever Karla internalized from this event may be used as she moves toward an understanding of alphabetic principles.

Another noteworthy characteristic of this scenario is that Harry and Karla discussed the notion that words are
"really" spelled in a certain way. Many of the older children in the study demonstrated this understanding— that there is a difference between inventive (or pretend) and conventional writing. Harry makes his understanding of this concept clear as he says, "I think that's really how you spell 'mom'." He knows that there is a difference between real and pretend ways of spelling this word. Having the opportunity to play at literacy gave the children the environment in which to explore play at language versus the reality of language.

It was the four- and five-year-olds who most often talked about pretending, versus the "real" way to read, write, and spell. Older children are typically more tentative when it comes to demonstrating their understandings about written language because they are more apt to know what they do not know (Goodman, 1983). Younger children, who understand less about conventions, are not as aware of what they do not know. Therefore, they are not as hesitant about expressing themselves, and about the possibility of being wrong. (Younger children's tentativeness is considered further in Chapter 5.)

Another example that illustrates the older children's awareness of real versus pretend occurs in a conversation about *linguistic forms* between Karla and Aster:
Aster is talking about the spelling of her name. Karla, whose sister's name is also Aster, attempts to write the name on a piece of paper. She writes A-S, and then runs out of space on the right side of her paper, so she places the T-E-R to the left of the A-S. Although she wrote the letters in conventional order, her product reads T-E-R-A-S. Aster looks at Karla's writing:

Aster: This is how you spell Aster: A-S-T-E-R.
Karla: No. You write it this way. (pointing to her own rendition of the name) This is how you spell 'Aster' in my house.
Aster: But 'Aster' for real is A-S-T-E-R.
Karla: Do you know what? In my house....

Both of these children demonstrated an awareness that there may have been more than one way to write 'Aster,' but that there was also a "real" way to write this name. To settle the debate, they used the authority of an adult. They went to the cubbies, on which their names had been written by Kevin, and determined who had spelled the word conventionally. Then, they went back to their table, and Karla changed the spelling on her paper so that it would be spelled the "real" way.

Consider another situation in which the issue of realness (as well as talk about linguistic forms) plays a part. In this scenario, Karla and Angie are playing as if they are part of a family of royal monsters. Kevin sends them a letter, and observes their conversation as they interpret the meaning of his writing. They discuss various elements of linguistic forms:
Karla: (pointing to some of the print on the letter) But what does it say down here?
Angie: I don't know. Can you read this?
Karla: Yes. It says, 'To king monster and queen monster
and the princess monster, queen of all. And prince.
I would like to invite you to dinner at The All Meat
Eaters, at once, tonight.' (then, looking at Angie)
Hey, mommy! I read it, that card. And I'm only
eight. I already read it!

Karla knows that she has not read the exact content of
the writing in the letter. She is pretending, however, to
be an eight-year-old, who, in Karla's world view should be
able to read conventionally. Although Karla knows that
there is a difference between conventional and inventive
reading, she does not let this stop her from taking risks
and experimenting with written language. In Karla's
classroom, it is safe to take risks with literacy; the
teachers rarely correct the children. Both Kevin and Trina
believe that children learn about the conventions of
language through discovery. Consequently, the children are
willing to take the risks that allow them to actively
explore and discover written language. There are no
negative consequences for trying.

In the next scenario, Aster and Kevin are playing
restaurant. Aster is taking Kevin's order in invented
cursive writing. Kevin orders a drink, and Aster writes the
order on her pad of paper:
After she writes the order, Aster (pretends to?) forget what she has written:

Aster: What did you want for drink?

Kevin starts to tell her what he had ordered, but Aster looks at the writing on her pad and interrupts him:

Aster: Oh, yeah, that's right- I remember, because I looked at the writing.

Kevin: Okay.

In all of these scenarios, the children are examining (or, in Aster's case, maybe pretending to examine) specific features of written language. When Aster refers back to her writing in order to remember something, she is not only explaining what she has done (talk about reading and writing), she is also implying that she is focusing on the print (talk about linguistic forms).

Aster's scenario with Kevin depicts the non-exclusivity in this set of categories. On one hand, Aster is referring
to her act, or, she is *talking about reading and writing*. On the other hand, she implies that she is examining the specific features of what she has written. This means that her event could fit into either of the dialogic categories, or the transactive category. The non-exclusivity of the categories does not have an effect on the implications which I make from this analysis. My reason for distinguishing between these two types of talk is to have a way to describe the discussions in which children engage in their construction and negotiation of literacy events and to show the multiple layers of complexities about language and the printed world, in which even four-year-olds engage.

In sum, talk about *linguistic forms* was a tool for the children and teachers to use in analyzing specific features of written language. It was through this kind of talk that the children and teachers provided one another with information about issues of realness and pretend, about interpreting the specific features of print, and about the kinds of language that are used to talk about such features. (For example, in the examples cited in this section, children and teachers use the terms *write, read, spell, what does it say, it says, and I read it*.)

Now, before moving on to the theoretical and practical implications that relate to Question 1, I summarize the
information discussed so far in this chapter. Literacy events were experienced within the children’s play:

1) As a support for play themes
2) As a frame for play themes
3) As an extraneous aspect of play

And, as a special contribution to play, the teachers used the strategy of *teachable moment teaching*, in which they contributed suggestive props and materials, and took on appropriate play roles.

Literacy events were constructed and negotiated as children and teachers:

1) Engaged in transactions with written language
2) Engaged in talk about reading and writing
3) Engaged in talk about linguistic forms and other sign systems

In the next section, I discuss the theoretical and practical implications of the findings reported in this chapter.

**Theoretical and Practical Implications: Unfolding**

The children in the study used written language to support and frame a multiplicity of play themes. They also encountered written language that was extraneous to their play, attending to it when it was relevant. Oral language
was a tool to help children (and teachers) share meanings and understandings about written language; as they constructed and negotiated literacy events, they used talk to independently and collaboratively explore both the language functions and the linguistic features of written language.

Children Explore Language Functions

As the children played, they explored many of the complex functions that literacy serves in the wider context of their lives. In play, as in real life, print is used for organizing various facets of daily life. It is used for writing and reading grocery lists, letters, stories, signs, songs, and faxes; it is used for obtaining information from newspapers, schedules, packages, and informational books. The children's context-appropriate use of literacy in these ways demonstrates that they understand many of the functions that written language serves in their society, and that they are capable of exploring these functions in play. Hall (1987) and Neuman and Roskos (1992) have also found that children at play demonstrate knowledge of the functions of written language in their society, and of the social contexts in which these functions are typically embedded.

Vygotsky (1978) explains that children's capacity to engage in these complex behaviors is mediated by the play
itself. According to Vygotsky, all play is governed by systems of rules, which are defined within the context of each play situation. "What passes unnoticed by the child in real life becomes a rule of behavior in play" (p. 9). The complexities of the rules may not be explicit for the children, but, nonetheless, they try to follow them. For example, children playing as if they are office workers try to follow rules for office workers as they understand them. Children playing as waitresses try to follow rules for waitresses as they understand them. According to Vygotsky, play enables children to do more than they can do in non-play situations, and allows them to explore culturally-patterned adult activities. The children in the study make it clear that this exploration includes exploring the functions of written language.

As the children played, they made their own plans and defined their own purposes for engaging in literacy events, and for taking specific literacy-related actions. Teachers are often told to set purposes for their children, but when experiences are relevant, as these children demonstrate, children already have purposes. Setting purposes and plans is facilitative of literacy development particularly because of the pragmatic constraints that are brought in to play situations as a part of these plans and purposes. Teachers might wish to consider, therefore, whether their purposes
and plans are at odds with the attempts of the learners to make their own sense of written language.

Children Explore Linguistic Features

The children also explored the specific features of written language as they engaged in literacy events within play. Without prompting from adults, they attended to word spellings, to the formation of letters, and to linguistic forms. As they read and wrote silently and aloud, they asked "What does that say," "How do you write that," and "What does that mean?" They asked questions such as, "How do you spell Dennis?" and "This spells 'to,' right?" This exploration was often a joint effort, in which two or more children worked together, collaboratively constructing understandings and providing one another with information.

The children collaborated in spelling, in sounding out words, and in interpreting the meaning of one another's writing. They played with letters and sounds, and they argued about the ways in which letters and words should be written. They complimented one another on their expertise, and drew attention to one another's shortcomings.

The children's exploration of written language in all of these ways brings to light not only their many understandings about the specific features of written language, but also their natural tendency to attend to these
features; given a print-rich environment where literacy materials are accessible, and where literacy is an expected way of life, children will explore written language together. These findings are consistent with Vukelich's (1993) findings that in an enriched play environment, peers will provide one another with information about the functions, features, and meanings of print.

Children Explore Linguistic Features Within Functions

The children in the study attended to the features of written language as they used written language for functional purposes in play. Whether the function was to bring pleasure, to obtain information, or to express imaginative ideas, it was within functional uses of literacy that specific features were explored. The data support the notion that understandings about the functions of written language drive understandings about its specific features (K. Goodman, 1986; Taylor, 1983).

It seems unnecessary, therefore, to focus early school instruction on transmitting knowledge about the specific features of written language. Yet, many kindergarten teachers attempt to transmit such knowledge. Children are asked to memorize letter forms and sound patterns. They are walked through phonics activities, spelling tasks, vocabulary exercises, and word-recognition tasks. They are
asked to copy words, and to diligently focus on the formation of letters. These are decontextualized tasks which break language into parts, but as the children and teachers in this study have shown, when children are immersed in a print-filled social community in which literacy is an expected part of life, they naturally explore language in its whole form; literacy knowledge need not be transmitted or broken into parts.

For the children in the study, who attended to the features of written language as they talked, and as they wrote and read stories, songs, letters, cards, notes, and books, language was explored in its whole form, in its appropriate context. Children are capable of exploring features at an early age, and these children show that they are naturally explored within contextualized, functional situations.

Classroom teacher Tonya Dix, in discussing her professional growth in teaching (1993), puts this notion into perspective. She writes:

...my need to teach the skills separately diminished, particularly when I saw the impressive interpretations and connections children were making during the discussions. It was obvious to me that they were already developing and using skills in a far more sophisticated way than when I was teaching skills in isolation. Skills in context were learned naturally (p. 317).
Like the children in the present study, Dix's elementary-aged students explored written language because it served a purpose in their child-centered activities.

This is not to say that literacy events themselves were never the purpose of a classroom play experience, or the focus of a play event. As I showed in the section on children using literacy to frame play themes, literacy events were often the purpose for play events. Even in these cases, the literacy almost always served a function for the children. It brought pleasure, it let them express themselves creatively, it allowed them to share knowledge, or it enabled them to learn about something in which they were interested.

It is interesting that in Kantor et al.'s (1992) study of the functions of literacy in preschool classrooms, literacy was not typically the focus or the purpose of classroom play experiences. Instead, literacy was opportunistic, and interwoven into other classroom events. The authors report that usually, "literacy was not the purpose of the context's activity but was constructed in the doing of the activity to support the curricular goals of the context" (pp. 193). The children in the present study did engage in many opportunistic events (as represented in the categories of literacy that is extraneous to play themes and literacy that supports play themes), but they also engaged
in literacy events that were the purpose of their play experiences. These events were not always opportunistic, and not always interwoven with other activities.

This difference in findings may be due to the fact that the teachers in the present study were selected because of their strong personal beliefs that play is important. All of the teachers with whom I worked thought that play should be central to a preschool curriculum. Because this was not the way that Kantor et al. selected their teachers, perhaps play meant something different to their teachers. If this is what makes the results of these studies different, then it may indicate that when play is the central aspect of classroom life, as it was in the classrooms I studied, a different kind of classroom literacy is elicited. Perhaps the children in the play-focused classrooms have more opportunities to use literacy as the context for their play, and perhaps the teachers are more conscious of looking for, supporting, and encouraging this type of activity. Perhaps, also, the teachers' goals are different; their goals for their children are to learn through play, rather than to learn as designated by the teacher. These conclusions remain tentative, however, because I do not have personal information on the teachers in Kantor et al.'s study. Their motivations, beliefs and ways of life in their classroom are not as clear to me as are those of the teachers I came to
know in my study. It would be worthwhile to investigate this issue in future research.

Another possible reason for this difference in findings is that the focus in the present study was on literacy in play at preschool; the focus in Kantor et al.'s study was on literacy in daily life at preschool. Perhaps by focusing on play, I observed children engaging in more events in which literacy was used to frame play themes than I would have observed if, like the other researchers, I had focused on daily life in general. I did, however, observe across the preschool day, and not only during play periods. I would therefore have expected the results to be more similar.

What is consistent across the five studies mentioned in this section (Hall, 1987; Kantor et al., 1992; Neuman and Roskos, 1992; Vukelich 1993; this study) is the evidence that preschool children already have a vast amount of knowledge about written language, and that they bring this knowledge to school. The data from the present study in particular demonstrate that children are capable of, and interested in, exploring the functions and features of written language.

As children play, multiple symbol systems support one another; through an integration of talk, reflection, sociodrama, and silent and oral transactions with written language, they develop their capacity for exploring their
own understandings about literacy, and at the same time, for nurturing literacy development in their peers. These findings support Dyson's (1989) contention that "...writing as a symbolic and social tool grows directly out of children's experiences with other tools-- such as gesture, speech, dramatic play, and drawing-- and their relationships with other people" (p. 68). The same is true for reading. As children immersed in social life explore multiple symbolic systems, they construct understandings about the meanings of written language.

What Teachers Need to Know

What does all of this say to teachers? "If children were to ignore print and view it as insignificant, then it might be necessary for teachers to draw their attention to this phenomenon. But do young children view print as irrelevant to their lives?" (Hall 1991 p.5). The data make it clear that they do not. Children who are immersed in a print-rich environment where the people around them use and are expected to use literacy for many purposes, attend to written language without prompting from adults. They voluntarily use it as a support for play themes, as a frame for play themes, and they attend to it even when it extraneous to their play.
How can teachers promote these multiple uses of literacy in their classrooms? First, they can give children many opportunities to play and to talk in a print-rich environment. In the classrooms in which I observed, it was acceptable for children to talk often; they talked while they played, while they stood in lines, while they were waiting for a teacher to read a story, and while they were eating snacks and lunches. Many literacy events occurred during these times.

It was also acceptable for children to talk as they read and wrote; the children were encouraged to talk about their plans for literacy events, their purposes for taking certain literacy actions, and their abilities as users of written language. It was acceptable to move noisily about the classroom, playing as teachers, dinosaurs, talking animals, spirits, office workers, and physicians. It was acceptable to make silly noises and gestures to get the meaning of one's writing across, to giggle through stories together, and to interrupt even the teacher when a good idea was to be shared.

It was acceptable to pull out a whole shelf of books, but to only look at the covers, to boisterously read the familiar lines of a story with a group of friends, to use ten pieces of paper in one sitting, or to sharpen a pencil as many times as desired. Spirited play and talk-filled
activity was expected and accepted. The teachers knew that embedded in the apparent chaos of their classrooms were the social supports that were central to the livelihood of their literacy environments.

The children's talk about written language often involved more than chatter or light conversation. Talk during literacy events was usually aimed purposefully, at interpreting and generating new information, and at formulating hypotheses and ideas. Oral language was used as a tool for thinking and learning. According to Vygotsky (1962), children's oral language eventually evolves into private, internalized speech and begins to influence the development of cognitive skills. Once language and actions converge, children can use language internally to think about, and structure future actions. They can also use it to talk about future actions. In this way, social experiences influence internal language, and internal language influences social experiences. "The individual and society both play strong roles in language development" (Goodman & Goodman 1990, pp. 231). Individual and social uses of language are both prevalent in play.

Graves (1989) suggests that the ordinary conversations and talking-through procedures among children are very important to their literacy development. Participating in literacy-related discussions helps children see how others
approach literacy related tasks. It teaches children to recount and reinterpret events, to display their abilities, to share the process of how they do things, and to encounter and understand the logic behind different points of view. Graves argues that these abilities are necessary for children's ultimate success in reading and writing.

Teachers who wish to promote this kind of environment can also capitalize on teachable moments. Capitalizing on teachable moments involves careful observation, and making contributions that are related to the children's focus in play. This requires that teachers are actively involved with children during their play, ready to collaborate in thinking and in exploring ideas.

The teachers in the study did not use their classroom time to make lesson plans, to clean up after children, or to prepare materials. The children were responsible for most of these activities themselves. They planned their own play activities, set their own purposes for literacy events, cleaned up after themselves, and usually did not use materials that had been prepared by teachers. When a teacher was needed for maintenance or preparation tasks, a special system, consistent among the classrooms, went into action. In all of the classrooms, the teachers took turns with their assistants at chores and preparation tasks so
that at least one adult was always available for quality transactions with the children.

Teachable moments were sought out by all of the teachers. When Kevin read the snack schedule, and told the children what he was doing, and when Karen read from the side of the plaster package, both were purposely showing the children uses of literacy that were relevant to the children’s questions. When teachers provide a print-rich environment, purposely act in literate ways, and expect literate behaviors from their children, meaningful, child-centered literacy events can naturally occur.

Vukelich (1991) found that the frequency of literacy-related play in preschool classrooms could be increased by the adult modeling of literacy behaviors. In theory, modeling is best aimed not at increasing the frequency of literacy-related play, but at increasing quality thinking in literacy-related play. Burke (1993) argues that the most valuable role for teachers is to raise questions that lead to reflection and dialogue. Their goal should be to help children reflect on what they know, and to relate what they know to what they want to do. Children learn not only through their actions, but also through reflecting on their actions (Adelman, 1992; Barnes, 1993; Burke, 1993). The ultimate goal for any kind of modeling within play situations should be internalization on the part of
children, so that they may generalize what they have understood from modeling— to future situations (Cazden, 1983). Frequency of literacy-related behaviors is not as important to reaching this goal as is reflection, and quality thinking.

The teachers in the study did not participate in play activities in order to get the children to behave in a certain way, or to focus on certain literacy-related skills. If teachable moments arose, they were seized, but there was no attempt on the part of the teachers to change the course of the children’s play. For the most part, they allowed the children to define their purposes and reasons for reading and writing. Consequently, the children explored written language in ways that were personally meaningful, and at appropriate levels of understanding.

Through play, an academic curriculum prevailed in each of the classrooms. If classrooms are set up in such a way that children and teachers can explore together what it is to be literate in meaningful, contextualized situations, then, as the children in the study demonstrate, literacy will be explored spontaneously, as it suits children’s needs and interests during play. Teaching techniques that involve modeling to meet teachers’ preestablished goals in play, or that involve direct instruction, are not necessary for
preschoolers to develop literacy, or to learn to function in an academic setting.

In this chapter I answered Question 1 by describing the ways in which literacy events unfold within the play of the children in the study. At the end of the chapter, I discussed the theoretical and practical implications of the findings.

In Chapter 5, I answer Questions 2 and 3. I focus on the personal and social constructions that occur during literacy events, and on the ways in which these constructions influence children’s literacy development.
CHAPTER 5
PERSONAL AND SOCIAL CONSTRUCTIONS

In Chapter 5, I answer Questions 2 and 3 together. To answer Question 2, I describe the characteristics of the literacy transactions that take place among the children and teachers within play. The literacy transactions are characterized by:

1) self-construction of meaning, knowledge, or understanding
2) joint construction of meaning, knowledge, or understanding
3) direct instruction
4) challenge

To answer Question 3, I describe how these transactions influence the children's personal and social construction of knowledge about literacy. To do so, I summarize the work of Ferreiro and Teberosky (1982), Piaget (1962), and Harste et al. (1981). Then, I show how, through their transactions during play, the children explore their hypotheses about written language (Ferreiro and Teberosky, 1982), they develop the strategies that are used by successful readers and writers (Harste et al., 1981), and they experience the disequilibrium and equilibrium (Piaget, 1962) that are essential parts of learning.
It was in defining and characterizing this last set of
categories that two of the teachers in my study (Kevin and
Trina) and I worked together. Our goal was to make certain
that others would interpret the literacy transactions in the
same way that I would. As I discussed in Chapter 3, we
obtained 84% consistency in the way that we interpreted
these transactions.

I integrate my answering of Questions 2 and 3 with a
discussion that focuses on the theoretical and practical
implications of the study. Throughout the chapter, I
speculate upon the ways in which the results of this study
fit within the Vygotskian and Piagetian frameworks for
learning and development. I describe the discoveries that
the children make about literacy as they engage in literacy
events within play, and as they participate in the social
transactions that carry these literacy events forward.

Drawing on the work of Goodman (1980; 1983), Goodman &
Goodman (1990), Ferreiro (1990), Ferreiro and Teberosky
(1982), Harste et al. (1981), and Pontecorvo and
Zucchermaglio (1990), I consider the similarities and
differences between this and other literacy research
findings, I draw conclusions, and I suggest practical
implications as they are relevant. I conclude with a
segment on the teachers' classroom practices and beliefs
regarding their participation in play.
Figure 5.1 shows the relationship between the three research questions used for the entire analysis. The themes which pertain to Questions 2 and 3 (self-construction, joint construction, instruction, and challenge) are printed in bold face. These themes (from Questions 2 and 3) are printed in two places in the figure; the top printing represents the children's transactions with peers, and the bottom printing represents the children's transactions with teachers.

Summary of Background Information
Ferreiro (1990) and Ferreiro & Teberosky (1982) describe literacy development as a psychogenetic process, in which understandings about the alphabetic system of representation develop within learners. As children construct and explore a sequence of hypotheses about written language, they discover the ways in which written language works. Exploring these hypotheses and making these discoveries involves taking in new knowledge and reconstructing it so that it makes sense on an individual basis. Hypotheses are continually tested and modified as necessary. The sequence of hypotheses have been described in depth in Chapter 2.
LITERACY EVENTS UNFOLD AS WRITTEN LANGUAGE IS USED (Question 1):

| To Support Play Themes | To Frame Play Themes | As an Extraneous Aspect of Play |

AS LITERACY EVENTS UNFOLD, THEY ARE CONSTRUCTED AND NEGOTIATED AS CHILDREN (Question 1):

Transact with written language
Engage in talk about reading and writing (plans, purposes, abilities)
Engage in talk about linguistic forms/other sign systems

THEIR TRANSACTIONS ARE CHARACTERIZED BY (Questions 2 & 3):

- self-construction
- joint construction
- direct instruction
- challenge

AS LITERACY EVENTS UNFOLD, TEACHERS PARTICIPATE IN CONSTRUCTION AND NEGOTIATION AS THEY (Question 1):

Transact with written language
Engage in talk about reading and writing (plans, purposes, abilities)
Engage in talk about linguistic forms/other sign systems
Contribute appropriate materials/props/ideas

THEIR TRANSACTIONS ARE CHARACTERIZED BY (Questions 2 & 3):

- self-construction
- joint construction
- direct instruction
- challenge

Figure 5.1 Characteristics of Literacy Events Within Play
Ferreiro and Teberosky's theories of literacy development are based in part on Jean Piaget's theories of cognitive development. A major point of connection between the two sets of theories lies in the concept of knowledge construction. Piaget argues that children learn by building schemas, to which they continuously assimilate new information. When the new information conflicts with what they know, there is disequilibrium. Disequilibrium causes children to accommodate, or to make a place for the new information. Accommodation involves either modifying existing schemas, or developing new ones. Assimilation is the first choice of learners, because it involves minor rearrangements in the schema; accommodation occurs when new information cannot be incorporated through minor rearrangements.

According to Ferreiro and Teberosky, Piaget's principles of knowledge construction hold true in literacy development. As children have experiences with written language, they organize new information by seeing how it fits with their existing hypotheses (schemas), or, with what they already know. When new information fits, they expand on what they know by assimilating the new knowledge. When children become aware (consciously or subconsciously) of a conflict about some aspect of written language, or, when the new information does not fit, there is disequilibrium.
Disequilibrium compels children to revise, or to accommodate, their existing hypotheses in order to achieve equilibrium. These concepts are applied to the data from the present study.

I also consider the ways in which the children in the study develop and exercise strategies for reading and writing as they engage in literacy events within play. Harste et al. (1981) suggest that four central strategies are used by successful readers and writers of all ages. The strategies involve:

**Textual intent**- The expectation that written language will make sense, and the expectation of what the sense, or the shape of the written language will be like. Shape refers to the style of print, as well as its semantic, lexical, and syntactic structure.

**Negotiation**- Selecting what will be represented, how it will be represented, what can be assumed, and what kind of context is important to make the representation clear.

**Using language to fine-tune language**- Building upon what is already known by using it in different ways.

**Risk-taking**- Experimenting with how written language works; this strategy is influenced by the attitude, the actions, and the immediate environment of the language user.
The major goals for this chapter are to show how children's engagement in four kinds of literacy transactions (self-construction, joint construction, direct instruction, and challenge) allow them to explore their hypotheses about written language, to develop the strategies that are used by successful readers and writers, and to experience disequilibrium (as well as accommodation and assimilation). Figure 5.2 provides a summary of the nature of the literacy transactions that facilitate the answering of Questions 2 and 3. The figure is followed by an example-filled discussion of the characteristics of each kind of transaction.

This chapter contains a new term, approximation, which carries special meaning when considered in terms of literacy development. According to Cambourne and Turbill (1991), to approximate is to "have a go" at using written language. Teachers who encourage approximations "do not expect children's attempts to be perfect [the] first time around. They understand that learning occurs only when learners have opportunities to gather new information and formulate hypotheses about written language, which then need to be trialled and tested before becoming part of the learners' repertoire" (pp. 68-69). Approximations are like inventions.
SELF-CONSTRUCTION is characterized by:

Child engaging in literacy with little input from peers or teacher; problem-solving is primarily a solitary effort.

Child observing another child or a teacher engaging in a literacy event; little or no discourse.

JOINT CONSTRUCTION is characterized by:

A teacher or child helping another child in "focusing his or her attention on the main points, scaffolding toward solution" (Pontecorvo and Zucchermaglio 1990, p.70).

Individuals engaging in talk, activity, and problem-solving tasks (Vygotsky, 1978), building knowledge together.

Acceptance of approximations.

DIRECT INSTRUCTION is characterized by:

A teacher or child demonstrating, explaining, or suggesting, with the recipient mostly observing or listening.

Ideas for initiation, extension, or completion of the event are from the instructor/limited opportunity for choice on part of recipient.

Questions that are primarily fact-based, and aimed at "right" answers, rather than conceptual exploration of written language.

Approximations may be accepted, but they are not encouraged.

CHALLENGE is characterized by:

One individual questioning another regarding the validity of what they are reading, writing, or saying about reading or writing; approximations are not accepted.

A debate leading to "collective reasoning toward higher processes and outcomes" (Pontecorvo and Zucchermaglio 1990, p.70).

Figure 5.2 Characteristics of Transactions: Summary
This chapter is arranged in such a way that the descriptive material needed to answer Question 2 is interwoven with the theoretical material needed to answer Question 3. Implications and comparisons with other research are considered throughout the chapter.

Self-Construction of Meaning/Knowledge/Understanding

Self-construction is characterized by one child engaging in a literacy event with little or no input from peers or teachers. Parallel play situations (two or more children playing next to each other, engaging in few or no interactions) fall into this category. In self-construction, decision-making and problem-solving are primarily a solitary effort.

Meaning, knowledge, and understanding, are all analyzed as part of this category. Each of these entities has its own properties, but in many ways, these properties overlap. I believe that all three elements are present in every literacy event. Because these elements are very abstract, however, I do not attempt to provide concrete evidence for this conjecture. In any case, a clear distinction between these elements is not necessary to support the inferences that are made from this analysis.
My goal in the self-construction segment is to show how the children in the study do more than imitate knowledge about literacy. They do more than replicate adult patterns. As children engage in literacy events, and as they develop their strategies for reading and writing, they actively test their current hypotheses about written language. They assimilate information, and make accommodations when the information does not fit with what they know. When they use their information in subsequent encounters, they are not imitating, they are reconstructing what they have understood from previous experiences.

The following is an example of a literacy event in which self-construction occurs. By participating in this event, Errin is exercising several important strategies for reading and writing:

Errin is writing in her journal, sitting near some other children who are also writing. Errin writes E-R-I-H-H-D, and then moves her pencil across the letters several times, moving her lips as if she is reading. Karen comes to the area where Errin is working.

Errin: Karen, I wrote 'bottle.' Karen, I wrote 'bottle.'
Karen: You wrote what?
Errin: 'Bottle.'
Karen: (Karen looks at Errin's paper.) 'Bottle?' Wow, look at that Errin. You wrote 'bottle.'

Errin continues to write words in much the same manner, and to read back what she has written. She uses several pages. Later, she looks for the page where she had written 'bottle.'
Errin: (to herself) Where's 'bottle?' Where's 'bottle?' (she finds it) See? 'bottle.' Two-Two-one-one-one-one (while pointing to the letters E-R-I-H-H-D).

Errin wrote and read the words in her journal with little input from her peers or her teachers. When Karen did participate, it was only to confirm that Errin had written 'bottle'. Three of Harste et al.'s strategies come into action in this event: Errin exercises, and therefore, further develops, her strategies of textual intent, using language to fine-tune language, and risk-taking.

First, Errin is exploring textual intent. Understanding textual intent involves having the expectation that written language will make sense. Errin demonstrates this expectation in showing her understanding that symbols carry meaning; she writes, and knows that she can read the writing back to herself later. For Errin, symbols make sense.

Understanding textual intent also involves having a sense of what the structure of print should be like. Errin has this sense; her E-R-I-H-H-D is the same length as the word 'bottle', and it looks like a word. She did not write a page full of letters to represent 'bottle'; she wrote one short string of letters, left to right, that looked like it could be a word. Errin did this for all of the words that
she wrote during this event. She understands what the structure of a word and a list should be like.

Second, Errin is using language to fine-tune language. This strategy involves building upon what is known by using language in different ways. In this event, Errin writes, reads, rereads, spells, talks, and thinks. She is using language in several ways, and each of these ways influences the others. This is a multilingual event.

Last, risk-taking involves experimenting with how written language works. Errin is experimenting with the syllabic hypothesis, and with writing words. Her vocalization of "two-two-one-one-one-one" as she writes E-R-I-H-H-D is a manifestation of the syllabic hypothesis; it reveals Errin's sense of one-to-one correspondence.

Errin took a risk not only in her experimenting with writing, but also in showing Karen what she had done. Being the astute teacher that she is, Karen did not interfere with the child's risk-taking. She accepted Errin's approximation and thereby validated her attempt at making sense of and through written language.

Where is the evidence for self-construction in this situation? Errin has constructed a system that allows her to write, although her written products are not conventional. She uses letters from her own pool of language information, her name among others, to construct the spelling of several
words. Her constructions are influenced by what she has seen others do, but it will take many personal experiences with written language, and many personal constructions, before she internalizes all of the conventions that the adults in her environment use. Ferreiro and Teberosky (1982) contend that children experiment with written language to find out about its properties. These authors have demonstrated that experimentation is a natural part of the psychogenetic process. As Errin continues to explore her personal system, and to notice how other people use written language, she will make accommodations in this system, and eventually work her way toward more conventional principles.

Consider another example of a literacy event in which self-construction occurs:

Karla is wearing a shirt given to her by her grandmother. The shirt says, 'Hug Me!'

Karla: Know what my shirt says? 'Love, Grandma.'

Given Karla’s experience with the shirt, it actually could say 'Love, Grandma.' That would make sense. But Karla has reconstructed the knowledge that she obtained socially, and made it personal. This is evidence for the notion that "...memory is more than a copying device. It uses what it already knows to reconstruct the material that it is supposed to remember" (Clay 1991, p. 63).
All of Harste et al.'s strategies can be considered in terms of Karla's brief literacy event. First, Karla is exercising the strategy of interpreting textual intent; her interpretation of the writing on the shirt is predictable, and demonstrates her assumption that the print should be meaningful in terms of what she knows. Further, she has an expectation of what the sense should be like; she knows that the shirt contains a short, two-word message.

Risk-taking also plays a part in Karla's event. Risk-taking involves experimenting with how written language works. Karla is experimenting, trying out possibilities. If children only imitated what they had previously heard, then Karla would not have reinterpreted the writing on the shirt. Her judgments about the message on the shirt are actually quite sophisticated; the message has the same syntactic structure as the messages on many shirts, such as:

```
Hug     Me
↓       ↓
Verb    Object
↓       ↓
Love    Grandma
```

Figure 5.3  Karla's Understanding of Syntax

Karla is also exercising the strategy of negotiability. She knows that some context can be assumed by readers;
writers do not provide every detail for their audiences, and Karla uses this knowledge in her reading. By reading, "Love Grandma" instead of, say, "My Grandma gave me this shirt," she demonstrates her understanding that readers assume some of the context in a piece of writing. This is evidence for Karla's ability to negotiate. Negotiability will be important as Karla continues to read more and more complex material. Effective readers continually make predictions about the semantic and syntactic content of what they are reading. When they actively negotiate and predict this content, their reading is likely to be efficient.

Karla is also using language to fine-tune language. She had an experience with the written language on the shirt at home; now she is using what she experienced previously, to inform her new event. Harste et al. (1981) write that each encounter that children have with written language allows them to test the validity of their current set of hypotheses, and to reconstruct new sets as necessary. "Having once had an encounter, subsequent encounters are governed at least in part by their understanding of what worked last time" (p. 13).

Both Errin and Karla had assembled systems for communicating using written language, although neither child's use of written language was conventional. It was their invented systems that allowed them to participate in
play and other activities as literate members of their classrooms. Karla was a great adventurer. Her uninhibited use of invented characters and spellings, and her willingness to interpret and assume the textual intent of the print in her environment, allowed her to read and write stories, letters, songs, books, restaurant orders, and menus. Through her writing, she demonstrated that she was exploring the syllabic hypothesis (Ferreiro & Teberosky, 1982); she often used one written character to represent each articulated syllable. She also used invented characters in her writing. This was not taught or modeled; it is not the way that adults write. These were her personal constructions, which were based on her current understandings about written language.

Errin, too, was willing to take the risks that allowed her to explore written language and to be a literate member of her classroom. Errin already had conventional control of many of the letter forms, but it was her freedom to take risks which allowed her put letter forms together to make meaningful constructions. She was not bound to imitation, or to doing only what she had seen others do previously. As Errin demonstrated many times in her journal-writing, and in her other play with her friend Cindy, she was experimenting with a system in which she could write words and sentences, and she was delighted with this ability.
Like Karla, Errin also demonstrated exploration of the syllabic hypothesis. For example, at the end of one of her laborious journal-writing sessions, she showed her sense of one-to-one correspondence as she did the following:

Wrote: O Y R i
Said: Put away journals

Her earlier spelling of the word 'bottle' also demonstrates one-to-one correspondence, showing that she is syllabic. Again, this is not something that Errin has learned from an adult or from another child. She is working her way through a system that allows her to communicate through her inventions, before she controls all of the conventions of written language.

As Karla and Errin begin to notice more and more detail in the writings of other children and adults, and as they begin to notice the details of the print that they see in the environment, their non-conventional hypotheses will be continually invalidated. They will not abandon their early hypotheses, but they will begin to explore and construct new principles, and continue to assimilate and accommodate new information (Ferreiro & Teberosky, 1982). This information will come from both the physical and the social environments, and eventually will lead these children to constructing the conventions that they will use as adults.
Chloe’s name-writing event in the next scenario provides a further illustration of how self-construction influences literacy development. As background information, it is important to know that Chloe has been writing her name conventionally for at least two weeks, and has been spelling (aloud) her name conventionally for over eight weeks:

Chloe is standing at the writing table with a piece of paper and a pink marker, writing and spelling aloud at the same time.

Chloe: C-H-L-O-...I need two O’s.

She writes two O’s, and then an E. She moves her marker as if she is going to put a fourth horizontal line on her E, but apparently realizes that there is no space left. She draws a line under the word as she reads aloud:

Chloe: Chlo-eee.

Then, she writes C-H-L-O-C-H-E (five bars on the E), underlines it, and then writes some invented characters on her paper.

Chloe is practicing with the letter forms that she already controls, as well as creating new forms. She is inventing new words by manipulating some of the familiar letters of her name. Piaget (1962) describes practice as being characterized by repetitive actions and repetitive manipulations of objects. From the standpoint of literacy, practice can be described as playing around with letters, making lists of words, repeatedly writing the same words, or inventing new words (Clay, 1991). Chloe is practicing--playing around with letters, and manipulating the forms that
she already controls-- to create new forms. In other words, she is using her conventional knowledge to invent new forms.

Goodman and Goodman (1990) write that children develop knowledge about written language as they experience the constant tension between the forces of invention and convention. *Invention* involves the creation of written language, or the personal contributions that individuals make to their own construction of knowledge. Children *invent* written language to meet their communicative needs. The preschoolers in this study demonstrate this process as they experiment with non-conventional forms, and as they explore the properties of written language.

*Convention* involves socially established norms, or the contributions that the social group makes to knowledge construction. Conventions are as important as inventions, because if inventions were to go unchecked, people would not be able to communicate; if language is to serve a function, it must be understood by others. The children in the study experience conventional understandings as they transact with conventional forms, and as they are exposed to conventions of language used by their peers and teachers. So, in play, children experience the tension between invention and convention; they make personal constructions in a setting where they are continually influenced by the conventions of the social group. The social group has a continuous
influence on what is constructed personally, and personal constructions have a continuous influence on what is presented socially.

Bruner (1983a) illustrates the value of practice activities such as Chloe’s name/letter writing. He discusses practice in terms of oral language development, but the concepts apply to written language development as well. Bruner suggests that game-playing provides important opportunities for children to explore the ways in which goals are accomplished with words. Game-playing can be compared to Chloe’s playing with the letters in her name. Games are familiar territory for children, like the letters in Chloe’s name. The deep structure of games (such as peekaboo) often remains the same time after time; there is one basic structure to peekaboo. Analogously, the deep structure of the letters in Chloe’s name remains the same time after time; there is one set of letters in Chloe’s name. The surface structure of games can vary, as can the order of the letters in Chloe’s name.

Bruner asserts that the maintenance of the deep structure in an activity is like practice for children. The changes in the surface structure allow children to extend their language and thinking into new domains. By changing surface structure elements in her name, Chloe extends her
written language into new domains. Chloe uses her existing pools of knowledge to construct and invent new knowledge.

In sum, this study provides evidence that solitary play facilitates literacy development. Vygotsky's (1978) supposition that play creates its own zone of proximal development is supported. In solitary play, the children explored hypotheses about written language, they experimented with reading and writing, and they exercised the strategies that are used by successful readers and writers. As Piaget (1966) contends, "students should be allowed a maximum of activity of their own, directed by means of materials which permit their activities to be cognitively useful" (p. vi).

There are multiple roads to literacy; self-construction is only one of the means by which children develop literacy understandings within play. Opportunities for social transactions, and for receiving feedback from others, arise in each of the next three categories that I discuss.

Joint Construction of Meaning/Knowledge/Understanding

The second of the four kinds of literacy transactions that I discuss is joint-construction of meaning, knowledge, and understanding. Joint-construction is characterized by individuals engaging socially in talk, activity, and

Class members may be seen putting "together the 'pieces' of their individual mental work, [and] building up their knowledge in the discourse process" (Pontecorvo and Zucchermaglio 1990, p. 70). In this type of transaction, children obtain information on their own hypotheses about written language as they see how other children and teachers react to their efforts at making sense of and through written language. Children's approximations are accepted.

Pontecorvo and Zucchermaglio refer to this type of transaction as co-construction, but since my research questions (and also my characterization of this category) are somewhat different from theirs, I gave it a different name. In Pontecorvo and Zucchermaglio's work, co-construction characterizes a transaction which takes place between two or more children. In the present study, adults may be an equal partner in the co-constructive process.

In this section I show how the children in the study test their hypotheses about written language, and how they develop their reading and writing strategies, as they engage in joint-construction of meaning/knowledge/understanding. I
also consider the importance of risk-taking in literacy development, and reflect upon the ways in which teachers who play a part in jointly-constructed literacy events can encourage children to take risks.

Consider the following scenario, in which Harry and Aster are playing restaurant with Kevin. As the children take Kevin's order, they jointly construct the spelling of some words, and scaffold together toward new understandings. Kevin plays a small part in the scaffolding process, but a great part in encouraging risk-taking. The segment of the play situation that I report here begins just after Kevin orders crab.

Harry: I wonder how you really spell 'crab.'
Aster: How do you? How do you?
Harry: Um, I can't really remember.
Aster: But you could sound it out. You could sound it out. Sound it out.
Harry: Kuh, K (writes 'K'), A, rrrrr...R (writes 'R'), rah...rrr rrr rrr... R, R, R (writes another 'R').
Aster: R.
Harry: Kuh Kuh Kuh...Kuh-ra-ab-buh-buh...B (writes 'B').
Aster: Oops. I messed up.
Aster: How do you do it? Can I look at it right now?
Aster: ...So, K...
Harry: R, R...
Aster: R...
Aster: How- what's after- (looks at Harry's) B.
Harry: And A.
Aster: -and A.

So far they have K-R-R-B-A.

Harry: Buh...uh. And maybe an O at the end. Do you think so?
Aster: Yeah.
Harry: All right (Writes 'O').
Harry brings his paper over to Kevin.

Harry: Does that spell crab?
Kevin: I read it as crab. Do you read it as crab?
Harry: I don't know.
Kevin: What do you think it says?
Harry: Uh, crab.
Kevin: Mmhmm.
Harry: Ooh! Cool. Crab's so easy. I didn't know we could write that! Kevin: You sounded it out.
Harry: Yeah!
Aster: K-R-R-B-A-O.
Harry: Oh! We wrote crab. Now we know how to write crab. I didn't know we could really write.

After 'crab,' they write 'kak' (cake) and 'mok' (milk).

The following is Aster's written product from this event:

M O N D A Y
11 K R A B A O

T U E S D A Y
12 K A K

W E D N E S D A Y
13 M O K

Figure 5.4 Aster's Restaurant Order

In this single event, the children exercise all of Harste et al.'s (1981) strategies. First, they exercise the
strategy of textual intent; they create written language that makes sense within the context of their play. In so doing, they exhibit their semantic and syntactic knowledge of the systems of language that would be expected in a restaurant; a list of words serves their need better than would, say, a sentence or a phrase. Their written language, as well as the shape of what they have written (three words in a column), makes sense in this context.

Second, they exercise the strategy of negotiation. It is through negotiation that a writer decides what will be said, how to say it, and what can be assumed. Since Harry and Aster will presumably be the only consumers of this print, all that is needed is a list of the food that they are going to bring for Kevin. They do not need to include information about who the food is for, or about where to bring the food. This information is assumed.

They also negotiate sounds, letters, and letter formation. In the segment of the transcripts that I included, the children’s discussion of letters and articulation of sounds helps them decide how to write the necessary words. In a segment of the transcripts that is not included, Aster negotiates the formation of letters, as she asks Harry, "So, how do you make a M?" Joint-negotiation plays an important part in this event.
Third, as they use written language, they are fine-tuning what they know. The three central notions of fine-tuning are:

(1) What we learn from a language encounter feeds a common pool of linguistic data which can be drawn upon in a subsequent language encounter;

(2) Oral language encounters provide data for written language encounters and vice versa;

(3) Growth in a given expression of language must be seen as a multi-lingual event; in reading, for example, listening to a book read, talking about a book, or attempting to write your own book all support growth and development in reading (Harste et al. 1981, p. 67).

The first notion (language encounters feed subsequent language encounters) can be illustrated by considering what happened after Harry wrote the first two words on the restaurant order. After Aster saw Harry write ‘crab’ and ‘cake’, she tried to write ‘milk’ by herself. As she did so, she sounded like Harry sounded when he was writing:

Aster: Kevin, how do you spell milk?
Kevin: Do you want to sound it out?
Aster: Yeah.
Harry: M.
Aster: Muh...muh-ih...ih...mih mih mih.
Harry: A.
Aster: M. M.
Harry: M.
Kevin: Aster, do you want to try it by yourself while
   Harry's getting me my food?

   Aster may be using what she understood from Harry's
sounding out of the words 'crab' and 'cake' to sound out the
word 'milk.' The earlier language encounter may have fed
this later language encounter.

   The second notion of fine-tuning (oral language
encounters provide information for written language
encounters) is also part of this event. Harry and Aster
talk their way through this event. Their oral language not
only informs their writing, but it also may have given Aster
some new strategies for writing words by herself.

   Part of the children's dialogue in this transaction is
characterized by hesitancy; the children are not completely
certain of themselves. Part is fragmentary; the children
sound like they are thinking aloud rather than conversing.
Children's fragmentary, hesitant talk displays their
internal making sense of emerging ideas. This kind of talk
does not represent a failure to communicate. In formulating
new ideas, such dialogue not only serves communicative
purposes, it also enhances reconstructive talk, or
exploratory talk (Barnes, 1993). Aster and Harry's
exploratory talk facilitates their construction of the
information that they will put on paper.
The third notion (language growth is a multilingual event) is also manifested in this scenario. Aster and Harry engage themselves in a multilingual event, as they listen, talk, think, write, and read, all in a single activity. Kevin supports the multilingual nature of the event by asking, "Do you read it as crab?" This prompts the children to reread their writing, to talk more, and to reflect on the way that they have written the word. The children's use of these three notions demonstrates that they are using language to fine-tune language.

The last of Harste et al.'s (1981) four strategies, risk-taking, plays a part in this event as well. Risk-taking involves the actions of hypothesis-testing, or experimenting with how language works. Hypothesis-testing is clearly a part of this scenario. Both Aster and Harry are exploring what Ferreiro and Teberosky (1982) refer to as the alphabetic hypothesis. They have discovered the basic nature of the alphabetic system; they understand that similar letter patterns are used to represent similar sound patterns, and they explore this understanding in their writing.

Risk-taking is influenced by attitudes toward hypothesis testing, which, according to Harste et al., are fragile. As an authority figure in the classroom Kevin will inevitably have an influence on the children's attitudes
toward risk-taking. Consider his role in Aster and Harry’s literacy event: First, Kevin observes as Aster encourages Harry to write a word which he thinks he cannot write. He does not show Harry the conventional way to write the word. After Harry writes the word, he is still uncertain of the validity of its spelling until Kevin confirms, "I read it as 'crab.'" Then, Kevin encourages Aster to write a word which she thinks she cannot write. Although none of the spellings on the list are conventional, they are all accepted by Kevin. Kevin knows that literacy development happens within learners, and requires that learners test individual series of hypotheses.

Kevin also understands that children invent spelling. Inventive spellers construct systematic (but unconventional) spellings of words based on their tacit hypotheses about the relationship between sound patterns and letter patterns. These spellings have a phonetic basis; they represent children’s constructions of a great number of speech sounds with a restricted alphabet (Read, 1975). Harry’s phonological judgments as he spells ‘crab’ are not incorrect; he is analyzing and categorizing sounds based on what he hears when he articulates the sounds in the word ‘crab.’ It is important that Harry does not come to believe that his phonological judgments are incorrect. The ultimate goal must be that Harry recognizes that his judgments are
reasonable, but that they do not reflect standard spellings. By accepting Harry's judgments as reasonable, Kevin encourages Harry to keep trying, and to keep testing his hypotheses. As Harry encounters new information he will continually be subjected to standard spellings, and will modify his early hypotheses (Ferreiro & Teberosky, 1982; Read, 1975).

If Kevin had shown Harry and Aster the correct spellings, he might have curbed the children's willingness to take risks. Harry was hesitant about writing crab at first, but with Kevin's encouragement, he discovered something very important to literacy development, evidenced by his saying, "I didn't know we could really write!" The value of allowing children to work in small groups, like that of Harry and Aster, is that it helps them to take the risks that are involved in thinking aloud (Barnes, 1993). This allows for the sharing of ideas, and for the exploratory talk that helps children to bring their understandings to a conscious level. Confidence with using literacy develops as children have their literate creations interpreted, understood, and accepted as real literacy events (Dyson, 1991). Confidence develops when children test their hypotheses in environments where they can discover that there are no negative consequences for trying.
The teachers in the study often acted as major partners in jointly-constructed literacy events. Consider the following scenario, in which Mike is writing in his journal, enthusiastically talking with friends about a superhero named 'Jason'. Mike requests Candy's help, and together, they construct the spelling of the word 'Jason.'

Mike: How do you write 'Jason?'
Candy: What do you think it starts with?
Mike: J. (writes a J) What's the next letter?
Candy: What do you hear?
Mike: C (writes a C)... C. Another C? Now another C?
Candy: What do you hear?
Mike: Son.
Candy: Jay Son. What else do you hear?
Mike: C! Does J C C spell Jason?
Candy: Think about it. Do you hear any other sounds?
Mike: N.
Candy: All right!
Mike: Does that spell 'Jason?' Does this spell 'Jason?'
Candy: Do YOU think it spells 'Jason?'
Mike: Mmhmm.
Candy: You did a great job sounding those out.
Mike: I spelled 'Jason.' Youspell it a J, a C, a C, and an N. That spells 'Jason.'

Figure 5.5 Mike's Spelling of 'Jason'

Candy was able to help Mike focus on some of the key aspects of the word he wanted to write, but she did not do
for the child what he was capable of doing on his own. Mike is exploring the alphabetic hypothesis, and was able to write the word without specific letter-sound information from Candy. If Candy had supplied the information, she might have damaged Mike's risk-taking boundary. Harste et al. argue that this boundary is often damaged when children experience certain kinds of formal instruction, and are driven to an over-concern with standard spellings and correct letter-formation. When this boundary is damaged, children often become afraid of making what they believe to be mistakes, and begin to rely on outside sources.

This does not mean that effective teachers refrain from supplying any information at all; effective teachers supply information when it makes sense to children. This is an intuitive and professional sense which effective teachers develop, and which must be decided within the context of each literacy event. In the following scenario, Karen supplies some key information at a key point in Jill's literacy event:

Jill writes B-b-L-O-L-L; she looks at her writing, and then as Karen walks by, Jill talks to her.

Jill: (pointing to the B.) Isn't that big? What is it?
Karen: B.
Jill: No...Yeah, B. B, what?
Karen: Big B, little b.
Jill: (reading off the letters) B-b-L-O-L-L.
Karen: B-b-L-O-L-L.
Jill was ready for this information; she was at a point where specific new knowledge would make sense based on what she already knew. When Piaget (1962) and Ferreiro and Teberosky (1982) discuss the processes of assimilation and accommodation, it is the learners who seek order in the knowledge they encounter. Jill sought this order. Through her questions, she showed Karen that she was equipped to assimilate some new information about the names of letters. Children make sense of written language by building internal schemas.

It would be impossible for Karen to know all that is currently in Jill’s schema. It is therefore Jill who must be allowed to become the expert on her own learning. It was Jill who knew what Karen could do to help her satisfy her goal of reading the entire list of letters she had written. Similarly, in the previous scenario, Candy helped Jason organize what he knew, but only to help him work through his own spelling of the word.

Understandings that are jointly constructed rely on contributions from all parties involved in the event, but it is the children who must accommodate and assimilate the new information. Teachers cannot make this happen; they can only support its happening. There is no one-to-one correspondence between teaching and learning (K. Goodman, 1986). The scenarios in this section (and in previous
sections) demonstrate that when teachers participate in literacy events, they are not necessarily the experts; it is the children who are experts when it comes to their own learning.

Allowing children to be experts means that teachers must take risks too. First, they must trust that children will learn through their play. Second, they must trust that when children have access to literacy materials, and when they are in an environment where literacy is a part of life, they will use literacy in their play. Third, they must believe that as children use literacy, they will refine old concepts by exploring new ones. Fourth, they must accept that when children do take risks with written language, the result is often an approximation, or an invention. They must trust that these inventions are a part of children’s literacy development, and that through them, children will eventually come to control conventional written language. Evidence from this study suggests that the consequence of teachers taking these risks is that children are freed to take the steps that allow them to explore their hypotheses, and to exercise the strategies that are used by successful readers and writers.

It is difficult to imagine a teacher-directed scenario that could yield the rich exercising of all of the strategies that Harry and Aster used in their restaurant.
literacy event. Certainly, a teacher could ask a class full of children to write a restaurant order, or to write a list of words, but without the context and the non-authoritative enfranchisement to take risks, it is unlikely that such stimulating results would be obtained. Jointly-constructed literacy events that occur within play are contextualized, and offer children the opportunity to take risks with written language in a non-threatening situation. Teachers can support this by accepting children’s approximations, and by treating their reading and writing as real literacy events.

Direct Instruction

*Direct instruction* is the third of the four kinds of literacy transaction that I discuss. *Direct instruction* is characterized by a teacher or child demonstrating, suggesting, or explaining, while a recipient mainly observes or listens. There is limited opportunity for making choices on the part of the recipient; ideas for initiation, extension, or completion of the literacy event come from the instructor. This type of situation is often characterized by question/answer sessions that are primarily fact-based, and aimed at "right" answers, rather than conceptual or inventive exploration of written language. Approximations may be accepted, but they are not encouraged.
In this segment, I show that there are some inherent drawbacks to direct instruction. When direct instruction occurs, children do not fully exercise their strategies for reading and writing, and do not have many opportunities to test their hypotheses about written language.

Consider the following scenario, in which Maria and Julie have been talking, and drawing in their journals. Candy comes to the children's table, and asks Maria to write her name:

Candy: Could you put your name on this for me? Could you put your name on there for me?
Maria: I can't.
Candy: Well, can you try a little bit?
Maria: I need a M.
Candy: Okay, can I help you with it?

Candy holds Maria's hand as they write the M.

Candy: Up, down, up, down. Can you do the rest of it? Do you want- can I help you?

Maria nods. Candy holds Maria's hand as they write an A.

Candy: And what's next?...Your R.
They write the R.
Candy: And what's next?
Maria: (five second pause) I can't write.
Candy holds Maria's hand as they write the rest of the name.

While Candy's intention is to be supportive, her instruction is beyond what Maria is willing to do, or capable of doing, on her own. It is not likely that Maria
will remember that the letter M is written by moving a pencil first up, then down, then up, and then down. Even if she could remember this, she would probably not be able to reproduce this form unless she also remembered that she had to move from left to right while going up and down.

By holding Maria's hand, Candy does not ignite any literacy-related cognitive action on Maria's part. Candy takes the responsibility for completing the event. "When we keep children from writing (from testing their hypotheses as they produce written texts) and force them to copy (repeating someone's markings without understanding their structure), we keep them from learning; we keep them from discovering on their own" (Ferreiro and Teberosky, 1982, p. 278). The hand-holding method is ineffectual for facilitating writing development because writing and copying are different acts. Writing involves decision-making, problem-solving, and hypothesis-testing. Copying involves none of these entities. It is as children respond to, interact with, and have personally meaningful experiences with organizing written language, that they develop literacy (Goodman, 1980). When Maria has her hand held in such a way, she has none of these opportunities.

It is doubtless that even without this kind of direct instruction, Maria will become intimately familiar with the printed form of her name. Candy already supports this: she
has Maria's name hanging in several areas of the room; Maria is required to read her name as a part of many group activities, and Maria has to read her name in order to put her journal away each day that she attends school.

It is interesting to compare the Candy/Maria transaction in this section with the Candy/Mike transaction in the previous section. In the Candy/Maria scenario, approximations are not encouraged. Candy is looking for M-A-R-I-A. In the Candy/Mike scenario, Candy encouraged Mike to write 'Jason' like he thought 'Jason' might be written. The aim was at building knowledge together. The aim in the Candy/Maria transaction, however, is at correctness, or at "right" answers, which only the teacher can provide. Maria's willingness to risk-take is defeated here, as evidenced by her final statement, "I can't write."

In another direct instruction scenario, this time involving reading, Karen asks Jonah to help her take attendance. Karen's goal for Jonah is that he read the names on all of the children's name tags. Together they will separate the names of the children who are present from those who are absent:

Karen hands Joseph's name tag to Jonah. (Joseph is present today.) Jonah looks at it, and then looks at Karen.

Karen: Juh- Juh-
Jonah: 'Charles!'
Karen: Juh-
Jonah: 'Jonah!'
Karen: J is not- It's close to 'Jonah.'
Jonah: 'Johanna!'
Karen: And 'Johanna' is close.
Jonah: 'Adria.'
Karen: No, stick with the J. You've got Jonah, Johanna, and who else?
...See the S?
Jonah: 'Adria.'
Karen: Jo-
Jonah: Gar- Johanna?
Karen: Jos (emphasizing the /s/)...look at this S.
Jonah: Joseph!

Karen's instruction assumed that Jonah was capable of exploring the alphabetic hypothesis. (It assumed that Jonah could use an initial alphabetic sound clue to determine what a name said.) This would be a difficult task for most four-year-old children because under normal listening conditions, speech sounds are embedded within the context of fluent speech (Carroll, 1994). Young children are not accustomed to isolating speech sounds as they listen to speech. When sounds are presented in isolation, there are many possibilities from which to choose.

When Jonah interpreted the /J/ sound that Karen was making as the /Ch/ sound in Charles, he indeed was exploring the alphabetic hypothesis. His phonological judgment was correct: /Ch/ and /J/ are articulated in the same part of the mouth and have related sounds. Even the sound that the A-D-R makes in "Adria" is related to the /Ch/ and /J/ sounds. Sound clues did not help Jonah because there were too many possibilities from which to choose. The names
Charlie, Jonah, Johanna, and Joseph all begin with the same or related sounds, and the sound in Adria is closely related as well. Karen’s instruction did not coincide with Jonah’s knowledge at the present time. The teacher not schooled in linguistic knowledge is probably unaware of the complexity of this seemingly simple act.

In any case, if Karen’s goal was for Jonah to read name tags, perhaps he would have experienced more success if he had been given additional leads, such as syllable clues, or color-coded cards starting with the same initial. Because the acoustic structure of speech sounds vary depending on the phonetic context, isolated sounds were not enough; broader aspects of context may have been more useful as clues for Jonah. According to Ferreiro and Teberosky, the syllabic hypothesis is explored before the alphabetic hypothesis, so in some cases, syllable clues would make more sense. In this scenario, however, even syllable clues would probably have been ineffectual, since four of the names start with the same syllable.

Vygotsky believes that the most powerful kind of instruction is that which slightly leads development. Instruction that slightly leads development occurred in Candy’s transaction with Mike when they wrote ‘Jason,’ and in Kevin’s work with Harry and Aster in the restaurant scenario. Karen’s instruction here, however, is beyond what
Jonah can do, even with help. The same is true in Candy's transaction with Maria. In these situations, both teachers focused on the isolated parts of the words, rather than considering the nature of language in the context of use. Neither child exercised the strategies that Harste et al. conclude are used by successful readers and writers.

Harste et al. (1981) argue that teachers must strive to understand what children do in contextually situated literacy events, rather than what they do when they are presented with isolated parts of written language. Isolated parts of written language became the focus in many of the direct instruction scenarios. "While the written language event may seem complex enough on its own, intervention by helpful adults may only make the event more complex, convincing children to trade in their personal strategies for those of instruction" (Harste et al. 1981, p. 292).

If children give up the personal strategies that allow them to be literate members of their classrooms, and allow direct instruction to take the place of these strategies, there is danger that they will become marginalized from many play situations. Literacy was an integral part of many play events. It served many functions in play. It carried play forward, and allowed children to act out real-life scripts. Only when teachers refrained from direct instruction, and allowed the children to take risks with written language did
the children fully and effectually participate in these play events. It is a combination of play and supportive, but non-controlling, teaching that encourages children to take forays into the unknown, to exercise and develop their own strategies, and to make new discoveries based on what they already know.

Teachers are not the only instructors in preschool classrooms. Children act differently, however, when peers (as opposed to teachers) are the instructors, and the consequences of direct instruction may not be as grave. In the following scenario, Megan offers Adela some direct instruction in name-writing:

Preston asks Megan and Adela to put their names on their papers before they begin to paint. Both children pick up a crayon.

Megan: Adela, remember, this is an A. (Megan writes on the table with her finger.) This is a D. This is an E. This is an L. This is an A. (She writes all of the letters on the table with her finger.)

Adela writes an A on her paper with her crayon.

Adela: Like this?

Megan writes her name.

Megan: See? Megan.

Adela may not have internalized all of Megan’s information especially since she copied what Megan
demonstrated. As I discussed earlier, imitating someone's writing without understanding the structure keeps the imitator from making discoveries on her own (Ferreiro & Teberosky, 1982). But, Adela had the crayon in her own hand, and was in control of the forming of the letters, so some of the construction belonged to Adela.

As the instructor, Megan had the opportunity to bring her knowledge about writing Adela's name to a conscious level, and to articulate what she knew. At the same time, she had the chance to write what she knew. All of this is part of using language to fine-tune language.

The value of peers teaching peers is that the recipient of a child's instruction (Adela) has opportunities to rebuff the instruction when it does not make sense, or when the instruction is beyond what she is willing to do. Because a child who instructs is not an authority figure (as are adults) the recipient can reject uninteresting, meaningless lessons. Consider the following situation, in which Brian instructs Ellie, and Ellie rejects his attempts:

Brian is sitting next to Ellie, writing letters. Julie, a child with whom Brian often argues, is also sitting at the table.

Brian: How can you tell what this is? (writes 'E')
Ellie: Um, E?
Brian: What's this? (writes 'O')
Ellie: O?
Brian: What's this?...What? (writes 'B')
Ellie: That?
Brian: Mmmmm.
Ellie: B?
Brian: No, I mean what's this? (I did not see what Brian wrote)
Ellie: O?
Brian: Uh-uh. (meaning no)
Ellie: B.
Brian: You don't know the alphabet. What's that?
Ellie: I'm not going to guess.
Brian: What's this?
Ellie: I'm not going to guess.
Brian: What is it?
Ellie: I'm not going to do it.
Brian: What is it?
Ellie: I'm going to color, okay?
Brian: What is it? What is it? Try to guess what is this?
Julie: She doesn't want to guess, Brian, so let her don't guess.
Ellie: I don't want to guess.
Brian: So, you know what that means?
Julie: Just let her don't guess! She doesn't have to if she doesn't want to!

It is primarily the instructor (Brian) who benefits from an event in which direct instruction occurs. Brian exercised his ability to write and name letters. He also created an opportunity to display his own skill. And, by announcing to Ellie, "You don't know the alphabet," he drew attention to the prospect that he does know the alphabet. (This was probably especially satisfactory to Brian, since long-time rival, Julie, was in earshot. Brian and Julie's arguments were used in the last chapter, where abilities and shortcomings were discussed.)

The event was not totally fruitless for Ellie, however. She had a chance to name and think about letters, and to use
language, but more importantly, she had the opportunity to reject instruction that did not make sense to her.

In the next scenario, Brian again takes on an instructing role, but this time he is more successful in getting the recipient to play along. Brian writes his name, and then:

Brian: Look at this. Look at mine. That's your autograph. That's yours, that's yours. I made your autograph.
Kerry: What's 'autograph'?
Brian: Can I have your autograph?
Kerry: No, thank you.
Brian: No, all you do is write your name.
Kerry: No, I don't have to write my name now, I'm going to do it later.
Brian: I'm going to give you my autograph. This is my autograph. Here.
Kerry: You keep your own autograph.
Brian: I'm doing my own autograph. There. That's my autograph. Now you give me your autograph. Write it down.
Kerry: I'll write my name in a minute, when I'm done.

In this scenario, Brian was successful in his instruction. When he began talking with Kerry, she did not know the meaning of the word autograph. At the end of this conversation, however, she substituted the word name for autograph, demonstrating that she finally understood the synonymity in meaning between the words, and that she benefitted from the transaction. Again, the instructor benefits in that he brings what he knows to a conscious level, and presents it to another child.
By comparing the *joint-construction* and *direct instruction* categories, it becomes evident that learning is most effective when all involved parties can contribute to the event. When children instruct one another, the instructors usually benefit more than the recipients, but the recipients are not likely to develop a fear of risk-taking due to these events, because child-instructors are not authority figures.

Teachers can best support children by observing what they do with literacy in their play, and helping them to use their own knowledge as they think through, and reflect upon their own participation in literacy events. "Teachers who want their students to be active constructors of knowledge must monitor their own language strategies because they may unknowingly place conditions on the ways their students can use language to learn" (Burke 1993, p. 94). This is an important part of critical moment teaching. Monitoring one's own language strategies is most effective when teachers understand how to use their professional knowledge to assess their influence on children's development. Ideas for professional development are discussed in Chapter 6.

Play gives teachers access to what children can do with literacy. It allows children the opportunity to be literate in an environment where taking risks usually does not yield negative consequences. When teachers carefully observe
children, and attempt to support and extend literacy through child-controlled events, they are offering the most useful kinds of support for development.

Challenge

Challenge is the last of the four kinds of transactions that I discuss. Challenges are characterized by one individual questioning the validity of what another is reading, writing, or saying about written language. Approximations are not initially accepted within the literacy event, but, often, there is a debate that leads to "collective reasoning toward higher processes and outcomes" (Pontecorvo and Zucchermaglio 1990, p. 70). After this debate, the challenge may or may not be retracted; the approximation may or may not be accepted.

Challenges may bring about disequilibrium, which is the antecedent of accommodation. Challenges are aimed at a child's existing hypotheses about written language, which become apparent to other children when they observe that child engaging in an act of reading or writing.

The challenge category could actually operate as a subcategory of joint-construction, but because of the effectiveness of challenges in facilitating literacy development, and because the teachers did not make any of
the challenges, (but did participate in joint-construction)
I chose to discuss it separately.

Pontecorvo and Zucchermaglio discuss something similar
to challenge when they refer to conflict, and to arguing.
Both of these elements are present in transactions involving
challenges. Arguing is characterized by a temporary dispute
in which children dialogue toward elevated understandings.
Conflict is characterized by a teacher attempting to induce
cognitive discord so that the child will experience
disequilibrium. In this section I show why children make
challenges, and how their challenges bring about cognitive
discord in their peers. I also consider the ways in which
cognitive discord may lead children into reconstructing
their existing hypotheses.

Consider an example of a challenge that Angie made
regarding a statement made by Karla. In this event, the two
children are sitting at the writing table, writing and
talking. Angie has written several strings of letters. I
ask Angie what she has written.

G.O.: What did you write on there, Angie?
Angie: Um, I don’t know. I just wrote B-E-A-I-G-I-E-W-E.
Karla: I know what you wrote. This is your name- wrote
this- is this your name?
Angie: No.
Karla: What is- um, it is your name, but it’s not- but
you’re not- pretending- it’s not- (Karla is trying
to say that Angie is pretending that what she has
written is not her name.)
Angie: No, it’s not my name! I know, it’s A-N-G-I-E.
Karla: Oh, yeah. Oh, yeah. But some of those are in your name, right?
Angie: Yeah, like A G I G E, right?
Karla: Yeah, and then this E. (then, she refers back to me) This is in her name.

Initially, Karla assumes that Angie has written her name because she sees some of the letters in Angie's name. Angie challenges this assumption, and through exploratory talk (Barnes, 1992), new understandings are constructed. Because of the challenge, Karla has the opportunity to sort out the notion that there is a difference between letters that are in a name, and letters that are needed to conventionally spell a name. As discussed earlier, exploratory talk is a mechanism for bringing implicit understandings and personal knowledge to a "talking-place," (Watson, 1993) where children can construct new understandings through socialization.

The following is an example of a challenge that involves name-writing. In this scenario, Katie attempts several times to write Chloe's name. She is using an invented cursive form, however, that Chloe does not recognize. As we saw earlier, Chloe is not only able to write her name, she is also exploring with different spellings of her name. Here is one of Katie's renditions of Chloe's name, and then some of the talk that occurs between the two children:
Figure 5.6 Katie's Rendition of Chloe's Name

Katie: I just write down Chloe's name!
Chloe: Where?
Chloe: No. (laughs)
Katie: Want me to write your name on here? (Katie writes again)... It's Chloe!
Chloe: (laughs, seemingly thinking she is being teased)
Nooo.
Katie: Yeah-ah!
Chloe: No, it's not. It's not me.
Katie: Uh huh!
Chloe: No-hoh.
Katie: This says Chloe!
Chloe: Noooo.
Katie: Chlo-O-S. Chloe!
Chloe: Nooo.
Katie: That's Katie's name then!
Chloe: C-H-L-O-E nyah nyah nyah nyah. I'm going to try to write Katie name. Katie, what is your name? (meaning, 'how do you write it?')

At school, Katie is rarely challenged when it comes to the meaning or the form of her writing. She uses writing in her play, and it is accepted by her peers as valid. She also engages in writing events with Kevin and Trina, who both accept the meaning and the form that Katie gives to her writing.

When Katie writes Chloe's name, however, Chloe finds no order in the writing. Piaget (1952) and Ferreiro (1990)
believe that it is the child's natural tendency to seek order in the world and to assimilate (rather than accommodate) new information. "But when the new information is impossible to assimilate, they very often are forced to reject it" (Ferreiro 1990, p. 14). Chloe finds nothing along the lines of order in Katie's rendition of her name, so she rejects what she sees. Chloe seems to feel certain that she knows how her own name should be written, so she challenges Katie. In consequence, she challenges the validity of some of Katie's existing hypotheses about written language.

This challenge launches Katie into providing a more explicit explanation of what she has written, and forces her to consciously reorganize what she understands partially. First, she shows Chloe how the word is divided syllabically; she says, "Right here. Chlo-eeee." Then, she attempts to spell the name aloud in order to prove to Chloe that she must have written it correctly; she says, "Chlo-O-S. Chloe!"

It may be that both Katie and Chloe experience some disequilibrium in this transaction, but it is Katie who seems to accommodate her new information, or to modify her scheme of what could be Chloe's name. Disequilibrium causes children to modify their existing hypotheses in order to achieve equilibrium (Piaget, 1952).
Ferreiro argues that:

When new information repeatedly invalidates the scheme, children must engage in a difficult and sometimes painful process of modifying it. Usually, they first try to make small rearrangements to keep as much of the previous scheme as possible. However, at certain crucial points in the evolution, they feel compelled to reorganize their systems, keeping some of the preceding elements but redefining these elements as they become part of a new system (1990, p. 14).

This becomes apparent through Katie's actions. She maintains that the invented cursive model is writing, but she eventually concedes that if what she has written cannot be 'Chloe,' then maybe it can be 'Katie.'

Goodman (1983) writes that young readers eventually become tentative. They begin to know what they do not know. With their greater knowledge, they may act as if they know less than younger children. Goodman contends that this kind of tentativeness is a more mature act than the quicker responses of younger children. At three, Katie is eight months older than two-year-old Chloe, and her tentativeness represents a more mature act than the unruffled stance of the two-year-old.

From experiences such as this, and as she has further experiences with written language, Katie will continue to learn that there are conventions required of her in order to have others accept her written language. Perhaps Chloe will soon become more tentative, and ready to accept the
possibility that there may be more than one way to represent her name. The older child's tentativeness and the younger child's tenacity in this scenario provide evidence for Piaget's contention that early play is primarily egocentric, and that children eventually come to terms with reality through play (1962). Katie is coming to terms with reality.

If a teacher had responded to Katie's writing like Chloe responded, it is unlikely that Katie's willingness to take risks would have gone so far. Four-year-old children tend to "glorify" adults (Curry & Bergen, 1988). Katie and Chloe are in Kevin and Trina's classroom. Although this classroom is democratic, with the children making decisions about many aspects of their learning, the children believed that the adults were the ultimate authorities on most issues. When there was a disagreement over a spelling, or a question about a piece of written language, the children usually referred to Kevin and Trina (and other adults) as the authorities. One example of this tendency is Harry's asking Kevin, "Does this say 'crab'?" Another example is when Aster and Karla referred to the adult writing to find the correct spelling of 'Aster.'

Dyson found the same situation in the classroom she studied. The children thought of the teacher as a superhero and referred to her as the expert on many important issues (Dyson, 1989). Von Dras, a classroom teacher, writes
that children may "see the teacher as the primary source of knowledge and guidance, so that the skills they possess to look elsewhere for answers have been suffocated by authoritarian role models. Didactic teaching has created student dependency" (1993, p. 62). Evidence from this study suggests that this tendency in children begins even before formal schooling, or exposure to didactic teaching. The teachers in the present study were viewed as the ultimate authorities on knowledge, but they did not take on authoritarian roles, and they did not teach didactically. In fact, they continuously strove to let students control their learning. A major goal of all of the teachers in the study was to curb student dependency, and to help children become independent learners. Still, their authority reigned, and at times, made children unwilling to take risks. This suggests that teachers must go out of their way to help children know that personal inventions are a natural and acceptable part of learning.

While the teachers in the study were careful to preserve the children's willingness to take risks, peers were not so careful. Piaget's supposition that children continually search for order in the world can be observed in children's challenges. When the children in the study saw their peers doing things that did not fit with their own schemas, or with their expectations about the ways in which
written language works, they made these expectations clear. I use the following three examples, to consider not the responses of the recipients, but the order-seeking language of the challengers:

Julie writes a 6 and a 9 on her paper. She thinks that her numerals represent 'one hundred.'

Julie: What number is this?...(to herself) It's a 'hundred.'

Kerry, who is observing Julie, makes a subtle challenge to what Julie is writing and saying:

Kerry: You know what? I heard it was a 'one, zero, zero.' (She says this as she writes 1 0 0.) That's what I heard it was.

Kerry shows Julie what she expects the numeral 'one hundred' to look like in print. She challenges Julie because '69' is not what she expected. Using a '69' to represent a '100' is not within Kerry's experienced world, so she raises a challenge.

In the next scenario, Cindy is looking at the string of letters which Errin has just written. The middle line on Errin's E is high; it is closer to the top horizontal line than to the bottom horizontal line. So, the spaces between the three lines on the E are not uniform. While Errin may not think this is important, and may not have noticed the uneven spacing, Cindy had certain expectations about the E. Here is Errin's writing, and Cindy's response:
Figure 5.7  Errin’s Challenged E

Cindy: That’s not how you make a E. You want it wide up there (pointing to the narrow space which Errin has left between the top bar and the middle bar of her E)

Cindy sought order in Errin’s writing, but did not find what she expected. In the next scenario, Sandy has written her name (S A N Y). Mike does not notice the spelling, but he does notice that Sandy’s version of an ‘A’ looks like a four.

Mike: That’s not your name.
Sandy: Yes, that’s my name.
Mike: You put a four!
Sandy: I don’t have a four.

The challengers in these scenarios are seeking order (in terms of form) in the writing of their peers. Because of their expectations for order, they drew one another’s attention to specific features and conventions of written language.
Again, if a teacher had played the part of the challenger, then it is likely that the children's future willingness to take risks would be inhibited by an over-concern for correctness or perfection. For this reason, it makes sense that teachers offer many opportunities for children to discover literacy together, not only to confirm and delight in one another's growth, but also to argue and challenge, and to question the details in the reading and writing of their peers.

Power relationships in any classroom have a great influence on literacy development, even in democratic classrooms. The teachers in the present study show, however, that when there is a consciousness of the social organization of classrooms it is possible to create a system in which children become free to take risks, and in which children and teachers engage together in meaningful, collaborative learning.

There is not one instance in the data of a teacher challenging a child. The teachers did occasionally engage in direct instruction, but they never overtly challenged or corrected a child's attempts at written language. As I stated earlier, even in a democratic classroom, teachers can be viewed as the ultimate authorities. For a teacher to have made such challenges might have prompted the children to surrender their own efforts for the safety of
instruction, and indeed, the children often did surrender in the cases where direct instruction occurred. Because challenges may help children see things in new ways, however, it is worthwhile for teachers to deliberately plan for and encourage this type of transaction among children. One way to do this is to provide children with many opportunities to play together in environments where the tools they need for literacy are available, for these challenges occur naturally in the course of play. Also, according to Pontecorvo and Zucchermaglio (1990), teachers can intentionally invite challenges by encouraging children to help and collaborate with one another, and by drawing attention to the different writing systems that children use. The children can carry out their own comparisons and analysis of the differences among their systems.

In Pontecorvo and Zucchermaglio’s research, they observed several instances of teachers encouraging challenges among children. I believe that the difference between this study and Pontecorvo and Zucchermaglio’s study is due to the fact that their teachers were teaching with a philosophy steeped in Piagetian ideology, and were asked to purposely induce cognitive discord.
Some Final Thoughts on Literacy Transactions

This study shows that preschool children who have the opportunity to play together in a print-rich environment, where the use of literacy is expected and supported, will construct knowledge about literacy, and will nurture literacy development in their peers. When classrooms are organized in such a way that children can engage together in literacy events, they will test their hypotheses, and with support from peers and teachers, will make their own discoveries about written language. The secret to the success in the classrooms that I observed lay in the teachers' willingness to act as facilitators, rather than directors, of literacy development. And, of course, the children's natural curiosity, and natural drive for exploring something (literacy) which was an integral part of their daily lives at school, was key.

These observations are evidence for Vygotsky's contention that collaborative problem-solving with adults or more capable peers can help children do things that they might not be able to do on their own. To reconsider some examples, in the situation in which Candy helped Mike focus on the key aspects of the word 'Jason,' Mike presumably did more than he could have done on his own. This is an example of a child who, with his "more capable" coach, could do more than he could have done on his own.
Also, in the scenario in which two-year-old Patty first read one line of a book, and then said, "That's the end," her literacy event might have ended if she had not been supported by her four-year-old peers (Diego and Bowen). Diego and Bowen had had some experience with the book, and helped her read it through to the end. In this way, Patty's "more capable" coaches facilitated her literacy development. The children and teachers frequently engaged in this type of help-oriented collaboration.

On the other hand, it is not clear that the facilitator of learning always needs to be more capable. Although Patty is probably "less capable" than Diego and Bowen in many ways, she was not the only one who benefitted from the event. Diego is from Ecuador. His mother tongue is Spanish. By having the opportunity to talk and read with Patty, he was exposed to, and used, his second language in a meaningful context. And Bowen, who is not often a leader in play situations, was at the center of Patty and Diego's attention when he was reading. If using language to fine-tune language is facilitative of literacy development, than Diego and Bowen benefitted from this event, and they benefitted in part because of young Patty's participation.

To reconsider another scenario, when two-year-old Chloe rejected three-year-old Katie's writing of her name, she may have helped the older child learn something. Because Katie
is eight months older than Chloe, one might assume that she is more capable in some areas. And indeed, Katie is quite capable in many areas. When Katie articulated the spelling of Chloe’s name as "CHLO-O-S," she demonstrated that she had discovered some sense of how this word should be spelled. It is unlikely that she had been taught how to spell Chloe’s name in this way. Katie already has the tools needed to discover spelling principles for herself. Moreover, her tentativeness (Goodman, 1983) is a sophisticated act, showing that she recognizes that there may be concepts of written language that she does not yet understand. The younger Chloe did not exhibit tentativeness in this event, and indeed, rarely exhibited it in any of my observations in Kevin and Trina’s classroom. Nonetheless, Chloe was able to initiate an element of cognitive discord for Katie. By challenging Katie’s hypothesis, the younger child may have helped Katie see something in a new way.

Every child in every classroom is likely to be more capable than others in some areas, but even when they are not more capable, they can support their peers in learning. "The struggle to communicate with someone who only half understands can contribute to the clarification of the speaker’s own thinking...students’ own efforts to express their understandings are a major means of enhancing learning" (Barnes 1993, p. 344). Participating in a
literacy event is bound to contribute to the learners' growth, whether or not the learner is less sophisticated or capable than the partner.

Teacher Perceptions on Participating in Play

In this section, I compare some of the perceptions and practices of the four teachers in the study. My purpose is not to speculate upon whose teaching is the most effective, or which kind of teaching is the most useful in facilitating literacy development; my purpose is to demonstrate that three unique ways of teaching in three different classrooms can yield similarly effective results. I will begin by describing some of the similarities among the teachers.

All of the teachers moved frequently in and out of the children's play activities. Sometimes they participated in the play; sometimes they observed. When they participated in the play, they often contributed ideas and materials, and drew attention to special materials which might have led to a literacy event. At other times, the children initiated the literacy events, and the teachers observed, or participated by following the lead of the children.

Regardless of the nature of their participation in the play, all of the teachers in the study expressed the importance of letting the children determine the course of their play, and maintaining its focus. Candy, for example,
said that when she participates in play it is important that she first becomes aware of the children’s intentions. She reflected that because she does not always know what the children are doing, and because she does not want to make any assumptions, she asks about the play before becoming involved. This allows the children to maintain their focus, and prevents her from unintentionally directing the play.

In Candy’s classroom, 15-20 children are usually present, with only two adults. The atmosphere is busy and bustling, and Candy does not often have the time to stay long with one child, or with one group of children. Candy’s technique of moving around the room, and asking children about their play allows her to actively facilitate literacy development, even though she has a very busy classroom schedule.

Corroborating Candy’s ideas about the importance of maintaining the children’s focus, Kevin expressed that it is important that children make the decisions about the directions of their play; according to Kevin, the teacher can make materials available and can contribute ideas to the play, but the children must decide how to use the materials and how to play. When Kevin enters a play situation, he makes literacy-related suggestions, or takes on an appropriate play role, rather than introducing or demonstrating the use of a literacy material. Kevin decides
the appropriateness of his entry into play based on his observations of the children during play. "If there's a way to support growth that already seems to be happening, I see how it can be fit into their play."

Both Kevin and Trina, rather than overtly asking about the focus of the children's play (like Candy does), observe the children before becoming involved. They ease into play situations as play partners. Their classroom is smaller than Candy's, and they usually have fewer children present. It may be that the different circumstances in terms of classroom sizes and numbers of children have some influence on the different teaching styles.

Karen, on the other hand, believes that it is important to be invited into play. When asked if, and how, she becomes involved in her children's play, she responded: "Sometimes I join it. If they invite me, I always join it—and sometimes reluctantly..." Karen believes that play belongs to the children. She clearly demonstrates this philosophy in her classroom practices. Rather than moving about the room like Candy, Kevin, or Trina, Karen often stays involved in one play event until she is called (by a child) to another event.

All of these teachers have the philosophy that if play is to be valuable, it must remain child-centered. Teachers can make contributions, and can help children make
discoveries about literacy through their play, but it is important for them to understand the play before becoming involved. In this way, they do not change the direction of the play, and they prevent themselves from turning the children's activities into non-play. All of the teachers leave play in the hands of their children, who present one another with new perspectives, new possibilities, and new ways of thinking about written language.

Some Final Thoughts on the Construction and Negotiation of Literacy Events Within Play

Without implementing preplanned activities, the teachers in the study were able to support children in their use, and in their growing understandings, of written language. They did not introduce skills that they thought the children should have been using at a certain point in time, or in a certain way. They often remained silent observers so that children could express their ideas, engage in exploratory talk, and collaborate in thinking through ideas and building upon their existing understandings. They did not engage in teacher-constructed lessons or activities. Instead, they found ways to capitalize on teachable moments, initiating, extending, and supporting literacy within the meaningful context of the children's play.
Vygotsky (1978) compares the play-development relationship with the instruction-development relationship. According to Vygotsky, both play and instruction create zones of proximal development in children. First, consider the zone that is created by instruction. Vygotsky explains that when children engage in problem solving on their own, they function at their actual level of development. Under adult guidance (instruction), they are able to function at their potential level of development. The difference between the actual and the potential levels defines the zone of proximal development.

Play also creates a zone of proximal development in that it frees children to take risks, and to act out roles that they are not yet fully equipped to fill in real life. "In play a child always behaves beyond his average age, above his daily behavior; in play it is as though he were a head taller than himself" (p. 102). According to Vygotsky, a child can do more when involved in play than when involved in other activities.

Goodman and Goodman (1990) suggest that zones of proximal development are created within learners, rather than by outside sources such as instruction. As teachers, parents, and others involve learners in relevant activities they have an influence on development, but as learners reshape and reconstruct existing and incoming concepts, they
personally invent new knowledge. They then bring this knowledge back into their social worlds. There is, therefore, a continuous cycle in children's experiences, of social understandings becoming personal, and personal understandings becoming social.

When children such as Karla and Errin demonstrate their exploration of the syllabic hypothesis, when Aster and Harry explore the alphabetic hypothesis, when Chloe, and Aster and Aimee play with written language, and when all of these children explore the meaning, the potential, and the semantic and syntactic structure of written language, they provide evidence that development comes from within. Using examples from all of these children, I showed that children engage in a constant process of reconstructing incoming concepts to construct new concepts. This constructive and reconstructive process is evidence for Ferreiro and Teberosky's conjecture that literacy development is a process in which understandings evolve within each learner. Further, it is evidence for Piaget's contention that, given a rich environment for exploration, children at play make their own discoveries as they explore their physical and social environments; they continually ask themselves questions about the world, and try to make sense of the world.
This study also provides evidence that literacy development is influenced by the child's social environment. Children have an influence on the literacy understandings of their peers, and teachers have an important role in facilitating these understandings. As classroom members strive to develop systems in which they can use literacy to serve functions in their play, literacy is constructed not only from within learners, but also in collaboration with peers and caring adults.
CHAPTER 6

LITERACY THROUGH PLAY: INSIGHTS AND UNDERSTANDINGS

Through their play, the children in the study collaboratively participated in a multitude of literacy events. In Chapters 4 and 5 I described the ways in which these literacy events unfolded within play, and described the ways in which the transactions that took place during these events influenced children’s literacy development. I also made comparisons between this and related research. From this, I drew several conclusions, and laid out implications that I hope will be useful for teachers.

In the present chapter, I reorganize the discussion from Chapters 4 and 5 into ten major findings, and I review the implications of these findings. The reorganization is a summary for the entire dissertation, and ties together the findings from each of the three research questions.

Then, relating the results from the present study to those in the professional research literature on play and emergent literacy, I divide the remainder of the chapter into three sections. First I discuss additional implications which were not discussed in the previous chapter. These implications extend beyond the preschool level, and beyond the specific aspects of literacy development considered in the previous chapters.
Then I evaluate the research design used for this study. I highlight its strengths and point out aspects which would strengthen it further. I also consider the ways in which elements of this design are useful for teachers who wish to conduct research in their own classrooms, and how research such as this is useful for professional development among preschool teachers.

Last, I consider how information from this study could be useful for teachers as they explore and develop their own understandings about literacy development, and as they help parents understand their classroom goals in facilitating literacy development.

Summary of Findings, Conclusions, and Implications

Throughout Chapters 4 and 5, I presented results, and tied them in with a number of implications and conclusions. The ten major findings from the study of literacy through play are:

First, the reading and writing of very young children is a precise and meaningful process. Even children who are not yet alphabetic or syllabic read and write for communicative purposes. That is, when they read or write, they believe they are communicating. What may look to adults like scribbling or imitation is purposeful writing to children; what may look to adults like repeating or
memorizing is real reading to children. The fact that very young children believe they are communicating with written language suggests the need for teachers to encourage and to respond to these attempts.

Second, **play is a means by which children test their hypotheses about written language.** Children who are given the opportunity to play in a print-rich environment, where literacy is an expected part of life, use literacy as a part of play. As they do so, they test their hypotheses, and they exercise the strategies that are used by successful readers and writers. Children's understandings about themselves as readers and writers, and their willingness to take risks with written language, facilitate their exercising of strategies and testing of hypotheses.

Third, **literacy events that occur within play are driven by function, and include exploration of the features of written language and other sign systems.** It is as literacy serves a function in play that children explore the features of written language. They transact with texts from both the efferent, and the aesthetic stances: Sometimes they read predominantly to obtain information, and sometimes they immerse themselves more fully in the text, making personal connections (Rosenblatt, 1991).

Rosenblatt has expressed the concern that while the ability to shift stances is necessary for developing broad
understandings about the world, schools often focus only on the efferent. "Surely, children are not insensitive to the fact that the greatest rewards come from demonstrating efferent understandings, that a poem or story is often to be read as a means for proving efferent skills" (p. 125). In children's play, both stances are explored.

Fourth, literacy development is both personal and social. Literacy develops within learners, but is influenced by learners' experiences within their social and physical environments. In a continuous cycle, children reconstruct knowledge as they test their own hypotheses, and as they transact with peers and teachers. This suggests that children should be given time to both work independently, reflecting on their own actions and ideas, and to play and talk with peers in collaborative construction and reflection. Because children play about what they know, play situations give them the opportunity to tie new understandings to those which they have already developed.

Fifth, oral language is a tool that supports literacy development. Oral language is a means by which young children create shared systems of understanding and make the use of written language understandable and manageable in their play. It is through social transactions that children and teachers discuss the functions that literacy serves in
play and the features that make the enactment these functions viable; they discuss the plans and purposes for literacy events; they discuss specific aspects of letter formation, sounds, spellings, and meaning. Social transactions help children work their way through ideas, and make their implicit, or half-developed understandings conscious and explicit. They help children think through ideas, extend their play, and make their intentions, their play-behaviors, and the meanings of their written language, clear.

These findings suggest that teachers should encourage a great deal of talk in their classrooms, not only during scheduled play times, but also at other times of the day. Certain kinds of oral language are used in certain kinds of activities. For example, when literacy was used as a frame for play themes, talk about written language and play with written language were more frequent than when literacy was used as a support for play themes. It was determined that this was due to the fact that when literacy was being used to support a play theme, excessive talk about language would interrupt the play.

Sixth, transactions with written language (actual reading and writing events) are a way for children to expand their own knowledge about written language, and to provide one another with information about the functions and
features of written language. Within the familiar context of play, as children transact with written language, they socialize one another into new ways of using literacy. Each literacy opportunity provides a frame through which children and teachers pass on understandings and expand their own knowledge at the same time.

Seventh, challenges, arguments, and the drawing of attention to shortcomings, which often occur during play, are particularly facilitative of literacy development. Children are curious about and interested in their peers' uses of written language. They notice expertise, and they draw attention to shortcomings. Challenges and arguments encourage children to reconsider existing concepts, and to articulate their implicit understandings. This finding suggests that teachers should not attempt to prevent challenges or arguments among children. Rather, they should encourage transactions that involve challenges and the drawing of attention to differences in the children's writing systems. Teacher participation in challenges should be aimed at helping children to make constructive challenges, rather than at redirecting behaviors.

Eighth, children learn from one another through each of their experiences with written language, regardless of ability. Transactions with "more capable" partners (Vygotsky, 1978) are not necessary for learning to occur.
Even teachers learn from children as they observe and participate in their literacy events.

Ninth, teachable moments for literacy arise when children are given opportunities to talk and play in a print-rich environment. The teacher's role in successfully capitalizing on teachable moments within play involves:

- Contributing play props or literacy materials that are directly relevant to the children's play focus.
- Taking on appropriate play roles without changing the children's focus.
- Supporting children in using language to reflect on their own actions and ideas. This involves observing and responding to children's talk and to their interpretations of written language.
- Treating children's reading and writing as real literacy events.
- Offering time each day for children to use a variety of literacy materials in their play.
- Carefully considering when to support, observe, and ignore children's transactions with print.
- Supporting children in making their own plans and setting their own purposes for literacy events, and continually assessing whether teacher purposes are at odds with child purposes.

When children see that teachers value and respect their inventive uses of language, they are freed to take the risks that are necessary for teachable moments to work. In turn, when teachers see that children invent language, and when they capitalize on these teachable moments, they show their
value and respect for children's use of written language. The cycle is continuous.

Tenth, when teachers provide direct instruction (instruction focused on transmission of specific knowledge or correctness of form) during play, rather than capitalizing on teachable moments, children do not fully exercise their personal strategies for reading and writing. Under direct instruction, children do not have free rein to generate their own written products, or to make their own discoveries. Approximations are not encouraged by teachers during direct instruction, and, therefore, inventions are rarely made by children. "When teachers do not allow errors to occur, they do not allow children to think" (Ferreiro and Teberosky 1982, p. 281).

Because of young children's perceptions of teachers as ultimate authorities on written language, it is important that teachers refrain from direct instruction. When peers are the direct instructors, children are more apt to ask questions, and to reject instruction that does not make sense. When adults are the direct instructors, children give up their personal strategies, and rely heavily on adult input. Direct instruction threatens children's willingness to take risks.

The children in the study have demonstrated that when experiences are relevant, children explore relevant
functions and features of written language, make their own plans, and set their own purposes for literacy events. As they carry out these plans and purposes, they read, write, and engage in the kinds of social transactions that facilitate literacy development. This suggests that teachers can avoid direct instruction, and leave play in the hands of the children.

Considered together, these findings suggest that literacy is successfully facilitated through play. In a print-rich environment, where there are appropriate materials for reading and writing that can be incorporated into play, and where talk and play are encouraged, children will construct and negotiate literacy understandings both by themselves, and with support and input from peers and teachers. As they use the literacy of police officers and pediatricians, kings and queens, mothers and fathers, and of preschoolers themselves, their reading and writing will be characterized by meaningful communication. As they use written language, they will share and develop their understandings about print, as well as their pragmatic knowledge about the world. Children develop literacy, and socialize one another into literacy and other ways of life, as they play.

It is worthwhile for preschool teachers to let children make choices in the ways that they approach literacy in
their play. Teachers can set up the environment, and act as facilitators and supporters of literacy development. They can help children to reflect, and to think about concepts in new ways. It is the children though, who are best able to find understandable and appropriate ways to use literacy in their play.

Further Implications

The findings from this study are useful in considering the design of literacy programs in early childhood classrooms. (Early childhood is typically considered to range from age three to eight.) The data from this study suggest that when teachers do most of their teaching through play-based activities, children and teachers collaboratively create a literacy program that is directly in tune with the children's current needs and understandings. Implementing a child-centered curriculum does not mean that the teacher lets the children take control of the curriculum. It simply recognizes that "knowledge exists in the knower's ability to organize thought and action" (Barnes 1992, p. 144). Play is a valuable medium for facilitating literacy development because the teacher is a guide who sets up situations in which learners can organize thought and action, and can reconstruct knowledge. This leads to the use, and therefore, the development, of language.
The value of child-centered instruction also lays in the fact that it allows all children to participate in literacy on an equal basis. Many children come to school knowing about stories, and about invented spelling (Dyson, 1991). Engaging children in storybook-reading, and encouraging them to use invented spellings are popular and well-known ways to facilitate literacy development. If teachers try to create structured situations in which the children can expand their knowledge in only these areas, however, they run the risk of not allowing all children the opportunity to fully participate in school literacy events. While many children are familiar with stories and writing, other children may be familiar with shopping lists, packages, and coupons. Still others may be familiar with the kinds of print that are shown on television commercials and cartoons. Others may be familiar with the writing on buildings, street signs, and other print in the outdoor environment.

Indeed, as the children in the study played, they demonstrated this uniqueness. For example, Karla knew many of the conventions of writing notes and letters; she was also an avid story-writer, and enjoyed sharing her work with peers. Because of experiences outside of school, she also knew about jewelry and dresses, and brought this knowledge into her play.
Aimee was good at writing stories; she had internalized many of the conventions of spelling and storywriting. And, she could read other children's writing (when it was conventional). Aimee's privacy was important to her. She often spent several hours by herself in the mornings, writing and drawing.

Angie knew about using copy machines, and other office materials. She had had a good deal of experience on her father's computer, and she was sophisticated in her use of a menu and a telephone to order food to be delivered.

Melissa knew about the ways that literacy is used at the optometrist's office, and at the public pool. Melissa liked to help her friends learn, and often attempted direct instruction.

These are a few examples of the unique understandings and unique ways of knowing that four-year-olds have about written language. Over the course of the study, the children shared their understandings and their ways of approaching literacy, which expanded the knowledge of all members of the classrooms. Because it would be difficult for a teacher to understand the extensive funds of knowledge and multiple ways of knowing in any classroom, the importance of instructing through a medium in which all children can participate using their varied understandings becomes important.
Teachers must not assume common experience or common ways of knowing among children. Flexibility in the support that teachers offer is key to facilitating literacy development. Understandings about the specific principles of written language emerge idiosyncratically for each child (Goodman, 1983). Depending on children's environments and previous experiences, they will develop understandings about written language in various ways. We cannot expect children to ask the same questions about language at the same times in the same ways, although there may be many similarities in the hypotheses they test.

Classroom play allows all children to build on what they know from their previous experiences with written language. All children may not have experienced stories and invented spelling, but all children in a literate society have been exposed to written language. Some will have seen it on television, others on the streets. Some will have seen it in grocery stores, others in restaurants. Some will have talked often about written language with their families; others will rarely have had this experience. It is well-known that well before children enter school, they have developed distinct language patterns, varied literacy understandings, and a wide variety of preferences, tastes, and personalities. They have already begun to develop unique cognitive learning styles that prompt them to handle
situations in particular ways, and to approach new ideas in distinctive manners (Weininger & Daniel, 1992). Play as a central component of an early childhood curriculum can be characterized as an equitable facilitator of literacy learning because it allows all children to use what they know; play has a natural tendency to treat the personal history of each child as a unique but important component of the curriculum.

Evaluation of The Research Design

The research design for this study enabled me to answer the questions that I set out to answer. I was able 1) to describe the ways in which literacy events unfold within preschool children's play; 2) to describe the transactions that take place among children and teachers during these events; and 3) to suggest the ways in which these transactions influence literacy development. Through observations, informal consultations with the teachers and children, and interviews with the teachers and preschool directors, I was able to achieve these goals.

In the following two segments, I describe the aspects of the design which I found particularly useful, and I suggest some changes that would strengthen the design. I then consider the ways in which ideas from this study could
be used by teachers who wish to conduct research in their own classrooms.

The Present Study

During my early visits to the three classrooms, the children were curious about my presence. They asked questions about my equipment (laptop computer, tape recorder, wireless microphone, receiver for wireless microphone), and about why I was in their classrooms. They wanted me to show them the computer games on the laptop (of which there were none), and they wanted me to type their names. They wanted to show me the letters they knew on the keys, and they wanted to know the purpose of the keys. They wanted to listen to themselves on the tape recorder, and to know exactly what I was recording.

They also expected me to act as an authority figure, so they asked me for help, they came to me to "tell" on one another, and they asked me for permission to do certain things. I consistently referred them to their teachers in these instances; my goal was to remain an unobtrusive observer.

I explained to many children that I was there to learn from them, and from their teachers, so that I could show other teachers what their classrooms were like. I explained that to do this, I had to keep typing into the computer so
that I could "remember what happened later." They soon understood, and even began to explain my presence to one another. They came to accept that I was not available to act as a play-partner, and that I was not an authority figure. Before long, they seemed to be uninterested in my presence.

I was not totally ignored, however. When I did ask the children questions, I was familiar enough to them that they were comfortable with answering, and with talking about their work. Sometimes they purposely shared items that they thought would interest me, such as, "If you want to know how to spell my name, R-A-C-H-E-L". At other times, they asked if I had remembered to type what they had just said or done. I believe that my taking this chiefly unobtrusive position allowed me to observe children's play situations as they might occur without my presence.

Although two of the teachers were initially nervous about my presence, other aspects of the research design helped me to alleviate their concerns. The early interviews contributed to my getting to know the teachers and children, and in turn, helped the teachers to understand my interests and goals. Also, my design required that I consult with the teachers in order to develop an emic perspective of each setting. As I asked questions, and as we shared stories and perspectives on the children, the teachers came to further
understand my goals, and all said that they were eventually comfortable with my recording the events in their classrooms. This informal communication was valuable to me also because it gave further insights into the children, and into the teachers' goals and philosophies.

For the most part, the design suited my research interests, and helped me to answer all of my research questions. I think that my study could have been further strengthened, however, if I had included four or five case studies of the children, perhaps one or two from each classroom.

Case-studies were not in the scope of my initial design, but would have been useful in the section where I describe the four types of transactions that take place within literacy events. The importance of risk-taking became quite clear as I analyzed each of these transactions. If I had done case-studies, it would have been interesting to compare the transactions of risk-takers like Karla and Errin with children who were not as willing to take risks.

In future research, it would be interesting to inquire into the risk-taking of, say, four children of the same age, in the same classroom, who attend school (and play with peers) for a several hours per week. Age may be an important factor because, as I discussed earlier, older children are typically more tentative when it comes to taking
risks. Through observations, and help from teachers and parents, I could select two children who take many risks, and two children who take few risks. This would allow me to provide even more insight on what drives certain children away from the willingness to take risks and toward a reliance on instruction and a desire for "correctness."

In my own experience, both now as I give workshops and deliver presentations for teachers, and in the past as a preschool director, a preschool teacher, and an elementary school teacher, I have often been involved in discussions in which teachers ask one another how to encourage the perfectionists in their classrooms to take risks with literacy. Because risk-taking is so important to literacy development, this may be a worthwhile avenue for further research.

Case-studies would also give me more insight into children's development over time. Although the study took place over the course of four months, I could probably have started the case studies right after I selected the schools, and carried them for up to eight months. I suspect that developmental insights from longer-term case-studies would have allowed me to come to a more in-depth understanding of the nature of disequilibrium and equilibrium in children's literacy development. This would have allowed me to strengthen some of the points I made about children's
accommodations, or modifications of their current hypotheses. Carefully documented illustrations of individual children's changes over time would have been useful.

Teacher Research in General

Teachers' actions in the classroom are guided by their beliefs about the ways in which children think and learn. When teachers are conscious of these beliefs, and when they reflect on their actions, these two entities come into alignment (Pierce, 1993). Early childhood teachers who wish to better understand the relationship between their beliefs and their practices, and who wish to understand more about their children's literacy development, could easily and practically use elements of the research methods that I used for this study to inform their own work.

First, to align beliefs with practices, teachers must become conscious of their beliefs, and must reflect upon their actions. Teachers could develop this consciousness and ability to reflect by recording and monitoring their own participation in literacy events. They could analyze the ways in which their participation in literacy events influences children's talk and actions. This study shows that the conditions for learning are most effective when children begin their explorations on familiar territory in a
print-rich environment, and then are provided with information or opportunities for experiences that extend and challenge. These criteria can guide the teacher's self-evaluation.

For example, the self-evaluating teacher asks:

Do the children use the reading and writing materials that I have placed in the classroom. Are they relevant? Are they readily available? Do they have meaning for the children in this environment?

Do the children read and write when I participate in literacy events, or do I take control of their learning?

Do I allow the children to talk with one another during work and play periods? Do they talk about their reading and writing? Do they have opportunities to talk at other times of the day?

Do I allow children to challenge their peers, and to draw attention to one another's shortcomings?

Do I recognize teachable moments? Do I capitalize on teachable moments, or am I too busy with other things when teachable moments arise?

Do children rely on me when it comes to making literacy-related decisions, or do they make their own decisions and exercise their own strategies?

The second way that teachers can improve their practice in facilitating literacy is to learn more about their children's literacy development. This is reasonably and practically accomplished by taking notes and making records of what children do when they use written language in their play, much as I have done for this study. By keeping track of what children do with what they know, and
what they know as a result of what they do, teachers become more aware of how they create conditions in their classrooms where literacy is thoroughly and enthusiastically explored. As teachers take notes, they can ask themselves the following questions:

What are the functions that literacy serves in my classroom? What are the ways in which the children use literacy for a variety of real-life functions and purposes?

What do the children talk about when they engage in literacy events within play?

What are the consequences of the challenges that children make regarding other children’s use of literacy?

What testing of hypotheses about written language do the children demonstrate?

Are the children using the reading and writing strategies that are used by successful readers and writers?

What knowledge do I have of children’s long-term development, and what evidence do I have that they are developing literacy?

The possibilities for teacher research are endless. All of the possibilities which I have suggested are feasible within the context of a preschool classroom because they only require that teachers take notes, and then analyze them by considering the effectiveness of the learning conditions in their classrooms. Effectiveness is evaluated by considering whether children are free to test their hypotheses about written language, and free to exercise
their reading and writing strategies as they play and as they transact with peers.

Methods such as those used in this study help teachers better understand their own practices as well as their children's literacy development; teacher studies similar to this research help teachers know what to look for in their children's attempts at literacy. All of this leads to expanded, thoughtful curriculum development.

Unfortunately, preschool teachers in the United States are not required to have any training in early childhood education. They are not required to know about cognitive development or about how children develop literacy. They are not required to be informed about ways of observing children that lead to helping them develop literacy. They may not know about accepting inventions or approximations as natural parts of literacy development, or about encouraging children to take risks.

Fortunately, teachers can engage in appropriate practice anyway, using intuitive understandings, and drawing on what they have learned from experience, readings, workshops, and other training. Neither Kevin nor Karen had received a great deal of professional education in early childhood, but through various kinds of programs, reflection, intuition, collaboration with others, and self-evaluation, they have become dynamic and effective teachers.
Many preschool teachers take courses. Others attend workshops. Some are certified teachers who have participated in professional education programs (like Trina and Candy). But, there are no requirements to ensure that preschool teachers will develop in-depth understandings about how young children think and learn. It is important, therefore, to consider what kinds of basic messages about literacy development should become common knowledge for preschool teachers, whether they learn these messages through workshops, through working with professional organizations, or through personal inquiry (reading magazines, reading journal articles, talking with other teachers).

I believe that three basic understandings are extremely important for teachers who wish to implement an effective literacy curriculum. First, it is important for all preschool teachers to know that children use and develop literacy when it is an integral part of their daily life. In a literate society, young children already have knowledge about written language, and they will explore it in play as long as the play environment is rich in print, appropriate literacy materials are accessible, and children’s reading and writing are supported and treated as real literacy events.
Second, when children are free to play in a print-rich environment, many teachable moments for literacy arise. They arise when a child asks how to spell a word, when a child asks a question that is answered with written language, when a child is reading aloud from a familiar storybook, when a child is writing her name, or when a child is making letter shapes out of the pretzels he is eating. They arise when a teacher sees a child looking at a colorful sign with print, when a teacher sees a child trying to figure out how to put a plastic toy together without the instructions, or when a teacher is asked whose turn is next at the computer. Knowledgeable teachers find ways to capitalize on these moments with the goal of extending or initiating a literacy event. Making the most of teachable moments is simple when teachers realize that children construct knowledge about written language through their own talk, and as they are supported in reflecting on their own ideas.

Third, all teachers, whether or not they are formally trained in the intricacies of how children think and learn, are in a position to create effective classroom conditions for literacy development. All teachers can create a print-rich environment in which they encourage children to play and talk, and to use written language. When a child wants to make a keep out sign for a fort, when a child wants to
make a list for whose turn is next on the computer, when a child needs help remembering which cubby is his, when a child has brought a piece of print from home, these are all potential teachable moments for literacy. Any teacher can learn to capitalize on these moments. In preschool education, professionals need not be defined by their formal education, but by what they do in their classrooms to facilitate authentic literacy experiences for children. Kevin and Karen show that preschool faculty not formally schooled in early childhood education are able to become effective teachers.

How does this happen? Kevin and Karen read about children, talk with other teachers about children, talk with parents about children, and observe children. They ask children questions, and listen to their responses. They collaborate with parents. Both teachers take notes on what their children say and do as they play at school. Both teachers have attended workshops and other educational programs related to early childhood education. Both are in constant pursuit of insights about the ways in which children think and learn.

All of the teachers in the study demonstrate that teachers can learn about children by observing and studying their play. All of the teachers were observers of children who followed up on what they saw children doing with
literacy in their play. Carefully observing children is in itself an educative event because it informs teachers about the value of the curriculum they provide, and it helps teachers learn about what their children can do with print.

Professional organizations can also be helpful in the professional development of preschool teachers. The teachers at Karen's school are seeking accreditation from The National Association for the Education of Young Children (NAEYC). Sue, the director at the school, reports that "the NAEYC stuff has helped us because it really brings a focus to the work. I can go to all the stuff that I've intuitively known and that I've been doing for 20 years with kids in various settings. When it comes time to try to communicate that to Karen, who's never done it before, how do you communicate it? It's pretty clear in the criteria set out by NAEYC. Very clear, so I can say 'this is what you need to look for' to the staff about what the expectations are and why we do it. So it's helped me kind of create a skeleton, or give form to this body of information. When I got the NAEYC stuff, the self-study material, it gave a hard framework to put all my experiences into, and it helps me communicate it to other people."

Professional knowledge can be developed in a variety of ways. Formal education is one of these ways. Teachers who have not experienced formal education can develop
professional knowledge in a variety of ways, and can become effective and informed preschool teachers.

Parents and Teachers

The kind of knowledge that is developed through the teacher research ideas suggested above is the kind of knowledge that helps teachers explain and validate their curricular goals to parents. Many preschool parents place a higher value than teachers do on their children learning academic skills (Rescorla, 1991). Evidence from this study suggests, however, that children learn academic skills as they play. For children to develop specific academic capabilities does not require that they receive direct instruction in skills.

The children I observed used and studied the functions and features of written language. They needed written language to carry their play into their desired directions, and to act out real-life scripts. Their motivations and rewards for using written language, and for studying its specific features, were intrinsic; written language was used as it was needed, and because it served a function in play. For these reasons, written language was thoroughly and actively explored.

Holistic philosophies and teaching strategies may seem new and unfamiliar to parents because it is not the way that
many were taught when they were children. Traditionally, children received direct instruction in a teacher-controlled environment. Students were silent as the teacher talked, asked fact-based questions, and gave directions. The teacher organized classroom learning by dominating discussions and curricular decisions (Fried, 1993). This type of classroom environment may be what parents expect for their children.

Teachers must help parents know that children develop understandings about written language through school play, and that play is an ideal way to facilitate literacy at home as well. Teaching is not minimalized in literacy through play; teachers support literacy development as children play. It is important that teachers are able to articulate this to parents, and to help them understand what their children do when they play at school, and how it facilitates their learning. This becomes feasible when teachers keep records of children's writing and reading, and are able to show how writing and reading develop over time. These capabilities on the part of teachers are developed through classroom research aimed at expanding their own knowledge, and aimed at better understanding their children's literacy development.
Literacy Through Play is Personal and Social

What this study makes clear is that written language is easily and naturally explored when it is embedded in concrete experiences, such as those that are enjoyed during play. As Piaget (1964) states,

Knowledge is not a copy of reality. To know an object, to know an event, is not simply to look at it and to make a mental copy, or image, of it. To know an object is to act on it. To know is to modify, to transform the object, and to understand the process of this transformation, and as a consequence to understand the way the object is constructed (p. 8).

Written language is learned as children use it for real-life purposes. It is learned and as they play with it, transform it, act on it and use it to communicate.

The important people in children's environments have a great influence on their written language development. Social transactions and social experiences are a part of literacy development:

From the very first days of the child's development his activities acquire a meaning of their own in a system of social behavior and, being directed towards a definite purpose, are refracted through the prism of the child's environment (Vygotsky 1978, pp. 30).

Play is a medium through which children personally and socially extend the limits of their experience, ask and answer questions, test hypotheses, and develop the capability to continually construct new understandings about
written language. Play is a worthwhile and effective medium for facilitating literacy development in preschool classrooms.
REFERENCES


Burke, C. (1993). Talk within the kindergarten: Language supporting a learning community. In K.M. Pierce & C.J. Gilles (Eds.), *Cycles of meaning*, (pp. 79-98).


Erickson, F. (1986). Qualitative methods in research on teaching. In E.M. Wittrock (Ed.), Handbook of research on teaching (3rd ed.), (pp. 119-161).


