UNDERSTANDING EARLY LITERACY

Literacy has its beginnings when a child is born and develops through the uncounted experiences of everyday life. From the earliest interactions with others, a child hears and absorbs language. Babies respond to the tone of words spoken by their parents and others who cuddle and care for them. Language development is closely tied to the individual relationships and early experiences of the child and the emotional quality these experiences carry. Oral language is the foundation for all literacy.

While we know from observation and research that young children are active users of language, we also know that early literacy development does not simply happen. Positive expectations about and experiences with literacy from an early age provide a base for successful literacy development (Snow, Burns, & Griffin, 1998).

Children's learning is prompted by personal involvement as they communicate for a purpose. What's more, all learning takes place in settings that have particular sets of cultural and social norms and expectations. Through social interactions, informal learning experiences, and more formal instruction, a child acquires the complex array of skills associated with the activities of making, interpreting, and communicating meaning. (Bransford et al., 2000; Padak & Rasinski, 1999).

Literacy involves learning to integrate the four interrelated activities of speaking, listening, reading, and writing. During the past 20 years, we have learned a great deal about how children learn to read and write by studying the literacy development of children who come from homes with rich oral and written language environments. In such homes, children's efforts at storytelling, reading, and writing are accepted with interest and enthusiasm and enhanced by adult questions and encouragement. Songs, nursery rhymes, and other forms of wordplay build phonemic awareness (the ability to hear the separate sounds in words), while encouraging the creative use of language. When adults and older siblings read to themselves and out loud to infants and children, they demonstrate the importance, and enjoyment of, literacy (Kontos, 1986; Snow, Burns, & Griffin, 1998).

Guided by an understanding of how learning takes place, educators can use this information as they design classroom procedures and make instructional decisions about how to accomplish particular goals. Before we explore specific ways that technology can be used in the well-designed primary classroom to promote literacy, let's take a look at how and in what contexts children develop language skills.

Social Learning

Children have a natural tendency to explain their world, explore with language, and challenge each others' thinking. The brain is social and is shaped through interactions with early environment and interpersonal relationships. Research on brain development has provided physiological evidence that early experiences and interactions do not just create a context for early development and learn-

ing, but directly affect the way the brain is wired. In turn, this wiring profoundly affects emotional, language, and cognitive development.

While the brain continues to form new connections throughout the life cycle, there are periods during which the brain is particularly efficient at specific types of learning. Human interaction is crucial for normal development, and humans have a natural desire to learn (D'Arcangelo, 2000). Early experiences with literacy are closely tied to a child's emotional and social development.

As innately social beings, children learn language as a natural part of development through their everyday conversations with siblings, parents, grandparents, and caregivers. In fact, these are rich opportunities for learning because the child can use the context to help figure out the meaning of words and the sentence structure.

The Home-School Study of Language and Literacy Development conducted by researchers Dickinson and Tabors (2001) found strong evidence that teacher-child conversations, in which children play an active part, have an important role in shaping children's language and early literacy development. In particular, they concluded that the quality of teacher-child extended conversations throughout the day has a significant bearing on the child's long-term language and literacy development. Extended conversations that included personal narratives, explanations, pretend play, talk about past and present events, and discussions of ideas were particularly helpful for language development.

Because language learning occurs in a social context, people make activities such as writing and reading interesting and meaningful to young children. Parents, caregivers, teachers, and others play critical roles by modeling the use of literacy skills in their daily lives. Teachers work collaboratively to provide a socially supportive atmosphere that encourages children to share ideas and strategies, exchange writings, and challenge each others' thinking.

Activities such as reading recipes, looking in the newspaper for movie listings or sports scores, or reading e-mail messages show children the usefulness of literacy. Adults also provide children with the materials for drawing (the forerunner of writing) and reading, demonstrate their use, encourage and offer help, and communicate expectations.

Learning Through Play

You do not have to be a researcher to know that infants and young children love to learn through play and exploration. Indeed, exploration and discovery are their primary teachers. Mental and physical actions support each other in early childhood, and learning engages both the mind and the body. Recent brain research demonstrates the need of young learners to experience life kinesthetically and to learn through experiences that engage all the senses.

Pretend play is a valuable part of early literacy development, providing important opportunities to develop language skills. In fact, the amount of time that children engage in pretend play is correlated to their performance on language and literacy assessments. Their conversations in the preschool classroom are related to a broad range of skills using oral language and print that are evident by the end of kindergarten (Dickinson & Tabors, 2001). A broad range of skills using oral language and print that are evident by the end of kindergarten have their roots in conversation in the preschool classroom.

Play offers rich potential for practicing and experimenting with literacy. In the primary and early childhood classroom, center areas can provide children with literacy props for dramatic play, such as house play, or restaurant, transportation,

post office, or office play. Teachers have found that nonworking machines, such as typewriters, telephones, computers, and keyboards, facilitate role-playing and give children opportunities to use language in their play. Providing students with math manipulatives and materials for hands-on science activities allows them to use both their bodies and minds for learning, and creates opportunities for spontaneous conversations that promote the development of language skills.

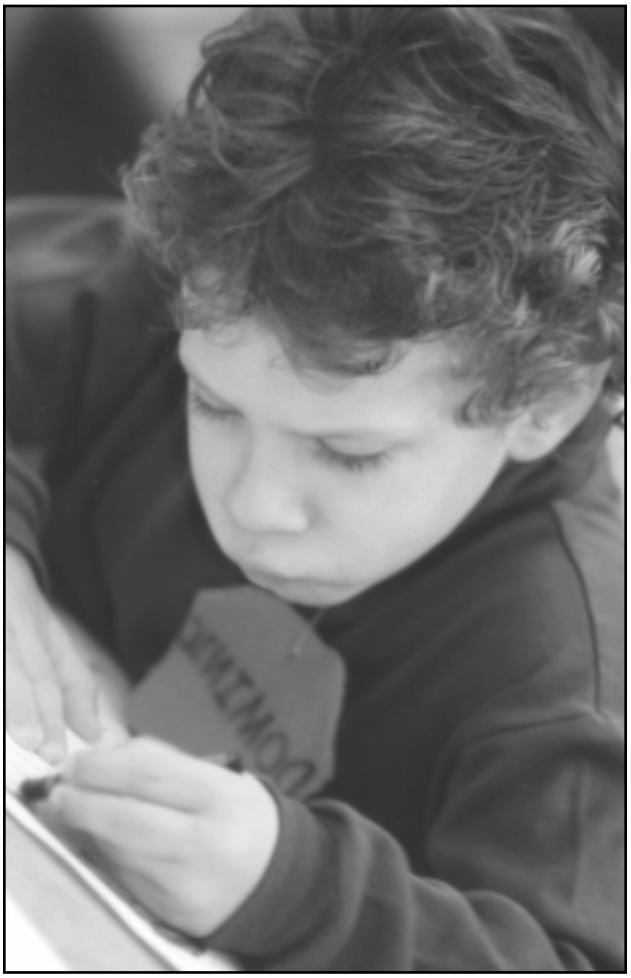
Children's ability to draw and to represent actions symbolically in dramatic play are important steps in early literacy development, and precursors of successful reading and writing. Research suggests that story reading, providing materials for scribbling and "writing" in pretend play, and participating in extended conversations are among the activities that promote emergent literacy skills (Bowman, Donovan, & Burns, 2000).

Print-Rich Environments

Spoken language and reading have much in common. A child develops language skills long before being able to speak and develops literacy skills long before being able to read. Making sense of written text depends on oral-language abilities, and requires an understanding of the meanings of words. There is "a consensus that the environments of young children should be language-rich, with lots of words used during interesting conversations, and should be enriched by stories and explanations" (Snow et al., 1998, p. 5).

Just as children learn to talk by using language in a purposeful manner, they can learn about written language in an environment enriched with meaningful messages and functional print (Warash, Strong, & Donoho, 1999). Print-rich environments surround children with words—signs, labels on objects, sign-in sheets, and charts. Teachers show that print is functional by building on opportunities that occur as part of the daily routine. Charts and lists posted around the classroom might record helpers, children's names, lunch count, or children's favorites. Any way that print can be integrated into the surroundings is helpful for creating an environment conducive to early literacy development.

Charts can be as simple as printing a name on a large sheet of paper in a column under a favorite food or favorite activity, or adding a name to a column in a database or spreadsheet. They provide another way to communicate ideas and observations, and are best used for information that has value or meaning to students. Teachers frequently use charts to help young children see relationships and make comparisons (Warash et al., 1999). Charting experiences in preschool and kindergarten lead into understanding of graphing



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and mathematical comparisons as children grow into more complex work with data and information.

Schickedanz (1999) describes a classroom environment where children experiment and play with all kinds of different papers and a variety of writing tools—a writing center much like a block area or water table. She has found that children take advantage of the "props" and often scribble messages to parents, grandparents, siblings, and teachers, imitating the writing they have seen. Children playing at this center might also ask an adult to write down the words they dictate. Dictating provides valuable literacy practice for children, as they choose what they consider important to record from all that might be said (Padak & Rasinski, 1999).

Early childhood classrooms cultivate written literacy by providing materials to use in pretend play and by encouraging children to express themselves in writing (IRA & NAEYC, 1998). Having a wide range of materials always available for children to use—crayons and pencils of all kinds and sizes, stamps and stamp pads, papers and scissors, glue, typewriters, and computers—creates a high level of interest and gives children many ways to explore print and express themselves (Warash et al., 1999).

Language and Literacy Development

Early experiences with language help prepare children for reading and writing. The well-designed primary classroom offers children opportunities to express their own creativity, hear books and poetry read aloud, read aloud to others, dictate or write stories, and engage in dramatic play and in myriad other activities that involve language.

Researchers agree that reading is the process of constructing meaning from written texts (Anderson, Hiebert, Scott, & Wilkinson, 1984). During this process readers join together information from the written text with their own knowledge and experiences to "make sense" of the text. "Thus, readers derive meaning from text when they engage in intentional, problem-solving thinking processes" (National Reading Panel, 2000a, p. 14).

Teachers are familiar with this interaction between students' personal knowledge and their comprehension of text. When a group of children reads the same poem or story, each one derives a slightly different message from the words, reacting to them based on what he or she brings to the text.

As we have seen, meaningful experiences form the foundation for students' learning. Prior to reading and writing, children need experiences in which they are surrounded by rich oral language. Such opportunities are critical, and their value should not be underestimated.