

Play: the roots of language and literacy development

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Communicative interactions during the preschool years can prepare children for the discourse skills that are essential for reading (van Kleeck, 2006). Symbolic play, language, social-emotional, and literacy skills have been shown to be interrelated (Bergen & Mauer, 2000; Roskos & Christie, 2000). The skills that are required for mental modeling for text comprehension are the same skills that children use in pretend play. Despite the potential value of symbolic play in early childhood education, the current emphasis on early literacy skills has put the educational and therapeutic use of play under siege. In efforts to meet literacy goals, educators have sometimes reduced the size of play areas in classrooms or eliminated them completely in favor of more structured, teacher-directed activities targeting alphabetic knowledge and phonological awareness (Golinkoff, Hirsh-Basek, & Singer, 2007). Although phonological awareness skills are important for emergent literacy, they are insufficient for ensuring the development of discourse comprehension, which is the ultimate goal of literacy. Play-based interactions can provide the framework for developing children's language skills, an understanding of temporal and causal relationships among objects, people and events, and theory of mind (ToM) – the underpinnings for text comprehension. Play provides an opportunity to develop and use semantic memory (memory for words and concepts), procedural memories (scriptal memories for how activities are to be done), and episodic memory that links the emotional experience of the event with the what, when, and how of the event. Episodic memory enables individuals to have memory for their subjective experiences throughout time and to perceive the present moment as both a continuation of their past and as a prelude to their future (Tulving, 1993). This type of memory makes it possible for individuals to have conscious recollection of personal happenings and events from one's personal past and mental projection of anticipated events into one's future. Episodic memory enables the individual to make predictions – and hence to inference, a requirement for text comprehension. Episodic memory and ToM are interdependent. As children develop awareness of the relationship between their own feelings and experiences, they also begin to conceptualize that others might have feelings about experiences.

The ability to engage in pretend play has also been linked to the use of decontextualized language--the style of language required for literacy success in school. Higher levels of symbolic play and literacy require the ability to comprehend and use language without the benefit of contextual support from the environment. Children who exhibit greater decontextualization in their play by substituting objects (e.g., using a chair as a train) or taking on imaginative roles (e.g., I'm an astronaut) also use more explicit, decontextualized language involving (a) endophoric reference (i.e., linguistic coding of referents rather than pointing and gesturing), (b) elaborated noun phrases, (c) temporal and causal conjunctions, and (d) past tense and future aspect and metacognitive verbs (Pellegrini, 1985). Inability to use decontextualized language has been associated with lack of academic success (Michaels & Collins, 1984). Pretend play, thus, provides a mechanism for developing and practicing the cognitive and linguistic skills that underlie text comprehension.

Precursors to Pretend Play

To engage in pretend play, children must develop the behaviors and interactional patterns that underlie ToM. Children must develop an awareness of their own emotionality and the emotionality of other – this can be done by engaging in emotional sharing. Adults and children participate in enjoyable, playful interactions in which adults promote a heightened anticipation and excitement (Gutstein & Shelley, 2002). The goal of emotional sharing is to lead children to referencing the emotions of others, which involves borrowing the perspective of another person, using others' reactions as a reference point to resolve uncertainty, determining the emotional meaning of an unfamiliar person or object, making sure that your actions meet the approval of your partner, or determining your behavior's effect on others. When children reference, they borrow the perspective of another person and use this perspective to resolve uncertainty. They watch the other person for signals of what they are to do and make certain that their actions meet the approval of their partner. Children cannot play with others if they do not reference the behaviors of those others.

This referencing must be ongoing. Children and their partners must coordinate or coregulate their referencing, that is, they must continually reference one another while engaged in an ongoing activity. They must monitor their behaviors in relation to those around them. For example, if they are playing ball, the child must check to see if the partner is ready to catch the ball. Without this coregulated referencing, the child will not learn to take the perspective of others that is essential not only in social interactions, but also for inferencing when listening to or reading narrative texts.

Promoting Play Dimensions for Literacy

Both play and comprehension of text require: ToM; understanding of temporal/cause-effect relationships among, people, objects and events (scriptal and episodic memory); and understanding and use of decontextualized language, Figure 1 shows the development of the components or dimensions of pretend play.

Theory of Mind

As children develop TOM in play, they move from pretending on themselves (e.g., pretending to eat or drink), to acting on a doll (but the doll remains a passive recipient), to talking to a doll, to taking on roles of others, and taking on multiple roles of others. If children are to develop higher levels of ToM in play, they must converse with persons who use words referring to mental processes. Adults facilitating children's play must make frequent use of words that not only refer to emotions (happy, scared, angry, frustrated), but also to mental processes (imagine, remember, forget, ideas, thoughts). If children are to develop to the level where they talk for a doll or take on the role of another, they must be aware of how others feel, that others may feel differently than they do, and they must be aware of how their own behaviors influence the emotions of others. Adults must be alert to situations where they can model these ideas and where they can help children recognize the need to attend to the feelings of others.

The distinction between self and others is seen in children's abilities to carry on multiple discourse roles in play (e.g., the roles of characters, stage manager, and narrator). Wolf and Hicks (1989) noted that these three types of discourse are encountered in reading a story: the spoken discourse of characters, the text in which the discourse is immediately embedded (e.g., "Rubin," *my mother and father whispered to me softly*, "without you to love we would have nothing."), and the narrative told by the author. They observed that preschool children use multiple voices

not only as they play multiple characters, but also as they organize play. They can smoothly switch their own roles during play, ranging from outside the play frame to within it. They can take the role of a character, ("I'm cooking macaroni and cheese for dinner."), act as a stage manager for the props ("There's not enough fire hose. Can you get some string?"), and speak as the author of the play story ("Now the mother squirrel decided to have a birthday party for her little boy."). Wolf and Hicks reported a relationship between these types of role play in symbolic play and the ability to interpret multiple voices in narratives.

Promoting Thematic Content and Organization

In play, children both display and further their understanding of events in the world. Initially this knowledge is of a scriptal or procedural nature. Scriptal knowledge provides knowledge of what is coming, how to behave, and what to say. If children are to reproduce themes in play, they must have represented the experiences or themes in memory. As children integrate emotional information into situations, their play makes greater use of episodic memory which enables them to develop more flexible themes. Children initially play at themes of events they have personally experienced every day (eating, sleeping, cooking). Gradually, they begin to reproduce themes of memorable events they experience less frequently (e.g., shopping or doctor play). By 3 ½ they are engaging in thematic play about events in which they have not been personally involved (e.g., fireman, superhero); and by 5 or 6 years they produce novel themes in their play, combining aspects of themes in new and different ways.

As the thematic content of play moves from highly familiar scripts to creative topics, the play becomes more organized. Play begins with reproduction of isolated event, then to a few related events, to an evolving sequence of event, then to planned sequences in play. The development of increasing organization or integration in play appears to reflect not only increasing understanding of the spatial, temporal, and cause-effect relationships within the physical and social world, but also increasing metacognitive skills that enable children to monitor their own behavior. Deficits in the organizational dimension of play may represent lack of understanding of the interrelationships within the physical and social world or deficits in the child's metacognitive abilities. Language is critical for the development of metacognitive self-control and self-monitoring behaviors, for it is largely through language that individuals plan their behavior (Berk, Mann, & Ogan, 2006). The ability to organize or plan play at advancing levels would appear to be highly dependent on a child's ability to use language to reflect on past experiences, to predict future experiences, and to reason about the relationships between past and future events. Metacognitive abilities are essential for monitoring reading comprehension (Westby, 2004).

The thematic/organization dimensions of play are dependent on scriptal and episodic memory. Memory is highly influenced by talk about past events. Talk about events facilitates children's verbal encoding and reporting by providing labels for and descriptions of the experience. Furthermore, adult-child talk may help children understand an event by highlighting its causal and temporal structure and by guiding the child's attention to its salient aspects (McGuigan & Salmon, 2004). Children must be provided with experiences to "prime the pump" for play. Adults in preschools often provide interesting field trips and hands-on activities as a way to promote language development. In addition, they may make plans for the field trip with children, talk with children during the experience, and do follow-up activity after the event. There are multiple ways to encourage talk after an event. Storyboards provide one strategy for promoting discussion and building episodic memory of an event. Photographs of the trip are posted on a

large storyboard in the room. Children can comment to one another or adults about what they are doing in the pictures, they can pull a picture off of the board to show to someone or match it to something similar they see in a book. Children can also refer to the storyboards and they reproduce the experience in pretend play. Multiple opportunities to talk about an event facilitate the development of language and episodic memory – and thus provide children with information to use in their play and in making narrative inferences.

Thematic play should not be limited to real events that children have personally experienced. In the preschool years, children play at a variety of imaginative themes involving pirates, castles, princes, dinosaurs, superheroes, etc. Adults can provide children with experiences to help them appreciate the information in books. For example, when learning about princes/princesses and castles, staff, parents, and children in a preschool for deaf went to a lumber store, purchased boards, and built a “castle” with a drawbridge on the playground. They dug a moat around the castle. The Society for Creative Anachronism, an organization that reenacts medieval activities, came to the school with their costumes and “weapons,” and demonstrated medieval games. The teachers supported the children playing in their castle and read them stories that provided content for their play.

Promoting Decontextualization

As children develop, their play and language becomes increasingly more decontextualized – they begin to talk increasingly about nonreal and not present objects and events. Children with language impairments typically use less decontextualization in their play than neurotypical children (Brown, Prescott, Rickards, Paterson, 1997). Neurotypical children past 3 years of age are likely to make nonliteral object utterances (e.g., “That’s your medicine” when referring to white, plastic containers) and knowledge beyond the daily experience (“We’re gonna go to Santa Fe”). In contrast, children with language impairments are more like to draw attention to literal objects (“That’s my truck); and to describe what they are doing on the objects in the play (“I’m feeding the dog”). When pretend play first emerges, children need fairly realistic props to engage in pretend. Gradually, they are able to use less representative props, then creatively substitute objects (a box becomes a roast turkey), and eventually they use language to set the entire scene. Adults must consciously be aware of using language to talk about other than the obvious. As children engage in more decontextualized play, they are relying increasingly on mental models to support their play. When persons listen to or read text, they must form mental models of the texts in order to make the inferences necessary for comprehension of the text (Perfetti, 1997).

Conclusion

Play has been eliminated in many early childhood programs because of the belief that it takes away valuable time needed for learning the literacy skills essential in the 21st century. Yet, play, particularly play guided by adults, can promote the very types of language and thought that are essential if students are to comprehend what they read. Direct, structured teaching promotes memorizing and seeking the “right answers”. In contrast, play promotes the thinking skills and “learning how to learn” attitude that contribute to the development of creative, flexible thinking and problem-solving essential for the mental modeling and inferencing that underlie text comprehension. In addition, play has value regardless of its links to literacy. Play promotes cooperative pro-social behaviors and self-regulation (the foundation for decision making and higher cognitive processes) and reduces anxiety (Golinkoff, Hirsh-Pasek, & Singer, 2006).

Possessing proficient literacy skills alone will not result in successful lives. Persons must also possess healthy social-emotional behaviors if they are to use their literacy skills appropriately and effectively in their interactions with others.

Figure 1: Development of Play Dimensions

Ages	Prop Use (Decontextualization)	Content/Themes Organization (Episodic Memory)		Self-Other Relations (Theory of Mind)
17-19 mo	realistic props	events personally experienced that happen daily	no organization, unrelated activities	pretend play only on self
19-22 mo		caregiver activities	toy combinations	doll passive recipient; pretends at roles of familiar others (mommy, daddy)
2 yr		events personally experienced that happen periodically		talks to doll
2 ½ yr			events child has seen or read about, but not personally experienced	short sequences of temporally- related activities; events evolve
3 yr	representational toys; low realism toys; one object to substitute for another	events child has seen or read about, but not personally experienced	short sequences of temporally- related activities; events evolve	gives voice to dolls/puppets
3-3 ½ yr				
4 yr	use language to set the scene	highly imaginative themes	activities planned before play begins	gives characters multiple roles (mother, wife, teacher)
5-6 yr				

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