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The Relationships between Sociodramatic Play and Literacy Development



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More than ever before, literacy development is a major goal for preschool education. The 2001 No Child Left Behind legislation includes preschool among its many literacy initiatives. This legislation provides funding for Early Reading First for the purpose of developing excellent models of literacy instruction for 3- and 4-year-olds (see also Roskos & Vukelich, Chapter 22, this volume). In addition, states are currently developing early learning standards in language, literacy, and mathematics. These efforts reflect the growing interest in improving children's school readiness skills in the very earliest years. Validating previous syntheses of research, including the National Research Council's Preventing Reading Difficulties (Snow, Burns, & Griffin, 1998) and the position statement of the International Reading Association (IRA) and National Association for the Education of Young Children (NAEYC) (1998), the most recent National Early Literacy Panel (2004) identified variables associated with early literacy development:

- Oral language: expressive and receptive vocabulary.
- Alphabetic code: alphabet knowledge, phonological/phonemic awareness, invented spelling, print knowledge: environmental print, concepts about print.
- Other skills: rapid naming of letters, num-

bers, visual memory, and visual perceptual abilities.

Against this backdrop there is good reason for the concerns of many early childhood educators and researchers that the role of play, including dramatic play, may be overlooked in our effort to ensure that children receive more explicit language and literacy instruction in the preschool setting. It is noteworthy that play has been reaffirmed by the NAEYC in its most recent accreditation standards (NAEYC, 2004). It is important that our understanding of play is integrated into our developing understanding of school readiness. In this chapter we seek to address this need by reviewing research on dramatic play and literacy, describing what we know about the relationships between play and literacy development and the impact of classrooms and teachers on the nature and quality of children's play.

As will become apparent, most of the research to date clearly describes the relationship between play, environmental supports, and literacy development. But it does not describe a causal connection between them. The current situation reflects the fact that theories of play have undergone several major shifts in points of view regarding the appropriateness of adult support for child's development through play. We begin by briefly

outlining these changing theoretical perspectives on play, indicating how these points of view have shaped research. We then turn to studies that have explicitly examined the relationship of play with literacy as we review (1) studies that have examined literacy behavior exhibited by preschoolers in their spontaneous dramatic play; (2) studies of the effects on children's literacy development of access to literacy-enriched environments in preschool classrooms; (3) studies of the variations in, and effects of, roles assumed by teachers who participate in children's dramatic play; (4) studies of the added benefit to children's engagement in literacy-related behavior of teacher mediation and support of play; and (5) studies of the benefits of conversations between teachers and children during play. This research suggests the important relationships between literacy and play, helping to inform next steps in this line of inquiry.

A Brief History of Theories about Play

Prior to the 1970s, psychoanalytic theory dictated the use of play in classrooms and, as a result, teachers limited their involvement in children's play so as not to interfere with their emotional problem solving and catharsis (Johnson, Christie, & Yawkey, 1987). Piaget's (1962) theory of play, which began to replace or at least augment the psychoanalytic view by the 1970s, stressed play's relationship to cognition. Specifically, Piaget viewed pretend play as a kind of symbolic activity, with objects and imagined roles representing something else. From a Piagetian perspective, development in play entails increases in decontextualization and decentration, which means that there is an increase in the distance of play behavior from the child's daily experiences in reality. For example, a younger child might use an empty play cup in pretending to take a drink of water, whereas an older child might position his or her hand as if holding an imaginary cup. A Piagetian observer would note that the older child's play shows more decontextualization than the younger child's. Similarly, a younger child might pretend to eat or drink, activities engaged in quite often by the child in real life, whereas an older child might pretend to be a firefighter, a doctor, or a nurse, all roles

the child has observed but never occupied in reality. A Piagetian would say that the older child's play shows greater decentration than the younger child's.

The Piagetian view of play opened the door to consideration of the relationship between pretend play and overall cognitive and language development and play's possible role in furthering development in these areas. It did not, however, change the adult's role in the child's play, given that Piaget's stage theory assumes that changes in development result from the interplay between maturation and the child's autonomous interactions with the world. As noted by Haight and Miller (1992), Piaget omitted "information about the social context of early pretending, with the implication that pretend play develops regardless of whether anyone pretends with the child" (pp. 331-332). It was Vygotsky's (1967, 1978) theory of cognitive development that gave a central role in play to a partner who tutors. Such a partner must be a more experienced other, often an adult or an older child, and sometimes a more skilled peer.

Research on the relationship between pretend play and language and literacy development has been framed in ways that reflect the prevailing theories about the nature and functions of play. Thus the shift from psychoanalytic views of play to more cognitive views prompted some researchers to examine children's ability to engage in symbolic, representational play (e.g., Fein, 1975). Research done in this tradition has provided important insight into the development of children's abilities to represent experience symbolically through play. For example, Bondioli (2001) described the progressive development of children's ability to decontextualize their object use, to decenter their role in their play, and to integrate play schemes. The trend in development of object use is from prototypical objects to substitute objects (i.e., objects that do not resemble physically their assigned function in play), to imaginary objects.

Based on a Piagetian perspective, adult participation in children's play typically was not a central variable. Although relatively little is known about the effects of particular types of adult input to the children's general cognitive development, research on adult intervention in play has revealed variations in

the quality of children's play that are related to adult styles of interaction in play. Specifically, when adults' behavior in the play setting involved give and take, the symbolic quality of the child's play is enhanced, and when the adult's behavior is directive rather than reciprocal, the child's play becomes less symbolic (Fein & Fryer, 1995; Haight & Miller, 1992).

Smilansky and Shefatya (1990) and Bondioli (2001) have also attempted to understand strategies that adults can use that support children's engagement in play. Bondioli (2001) summarized this work when she outlined what is required of the adult who hopes to foster pretend-play abilities in children. She stated that the adult should take a maieutic role, with a high level of curiosity and with the ability to withstand uncertainty. The adult must scaffold the play, but within the child's zone of proximal development. The adult must also keep in mind the characteristics of play, such as "denotative license, referential freedom, affective meaning, and shared symbolism" (p. 128). Ideally, the tutor does not predetermine roles, content, or the direction of play; rather, he or she "must pay attention to 'what happens and when it happens' and stimulate children to develop play scripts or themes by themselves" (p. 114).

Research on adult input in toddler play (Bornstein & Tamis-LeMonda, 1995; Haight & Miller, 1992; Slade, 1987) also has been limited to studying the quality of toddlers' play with and without an adult partner. Overall, results of adult interventions to support play show that levels of play, as defined by a Piagetian framework (i.e., decentration and decontextualization), are altered positively by adult participation. In the toddler research, play episodes involving adult partners were also more frequent and longer than when children played independently.

The adult behavior that supports the development of play behaviors in the dramatic play context shares essential features with adult behavior known to facilitate other aspects of development. For example, reciprocity in parent-child interactions predicts the development of a secure attachment relationship (Ainsworth et al., 1978; Isabella & Belsky, 1991; Lamb, 1992), whereas intrusiveness, indifference, and other kinds of insensitive behavior predict anxious attach-

ments. Similarly, sensitive and reciprocal verbal interactions by parents predict competence in children's skill in relating autobiographical narratives (McCabe & Peterson, 1991; Peterson, Jesso, & McCabe, 1999), whereas lack of sensitivity and reciprocity on the part of the parent inhibits the development of narrative competence.

In sum, throughout the 20th century theories of child development changed dramatically, and with these shifts have come varied views of the nature and functions of play, changes in notions about the role of adults in supporting play, and shifts in the priorities of researchers. Distinct bodies of research examined play, with the result being a relatively diffuse body of literature showing that children's play goes through predictable development stages and that adults can play a role in nurturing development (Hart & Risley, 1995; Morrow, 2005).

Play as Literacy Behavior

In the final decades of the 20th century reading researchers began serious study of the origins of literacy, and some began to investigate the intersection between early literacy and play. Studies carried out by researchers with primary interest in literacy have also shifted focus from early examination of children's literacy behaviors to contextual factors that affect children's uses of print during play.

Inventories of Children's Literacy Behavior in Spontaneous Play

The early research dealing with children's literacy behavior in spontaneous play was motivated by a concern that adult-centered, decontextualized probes (i.e., tests) underestimate preschoolers' actual literacy knowledge and skill. In one study of this kind, free-play data were collected for 50 children over a 2-month period in two preschool settings (Neuman & Roskos, 1991). The literacy demonstrations isolated in play protocols were analyzed for functions served by the child's literacy behavior and for evidence of children's knowledge of various features of print (e.g., letter names, orientation of print). Results showed that preschoolers had considerable knowledge about literacy functions

and also readily displayed knowledge about print features in functional contexts.

A second study of this kind provided a similar inventory of preschoolers' literacy demonstrations as they occurred naturally in the context of children's pretend play (Roskos, 1991). Literacy-related videotaped episodes were analyzed and inventoried as instances of activities, skills, and knowledge. The inventory demonstrated that preschoolers knew a lot about literacy and revealed that knowledge readily in the dramatic play context. These two descriptive studies established that existing pretend-play contexts in preschools elicited literacy behavior from preschool children and provided situations in which literacy behavior, especially functional routines, could be practiced.

Given that these settings were not furnished with an abundance of literacy-related materials, researchers wondered whether preschoolers would engage in more literacy behavior if the typical dramatic play areas of their classrooms were enriched. This curiosity led naturally to additional studies of enriched dramatic play environments and shifted the focus of researchers from viewing play as a window through which to learn what preschoolers already understand about literacy to viewing it as a potential context for promoting literacy learning.

Enriching Dramatic-Play Contexts with Literacy Materials to Enhance Engagement

In one study of this kind the researchers redesigned the physical environments of two urban preschool classrooms to create four dramatic-play areas: a kitchen, a post office, an office, and a library (Neuman & Roskos, 1990). Literacy props appropriate to each play theme (e.g., paper, pencils, envelopes, and books) were added. Prior to adding literacy props to the areas, each child's literacy behaviors were observed and videotaped over a 2-week period during free play in the four dramatic-play centers. Each child's print concepts were measured with the Concepts about Print test (Clay, 1979). Four weeks after the addition of literacy props, children's behavior was again observed during free play and videotaped in the four dramatic-

play contexts, and the Concepts about Print test was administered as a posttest.

The average number of literacy demonstrations per child almost doubled following the intervention, and children also made significant gains in print concepts. Literacy demonstrations also increased in length and density and became more unified in the enriched-play centers. Given the small number of classrooms and the absence of a comparison group, there could be other explanations for increases in children's print concepts. Yet the study demonstrated that literacy-enriched dramatic-play contexts alter children's literacy behavior in beneficial ways.

In a subsequent study, Neuman and Roskos (1992) assigned classrooms from two day-care centers to two conditions. At the intervention site (B), three existing play areas were defined physically and enriched with literacy materials to create a library, a kitchen/house, and an office. At the nonintervention site (A), no changes were made. Prior to intervention, the Test of Early Reading Ability (TERA; Reid, Hresko, & Hammill, 1981) established that groups did not differ in their literacy knowledge. Children's literacy behavior was observed and videotaped at both sites prior to the intervention to obtain information about the literacy demonstrations spontaneously engaged in by children during play.

Following the changes made at Site B, children's behavior during free play was videotaped weekly for 6 months. In Site A (nonintervention), contexts for videotaping included the housekeeping area, a book corner, a small-manipulatives area, and the arts and crafts table. In Site B (intervention), the contexts included the house/kitchen, library, and office play areas. Each child's spontaneous play behavior was observed during the final 2 weeks of the study.

Significant differences were found on all types of literacy demonstrations (handling, reading, and writing) in favor of the intervention group. In fact, children at Site B engaged in 10 times as many literacy demonstrations as children at Site A, and these demonstrations were longer and more complex.

Two additional studies, one by Morrow (1990) and another by Neuman and Roskos (1993b), also investigated the effects of

literacy-enriched dramatic-play settings. In these studies, researchers also manipulated adult support for play, which is discussed separately in the next section of this chapter. Here, we consider the studies' effect of enriching play contexts with literacy-related materials.

In Morrow's (1990) study, 13 preschool classrooms were randomly assigned to a control group and three experimental groups (E1, E2, and E3). The kitchen play areas in the three E1 classrooms were enriched with literacy materials. In the four E2 classrooms and the three E3 classrooms, the preintervention kitchen play area was transformed into a veterinarian's office. Many literacy props related to a veterinarian's job were added to the play area. The E2 and E3 conditions differed in terms of levels of adult support, but not in their physical design or in the literacy materials available.

Children were observed during free play prior to the intervention to obtain data on children's engagement in literacy activities. One week after the changes were made, observation data on children's literacy activity were again collected during free play. Following a 1-month period during which observations were not made, children's engagement with literacy activities was observed for a third time. All three experimental groups differed significantly from the control group on three literacy behaviors (paper handling, reading, and writing). The study demonstrated that enriching dramatic-play areas with literacy materials increases preschoolers' literacy behavior.

In the second study, eight Head Start classrooms were randomly assigned to three groups (Neuman & Roskos, 1993b). In Group 1 and Group 2 classrooms, a literacy-enriched office was created. Groups 1 and 2 differed in terms of adult participation in play (discussed in the next section), but were identical in terms of literacy-enrichment of an office-play context. No changes were made in the two control classrooms (Group 3).

Children's behavior during free play was observed before the intervention, and the Test of Early Reading Ability (Reid et al., 1981) established that groups were initially similar in terms of their literacy knowledge and skill. After 1 month of the intervention, children's free play was videotaped weekly.

The play behavior of children was also observed 8 weeks into the intervention, and again during the last 2 weeks of the intervention. After the 5-month intervention ended, children were tested on an environmental word-reading task and a print-functions task. Children in intervention classrooms engaged in a greater number of literacy-related interactions during free play, both during and after the intervention, than children in the control group; and children in the intervention classrooms also did significantly better than the control group on the environmental word-reading task and the labeling-of-items portion of the print-functions task.

This line of inquiry established very clearly that literacy-enhanced dramatic-play settings can significantly increase preschoolers' engagement with literacy functions and routines and also that dramatic play is a context in which children can learn about environmental print and basic print concepts. To explore further how children demonstrate their literacy knowledge and how they adapt literacy tools to fit situations encountered in play, a study was conducted with two groups of children in one Even Start classroom (Neuman & Roskos, 1997). Three play settings, all representing contexts familiar to the children, were created (doctor's office, restaurant, and post office). Many literacy-related materials and objects were provided in each context (about 20 in each play setting). Over the 7-month course of the study, children's play was videotaped weekly during a 30-minute free-play period. The number of children who played in each setting was recorded in a log of the videotaping. The researchers also observed children's behavior in the play contexts once each week to judge whether the play areas were engaging children sufficiently and to inform themselves about the need to add new literacy materials.

Literacy-play episodes were identified on the videotapes, transcribed, resituated within the various play contexts, and then analyzed again. These analyses yielded insights as to how children used their knowledge of literacy in relation to specific situations. A major finding was that the purposes evident in children's literacy behavior "varied dramatically across settings" (p. 32). This study indicated that not only do literacy-enriched dramatic-play areas serve as contexts for learning

what children know about literacy, but they are also places where children can practice what they already know and participate in critical cognitive work in literacy. The researchers noted, however, that providing authentic contexts in which children can practice literacy routines and skills does not address how "print conventions and literacy skills are formed by young children" (p. 30). The investigators suggested that adult support in these literacy-enriched play contexts might enhance children's literacy learning (Neuman & Roskos, 1997).

Adult Behavior and Children's Literacy Behavior in Pretend Play

In this section we review studies that provide descriptive information about teacher styles of interaction and delineate how these styles link to effects on children's play behavior (Enz & Christie, 1997; Neuman & Roskos, 1993a; Schrader, 1990). We also look at the effects of adult mediation and guidance on children's engagement in learning from literacy-enriched dramatic-play contexts (Morrow, 1990; Neuman & Roskos, 1993b). The commonality among the studies is that all discuss the effects of adult behavior on children's literacy behavior in play contexts (Glaubman, Kashi, & Koresh, 2001).

Teacher Interactive Styles in Literacy-Enriched Dramatic-Play Contexts

Three descriptive studies provide useful information about adult styles or roles in children's literacy-enriched dramatic play. The first study, conducted by Schrader (1990), involved four preschool teachers in a university laboratory preschool and two private preschools. Before the study began, teachers were provided training in early literacy development. Teachers were instructed to first ascertain a child's intentions and then to provide support in the form of comments, questions, demonstrations, and suggestions during play. After the training, the teachers' behavior was observed in three dramatic-play settings (post office, office, and house), each enriched with many literacy-related materials. Data on interactive teacher behavior in these contexts were obtained from videotapes and audiotapes of teacher-child in-

teractions, from the teachers' written observations of their experiences, and from children's writing samples. Data were coded in terms of extending or redirecting behaviors. *Extending* behaviors supported the child's intentions while also taking a child's idea beyond where the unassisted child might have gone with them. *Redirecting* behaviors ignored the child's intentions by introducing an idea unrelated to the child's intentions. All teachers exhibited both extending and redirecting type behaviors, and all teachers used the extending style more than the redirecting style. Teachers varied somewhat in terms of the number of behaviors captured by the two styles defined for use in the study.

In a second study of teacher roles in children's literacy-enriched dramatic play, Neuman and Roskos (1993b) collected data on six preschool teachers. Data consisted of teachers' journal entries of their interactions with children in three literacy-enriched play settings; interviews (audiotaped and transcribed) conducted by one of the researchers with the teachers to discuss their journal entries; and field notes of teacher interactions in the play settings. Through a process of data analysis and reduction, characteristics of teacher behavior were identified, and three distinct roles emerged: onlooker, player, and leader. In the role of *onlooker*, a teacher created "a sense of benign and accepting presence" and "celebrated children's literacy triumphs" (p. 86). In the role of *player*, a teacher played along as "a member of the team" (p. 87). In the role of *leader*, the teacher introduced specific literacy-related ideas into the play and used play opportunities to teach children about literacy. All teachers interacted quite similarly in children's play.

In a third study on teacher roles in play, Enz and Christie (1997) identified six styles/roles among four preschool teachers working in three early childhood classrooms: (1) uninvolved, (2) interviewer, (3) stage manager, (4) coplayer, (5) play leader, and (6) director/instructor. These styles/roles provide a continuum of interaction that ranges from uninvolved to highly directive behavior.

Enz and Christie (1997) found specific effects associated with the various styles of interaction on the children's play behavior. Styles/roles from the middle of the con-

tinuum (stage manager, coplayer, and play leader) promoted children's play. The play lasted longer, and children did not leave the scene. Teacher styles/roles from the extremes (*interviewer* and *director/instructor*) either ended the pretend play in reaction to the teacher's direction and control or allowed the play to fizzle or disintegrate into disputes over roles and materials (*uninvolved*). The four teachers used a distinct style that was related to their experience and training. For example, a less experienced teacher trained in family counseling used the interviewer style 41% of the time. The most experienced teacher, who had extensive training in early childhood, occupied the coplayer role 51% of the time.

The styles/roles identified by Enz and Christie (1997) have features in common with the styles identified by researchers studying parental styles of interaction in toddler play (Bornstein & Tamis-LeMonda, 1995; Haight & Miller, 1992; Slade, 1987) and with parental styles identified by researchers studying infant attachment (Ainsworth et al., 1978; Cassidy & Berlin, 1994; Isabella & Belsky, 1991; Magai & McFadden, 1995). The behaviors characteristic of the most effective roles allow for a measure of responsiveness to the child's current behavior. This behavior is neither neglectful nor controlling, but responsive, allowing for reciprocal influences between children and the adult.

Effects of Adult Support of Children's Literacy-Enriched Dramatic Play

The two studies reviewed here differ from the descriptive studies in that adult engagement or support of dramatic play was varied systematically. Although quite different in the kinds of support adults provided, both studies found that adult support of play affects positively the literacy outcomes for children who have access to enriched dramatic-play environments.

One study on adult support was conducted by Morrow (1990). Recall from our previous discussion of this study that each experimental classroom (E1, E2, and E3) had literacy-enriched dramatic-play areas, whereas a control classroom did not. E2 and E3 classrooms provide the comparison of in-

terest because the same physical changes were made in classrooms assigned to these conditions (addition of a literacy-rich veterinarian office), but level of adult support for play was varied. In E2 classrooms, teachers introduced the literacy materials in the new play area and made suggestions for their use *only* on the first day the new play area was available. In E3 classrooms, teachers introduced literacy items in the enriched-play area and suggested possible uses on *every day* of the 4-week intervention. Observational data collected for 3 weeks prior to the intervention and for the last 3 weeks of the intervention were analyzed and placed in literacy demonstration categories (i.e., handling, reading, and writing). Significant differences were found among groups for both reading and writing demonstrations, with more of each occurring in the E2 classrooms. This study demonstrated that adult support for literacy-enriched dramatic play, provided outside of the play itself, can have beneficial effects on children's literacy-related play behavior (Morrow, 2005).

In a second study on adult support of play conducted by Neuman and Roskos (1993a), adult involvement and support of children's play in a literacy-enriched dramatic-play area was contrasted with physical enrichment alone without adult support during play. In this study, parent volunteers served as "parent/teachers" in eight Head Start classrooms. In three classrooms (Group 1), parent/teachers were instructed to join children in ways that were responsive as they played in a literacy-enriched office area. A literacy-enriched office-play area was also provided in the three classrooms comprising Group 2, but parent/teachers in these classrooms were asked to refrain from joining with children in their play (i.e., to adopt an *onlooker* role). The two classrooms assigned to Group 3 (control) continued, as usual, without an enriched office-play area or specific instructions to teachers about engagement in children's dramatic play.

No differences were found among groups on literacy skills prior to the intervention. During the preintervention period, children's play behaviors were observed to identify literacy demonstrations (i.e., handling, reading, and writing), and the researchers met separately with the parent/teachers in each intervention group to explain expectations

for their behavior with respect to the literacy-enriched office-play setting (i.e., responsive participation in Group 1; no participation in Group 2).

After the intervention, the researchers videotaped on a weekly basis to capture children's interaction in the office-play setting, and data were collected on individual children's behavior in the new play setting at the end of the first 8 weeks of the intervention and then again during the last 2 weeks of the intervention. Immediately after the 5-month intervention, children were assessed individually to determine their knowledge of the functions and uses of office-play print objects (e.g., a page from a telephone book, a stamp, a calculator, and so on) and their ability to read words drawn from the environmental print displayed in the office-play area (e.g., *office*, *exit*, *open*, *closed*).

Literacy demonstrations (i.e., handling, reading, and writing behaviors) increased in the two intervention groups (Groups 1 and 2), but not in Group 3 (control group), after 2 months of the intervention. At the end of the 5-month period, Group 1 (intervention with adult participation), but not Group 2 (intervention without adult participation), showed additional gains. There were also significant differences on environmental word reading between Group 1 and Group 3, Group 2 and Group 3, and Group 1 and Group 2, indicating that adult interaction provided a benefit above the benefit of mere physical enrichment of a play space. Other results obtained in the study included a significant difference in the number of children who participated in the office-play setting and in the duration of their interactions with peers, with Group 1 again ahead of Group 2 in each case.

Conversations in Play and Literacy Development

The studies of adult engagement in dramatic play that we have reviewed do not discuss in detail the content or course of conversation that occurred during play. They simply describe and define in broad terms the role taken by the teacher. Another approach to examining the relationships between play and development has been taken by researchers whose primary interest has been

language development (Glaubman et al., 2001). This work, which is consistent with Vygotskian theory, has examined sociodramatic play during which children enact scenarios that they create and negotiate themselves, using knowledge of real-life situations they have experienced or observed. Investigators (Dickinson & Tabors, 2001; Heath, 1983; Pellegrini, 1980, 1982, 1985; Pellegrini & Galda, 1993; Sachs, 1980) who have examined preschool children's engagement in such play have concluded that engagement in sociodramatic play prompts children to use language to convey meaning, interpret ideas, and appreciate the role or perspective of others.

Research conducted by Dickinson (2001b), and studies reported in Dickinson, St. Pierre, and Pettengill (2004) emphasize the need for high-quality language and literacy preschool programs to have a high level of teacher-child verbal interaction, with special emphasis on narrative conversation. Strong relationships have been found between the types of conversations engaged in by teachers and children and literacy behavior assessed at the end of kindergarten. Conversations in which teachers use rare words, limit how much they talk relative to how much the child talks, and listen to what children say benefit children's language development the most.

Further evidence of the power of conversations to affect language outcomes comes from home studies of parents and children. In one home study (McCabe & Peterson, 1991) designed to enhance children's narrative conversation through parent interaction with children during play parents were asked to:

1. Talk to your child frequently and consistently about past experiences.
2. Spend a lot of time talking about each topic.
3. Ask lots of *wh*-questions, such as "Where . . .?" and "When . . .?" Ask few yes or no questions.
4. Listen to what your child says and encourage elaboration.
5. Encourage your child to say more than one sentence at a time by repeating what your child has just said.
6. Follow your child's lead by talking about what he or she wants to talk about.

Parents in the treatment group increased the types of utterances they had been taught to include in their conversation with their children. After the intervention, children in the experimental group increased in vocabulary. At 12 months, when tested, they showed improvement in all areas.

Studies carried out to determine whether preschools provide the type of instruction or setting needed for language and literacy to flourish have found that few children are receiving the support needed, especially those who already have limited language ability (Tizard & Hughes, 1984). In observational studies of interactive talk between teachers and children during free play and at other times during the school day, researchers have found that little conversation occurs (Chall & Dale, 1995; Wilcox-Herzog & Kontos, 1998; Dickinson, 2001b). Studies in preschools have also found that the number of different words and the different types of words used by teachers is limited and that little explicit or intentional vocabulary development takes place. Researchers have suggested that teachers think about increasing the frequency and complexity of language interactions with children and also about the settings in which this might best take place. Even the positioning of the teacher in relation to the child to encourage talk is a consideration (Galda, Pellegrini, & Cox, 1989).

A study by Dickinson (2001a, pp. 239-240) gives us a glimpse into a preschool classroom during dramatic play when a teacher engages the children in a conversation about their dramatic play, which involved sharks.

TEACHER: Oh, so you're going to get the sharks. Do you need to kill them, or do you move them to a different place so they can't hurt anybody?

CASEY: Kill them.

TEACHER: Kill them. You have to kill them?

BRYAN: Yeah.

CASEY: There's water already in the cage.

TEACHER: Oh, so they're in cages that are filled with water?

BRYAN: Yeah, it's a water cage.

TEACHER: And they don't get to eat spinach. Do you think sharks miss eating spinach?

CASEY: Sharks think they could get out with spinach.

TEACHER: You must be a very brave and daring man to go down there and take all these sharks back to this special place.

CASEY: We're protecting them.

TEACHER: Do you have to wear special suits? What kind do you wear in the water?

BRYAN: I wear climbing.

TEACHER: A climbing suit?

CASEY: Yeah.

TEACHER: What do you wear?

CASEY: A shark suit.

TEACHER: Those things on your back, are those the oxygen tanks? To help you breathe underwater?

BRYAN: They can breathe underwater.

TEACHER: Wow, that's special trick to learn how to do.

In this conversation the teacher repeats ideas discussed by the children to help them make their own concepts clear. For example, she repeats "Oh, so you're going to get the sharks." She clarifies what they eat and repeats the novel words *spinach* and *oxygen*. She helps children clarify what the oxygen tanks use. The teacher listened to the children and then spoke to them about the topic of their play, she used words that were rare for them, and she explicitly repeated new ideas and words in sentences (Dickinson, 2001a, p. 250). Dickinson found that conversations of this type, sampled when children were 4, were correlated with children's language development a year later at the end of kindergarten.

Clearly, we need to study conversations in play in more depth. For example, studies are needed in which teachers are trained in conversations that are designed to help support children's language and literacy development during dramatic play, after which their conversations are compared with conversations of teachers in a control group. The quality and content of teachers' verbal behavior in relation to children's must be measured, and we must measure children's language and literacy achievement in the short and long term.

Conclusion

At this time, although the relationships between play and literacy development have been documented, we still lack information for making causal connections between the two. In terms of the four categories of learning identified by the National Early Literacy Panel (2004), research on play in literacy-enriched dramatic-play contexts seems to contribute, and perhaps has the potential to contribute, to print knowledge (i.e., knowledge of environmental print and concepts about print) and oral language (i.e., receptive and expressive vocabulary). The lack of causal evidence linking play to literacy development must be viewed within the context of the shifting theories of play and associated limitations in available research. Many potentially productive questions remain to be addressed. For example, researchers have yet to explore the relationship between children's increased engagement in literacy behavior during dramatic play and their interest in and attentiveness to teacher-directed and explicit literacy instruction provided in the children's school day. It seems likely that playing with literacy objects and routines might indeed make explicit treatments of literacy in teacher-directed contexts more interesting to young children. If this were the case, might there also be some long-term consequences for children's reading and writing achievement? Future research on dramatic play in literacy-enriched contexts needs to probe for such relationships, in the short term and over the long haul.

Research might also help us learn how to give children more to *take* to their play, and perhaps benefit more from it. We know that children practice in play what they already know about literacy functions and features and that literacy-enriched play settings increase this kind of behavior. We also know that supportive adult participation in play leads to gains in knowledge of environmental print and print concepts. The evidence is limited, however, on the causal connections to children's knowledge of environmental print and literacy functions. We also have no information about possible effects of supportive adults participating with children in play on children's relationships to their teachers and the possible benefit this might bestow on children's learning in other con-

texts, such as story reading. We need to study how close attachments to teachers influence play behavior, similar to research conducted by Adriana Bus (2001).

In the discussion section of their 1997 study, Neuman and Roskos commented that "children's actions and routines did not appear to significantly change or become more embellished over the 7-month period of the study" (p. 32). They continued by suggesting that teacher support in play (not a focus in the 1997 study) might prompt more "active knowledge construction" (p. 32). In their concluding comments, however, they suggest that "both situated learning and formal school learning" are needed to provide sufficient support for preschoolers' literacy learning. We concur wholeheartedly.

If we are to develop comprehensive and integrated early literacy preschool programs, we need the benefit of evidence-based research demonstrating whether and how literacy-enriched play environments benefit children's literacy learning, how various styles of teacher interaction in play affect children's language and literacy learning, how teacher-directed literacy activities outside of play might leverage children's literacy learning in play, and how teacher-child relationships are affected by different styles of teacher participation. We also need to study the content and course of conversations between teachers and children during play and how variations in conversations affect language and literacy development.

Researchers also must pursue more play and literacy connections using randomized experimental and control groups, and they must probe for a wider range of possible benefits to literacy development, including children's interest in literacy learning. Moreover, studies must include longitudinal designs, to determine what happens, in time, to any near-term benefits identified. Longitudinal designs would also uncover "sleepers"—benefits in the long, but not the near, term.

Unless randomized controlled trials are used to examine literacy from play, we run the risk of losing a traditional component of preschool programming as problems with school readiness continue to alarm us. This would be a loss, for reasons both related and unrelated to literacy. Such a loss would be devastating if it were to occur as a conse-

quence of what benefits play might hold for language and literacy development in our youngest children.

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