Children's Development and Literacy Learning

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From the time that they are born, children begin to learn about language, both oral and written. They learn how language is used. They learn what written language looks like as it surrounds them in the environment in the form of signs, billboards, labels on food, newspapers, magazines, and junk mail and on computers and television. Children also see adults using print in their daily lives to make lists, read recipes, read books and magazines, and write notes. The use of print is so wide-ranging in our society that children begin to learn about how it works from a very early age. We call this early learning emergent literacy.

Emergent literacy means that literacy learning begins at birth and unfolds throughout a child's early years. It also means that to become literate, children develop and bring together complex subsystems of resources. Specifically, children use linguistic, cognitive, social, and cultural experiences as they interact with print and make meaning from print (Clay, 2001). Each child follows a unique developmental path as he or she develops these resources and learns how to bring them together. Thus, emergent literacy is the developmental process of becoming a proficient reader and writer. It includes the skills and knowledge that children develop and the behaviors that they demonstrate before they are able to read and write like adults. This knowledge and these skills are the resources children use and build on as they have interactions with and around print. They then build up an understanding of what it means to read and write as well as develop listening and speaking abilities. Children's literacy development is not necessarily evident in how conventional or adult-like their reading and writing appear. Instead, it is evident in the literate behavior they exhibit. Literate behavior is what children do when they exhibit an action or performance that, on the surface, looks like something an adult engaged in a literacy

> Emergent literacy is the developmental process of becoming a proficient reader and writer.

activity might do. Examples of literate behaviors demonstrated by preschool children include holding a book and turning its pages, talking about a book, or pretending to write.

HOW CHILDREN DEVELOP AND LEARN

Literate behavior emerges through normal child development and learning. The experiences young children have at home and at school can either facilitate or slow the literacy learning process. Experiences that allow children to construct their own ideas or theories about how the world works are an important part of the process. Knowledge construction is the essence of learning—personally making sense of the world. Current views of learning and development describe children as active meaning-makers rather than as sponges that absorb information (Miller, 2002). In early childhood education, this process is often called active learning.

This view of children as active participants in the learning process is known as constructivism. The theories of both Piaget and Vygotsky are considered constructivist although each approaches the learning process in different ways (Shapiro, 2002). Short descriptions are provided here to show how the practices advocated in this book help children construct their own knowledge.

Piaget's Adaptation Process

Piaget, a Swiss psychologist, stated that development and learning occur through an interactive process between the child and the environment with both influencing each other (Miller, 2002). As the environment provides experiences, the child responds and in so doing has an impact on the environment. Specifically, as children have experiences in the world, they try to make sense of these experiences through their existing knowledge. Sometimes they can fit a new experience into their existing knowledge, allowing the new information to be assimilated. An example is three-year-old Joshua on a field trip to a local arboretum. He tromps along intent on making "giant steps," not paying attention to the teacher asking him to look up at the banana trees. Finally he looks up and discovers them himself saying, "Look at those big *leaves*!" Joshua has assimilated the huge banana leaves into his existing knowledge of trees and leaves.

In other cases, the new experience simply does not fit and so children must change or adjust their knowledge to accommodate the new information. The experience of one of the authors at age two provides an example. Loraine was with her mother in a city park. She ran up to a fence to pet the pretty swan on the other side. She thought the swan would be happy to be petted, just like her neighbor's dogs. Instead the swan honked and tried to bite her fingers, forever changing Loraine's conception of swans from nice to mean. This change in understanding illustrates accommodation. Piaget said that the processes of assimilation and accommodation always occur together and comprise the process of adaptation or learning.

Vygotsky's Social Interaction

Another prominent theory that gives the child an active role in her own development is that of the Russian psychologist Vygotsky. While Piaget concentrated on the individual experiences of children and an internal process through which knowledge is actively constructed, Vygotsky described development as a social process. While interacting with others, children create understanding, or knowledge, that is shared between them. Thus, active knowledge construction occurs in the social world. As children become sure of their knowledge, it becomes their own and they are able to use it independently.

Vygotsky says that children construct this shared understanding in the zone of proximal development or the ZPD (see Box 1.1). The ZPD represents the difference between the child's actual, or achieved developmental level, and her potential developmental level. The actual level of development includes knowledge and skills the child has mastered and can do independently. Potential development refers to things the child can do or achieve with the help of someone with a higher skill level. This helper is often called "the more skilled other" and may be either another child or an adult. The more skilled other helps the child move forward by supporting or scaffolding his learning process (Miller, 2002). For example, a teacher might help three-year-old Jacob who is working on a new, difficult puzzle by turning a piece around and saying, "try it this way," or suggesting he look for yellow pieces to match the yellow of the sun in the corner, or even by moving some pieces away and others closer. These strategies all provide a scaffold to help Josh solve the problem of what piece goes where. Thus, for Jacob, the skills for completing the puzzle are part of his social interactions with the teacher in the zone of proximal development. He will need many experiences like this to master puzzle problem-solving strategies, but over time, Josh will eventually be able to use these strategies independently, making them part of his actual developmental level.

Box 1.1   Theoretical Terms

Theorist	Concept	Definition
PIAGET	**Assimilation**	Making new information fit into existing knowledge and understandings
	Accommodation	Changing existing knowledge and understanding to fit new information
	Adaptation	How learning occurs The simultaneous processes of assimilation and accommodation
VYGOTSKY	**Shared Understanding**	Knowledge shared between interaction partners Knowledge developed in social situations
	Zone of Proximal Development	The distance between what a child can do independently and what she can do with the help of someone who has greater knowledge and skills
	Scaffolding	Providing assistance to help a child perform or understand at a more advanced level

CHILD DEVELOPMENT: THE FOUNDATION FOR LITERACY

While the theories of Piaget and Vygotsky explain how children learn, child development research provides information on children's competencies in various developmental areas. Three areas of development are particularly important for children's emerging literacy: language development, cognitive or intellectual development, and physical-motor development. Physical motor development will be addressed first, followed by language development and then finally cognitive development.

Physical-Motor Development

Development of the small muscles, or fine motor development, and maturation of the brain, affect children's ability to manipulate writing tools and to focus their eyes on printed material. At birth, babies wrap their fingers tightly around anything that touches their palm, often an adult's finger. This reflex action quickly fades away around three to four months, allowing for purposeful grasping. Eye-hand coordination remains crude during the first year of life though, so babies often miss the object they reach for. While toddlers can use a pincer grasp—their thumb and forefinger—to pick up objects around the end of the first year, crayons are still held in a fist-like grip. In fact, writing remains a challenging task for toddlers as it involves both controlling the writing tool and keeping the paper still (Berger, 2006). There is wide variability in the age at which children demonstrate a mature pencil grasp. Most children master it toward the end of the preschool years but a few others continue to struggle into elementary school. However, by age four, eye-hand coordination is sufficiently developed for easy writing and drawing—although the writing does not look like adult writing (Trawick-Smith, 2006).

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Language and Communication

Because literacy includes speaking and listening, children's learning of oral language and the conventions of speech are important to their literacy learning. Language development begins early in infancy as babies begin to communicate through cries, grunts, and facial expressions. Around two or three months of age, cooing begins wherein babies make repeated vowel sounds that vary in pitch in a sing-song fashion. Cooing changes into babbling around six months. Babbling adds consonant sounds to the vowels of cooing resulting in vocalizations such as "gaga" and "mama." The onset of babbling also marks the time when sounds not used by the native language of the infant's culture begin to disappear from her vocalizations. This indicates she is learning the phonology, or sounds, of her language system (Hoff, 2006; Puckett & Black, 2005).

> Language development begins early in infancy.

A few months later, as the child moves from infancy to toddlerhood, vocalizations take on the rhythm and cadence of speech with accompanying facial expressions and an expectation that others will respond. It seems that if one could listen closely enough, intelligible words would be heard. This phenomenon is known as expressive jargon and indicates intelligible speech is right around the corner. Loraine's experience with

twenty-month-old Abby illustrates how adult response to a child's vocalization validates the child's attempt to communicate. While Abby has many words in her vocabulary, such as "pink," "baby," "mine," and of course "*No!*" she is not yet using multiword sentences. She pats Loraine's leg, and jibbers and jabbers earnestly. Using the context of the ongoing activity, Loraine responds saying, "Yes, I know you want to go, but we have to wait for Austin [her older brother] to find his shoes." Abby shrugs her shoulders, says "hruumph," and dashes off yelling "Austin!" Her message was received and she set off to urge her brother to hurry.

Responding to children as though their behaviors communicate meaning is important for language and literacy development. By engaging children as communicative partners, adults help them to see themselves as speakers, readers, and writers. Evidence of this important process is seen very early in life as children begin to understand that language and communication are social enterprises requiring turn-taking (Jaffe, Beebe, Feldstein, Crown, & Jasnow, 2001). This understanding develops over time as the children have repeated experiences in which adults make turn-taking happen. Specifically, while a baby makes cooing or babbling sounds, his mother listens, waits for a pause, and then responds. The baby repeats his vocalization, and his mother again makes a vocal response. Through the repetition of this sequence, the baby learns that turn-taking is a part of communication—each partner in the interaction waits and listens to the other, then adds his or her own vocal contribution.

> Language and communication are social enterprises requiring turn-taking.

Clearly, the young child develops the idea that speech has meaning and communicates messages. She focuses her efforts on the sound system of her own language as her understanding (or receptive language) and production (or expressive language) skills grow. Vocabulary development proceeds somewhat slowly over the toddler period, with the average child knowing 500 words by age two. However, during the preschool years vocabulary growth literally explodes as the child learns about ten new words per day. This rapid increase in vocabulary development is possible because of fast mapping in which children map new words to similar concepts they already understand, allowing them to learn a word after hearing it only once (Berger, 2006; Puckett & Black, 2005).

> During the preschool years, vocabulary growth literally explodes.

Along with the development of receptive (listening) and expressive (speaking) language comes the child's learning of the structure of grammar,

or syntax of language. Syntax refers to the ability to combine words together in an order to communicate a message—the creation of meaningful sentences. Along with syntax, children learn that specific sounds can have meaning and when added to words they change the meaning. Examples are adding "ed" for past tense or "s" for plural. These meaningful units of sound are called morphemes (Hoff, 2006). One indication that a child is learning about syntax and morphemes is the child's application of the rules to the exceptions. Past tense and plural words take on the delightful preschool forms of "eated," "goed," and "feets" (Puckett & Black, 2005).

Family income has consistently been related to children's language and cognitive development. The vocabulary development of preschool children growing up in poverty is typically behind that of children living in families with higher incomes. The difference is quite dramatic as seen in a recent national study of children entering kindergarten. Seventy-six percent of children receiving public assistance scored at or below the 50th percentile on a standardized literacy test which included a vocabulary assessment. In contrast, children whose families were not receiving government aid were equally likely to score above or below the 50th percentile: 47 percent scored at or below and 53 percent scored above the 50th percentile (West, Denton, & Germino-Hausken, 2000).

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The number of challenging factors, or risks, present in the home magnifies the effect of poverty such that children living in the worst circumstances have the poorest language development. Taylor and colleagues (Taylor, Dearing, & McCartney, 2004) noted that children living in families experiencing long-term poverty with mothers who had little education and were clinically depressed had lower vocabulary scores than children whose families were experiencing only short-term financial problems.

Chapter 3 includes more detailed information on teaching strategies to facilitate the language development of children living in poverty. However, language development is only one area in which children of low-income families differ from other children. As they enter elementary school, their scores on assessments of a variety of academic skills are typically behind that of middle-class children (see Ryan, Fauth, & Brooks-Gunn, 2006 for a review). Fortunately, high quality preschool programs can help with this problem. This means it is extremely important for programs serving low-income families to offer a stimulating learning environment with many opportunities for learning language and literacy concepts as well as other academic skills.

Cognitive Development

Language and cognitive development are tightly intertwined. Both Piaget and Vygotsky emphasize the importance of the child's ability to use symbols. Vygotsky places great importance on the psychological "tools" children use in their interactions with the world (Miller, 2002). He stated that language is the most important tool a child can use to interact with others, learn about the world, and solve problems. Oral language is a symbol system that uses a word or phrase to represent an actual object or idea. It is a symbolic tool that enables learning to occur. Written language or print is an even more abstract symbol system than oral language, because it takes oral language and turns it into a second symbol system—that of the specific forms of letters.

> Language is the most important tool a child can use to learn about the world.

One of the most significant developmental events for literacy learning is the emergence of symbolic or representational thinking. According to Piaget, symbolic thinking is the ability to use one object to represent another. Early examples of this skill are seen during the toddler years as children rock baby dolls and speak into toy telephones. In the preschool years, symbolic thinking blossoms in two important ways. One is elaborate and organized pretend play and the other is the understanding that marks made on paper can represent specific things. Thus, symbolic thinking plays a critical role in the development of both reading and writing as it brings meaning to marks on paper.

In contrast to this remarkable ability to think symbolically, there are limitations to the typical thinking patterns of preschool children. The primary limitation is that children reason from specific to specific; they do not see the relationships in between. Many preschool teachers have encountered children such as four-year-old Kara when she stamps her foot and says, "I live in Lafayette, *not* Indiana!" This inability to take relationships into account may not be resolved until age eight. Being oblivious to relationships like this results in interesting writing behaviors. Robert, age four, sees no problem with writing letters or words backwards and gets frustrated with his mother who does. For Robert, the meaning of the letter symbol is not tied to its orientation in space or its relationship to other symbols. He is very focused on his own point of view. For the third letter of his name, he wrote a "b" and expects everyone to know that it is a "b" even if he writes it backwards like "d" or upside down like a "p."

INTRODUCING REBECCA, JUAN, MICHAEL, AND ANNIE

All children in preschool classrooms are different. They come from different cultural backgrounds that support diverse ways of using language and literacy. They live in different types of communities that value different literacy practices. They learn to use language in different communities of practice (Wenger, 1998). Some children come to preschool not speaking English as a first language or speaking English using a nonmainstream dialect. Some come with learning differences. All of these children, however, are in our classrooms and all come to those classrooms with conceptions and beliefs about literacy. We would like to introduce you to four such children who attend diverse types of preschool settings. These children are composites of children that we have known in preschool classrooms. We will use these children throughout the rest of the book to illustrate both the theory and the practice we describe.

Rebecca, a four-year-old African American girl from a middle-class family who lives in a suburban area, attends a half-day preschool affiliated with a local church. Her teacher's name is Kathi. It is the custom in this program, as in many others, for children to use the teacher's first name. Rebecca bustles around the preschool classroom during centers time, chatting with her friends as they play in the different centers. She is a talkative child when she is with her friends or with familiar adults. Her parents have always taken time to talk with her and answer her questions. From the time she was a baby, they have cuddled her on their laps and read books with her, first pointing to the pictures and talking about them and later reading the stories while asking for her input. She has seen her parents writing on the computer as well as making lists and using writing for other daily tasks. She often makes her own list when she accompanies her mother to the store. In the classroom, she writes in her own journal in the writing center daily, often visits the library area and "reads" to her friends, and likes to find her own and her friends' names in various places around the classroom. At least one parent volunteers in the classroom each week, reading to children, taking dictation in different centers, or helping children make the daily snack.

Juan attends a Head Start classroom situated in an ethnically diverse neighborhood in a large metropolitan area. Because this program follows a more traditional practice regarding teacher names, Juan addresses his teacher as "Mr. Gonzalez." Juan's parents immigrated to the United States from Mexico in their teens and became migrant farm workers. Once they had married and started a family, they settled in the city in order to

provide their children with the education that they did not have. Neither parent had gone beyond the third grade, and when they came to the United States, neither spoke English with any fluency. They now work hard to support their growing family. Because of their circumstances, Juan has not had very much exposure to literacy at home and extended conversations are not the norm. Literacy at home is limited to religious bulletins and bills. At the Head Start classroom, Juan spends much of centers time in the block area building or at the sand table. He seldom responds to questions during group time, but sits quietly listening.

Michael is enrolled in a child care center in a small town. Ashley is the lead teacher in his classroom. Both of Michael's parents work in a factory in the nearby metropolitan area, his father on the assembly line and his mother as a secretary. They drop Michael off each morning at 7 a.m. and pick him up at 6 p.m. On weekends, to make ends meet, his father also works at the nearby discount store. Michael is an active, energetic boy who loves to play outside and enjoys finding out how things work. In the classroom, he often can be found in the block area building a structure or at the sand or water table experimenting with the manipulatives there. He seldom goes to the writing center or the library area. He usually doesn't stay very long in one place, and during group time, he is always moving around or shouting out answers to questions about the stories being read.

Annie attends a full-day Head Start program in the small rural community in which her family lives. Her teacher's name is Mrs. Jones. Annie's family lives outside of the community and earns their living as share croppers. Her family has lived in the area for generations and has been unable to break the cycle of poverty. Neither parent completed high school, dropping out as soon as possible. Neither parent had good experiences in school and had difficulty learning to read and write. Therefore, there is little mainstream literacy use at home. Her family speaks the nonstandard dialect of the area. Annie has few friends in the preschool classroom. The other children do not want to play with her because of her poor hygiene and dirty clothes. She often speaks out inappropriately at group time.

FOUNDATIONS FOR LEARNING TO READ

This book explains how teachers can help children like those just introduced become readers and writers. To do this, we must define literacy and explain how it develops. We define literacy as reading, writing, and oral language use in a particular culture. Reading is constructing meaning

using print. It involves breaking the code, that is, matching letters to oral language, and constructing meaning. Children construct meaning using the words chosen by the author, their knowledge and experiences, the purpose for the specific reading task, and the social and cultural context in which the reading occurs. Writing involves using print to construct a message that communicates to others. Writing includes *both* writing letters and words onto a page *and* composing the meaning of the message. Reading and writing are intertwined processes. Learning about one contributes to learning about the other. Both are woven together with oral language. To learn to read and write easily, children need to develop experience in oral language, phonological awareness, alphabetic principle, concepts about print, and comprehension (see Figure 1.1). Box 1.2 defines each of these terms. As children experience each of these foundational aspects of literacy, they begin to understand how print and language work together as well as conventions of written language use. All of these understandings develop *simultaneously* over time. Therefore, it is important for preschool age children to have experiences with *both* reading and writing, as illustrated in Box 1.3.
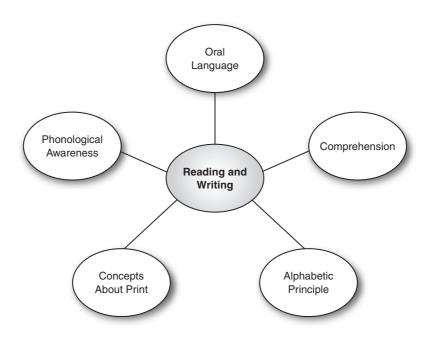
> Reading and writing are intertwined processes.

Figure 1.1   Important Foundations for Learning to Read

Box 1.2   Definition of Literacy Terms

Concept	Definition
ORAL LANGUAGE	Ability to use spoken language to make oneself understood Knowledge of vocabulary; ability to use more and more complex sentence structures Ability to engage in appropriate conversations
PHONOLOGICAL AWARENESS	Sensitivity to the sounds in speech, including recognizing rhymes and alliteration (same beginning sounds); being able to blend sounds together to form words; being able to break words down into the sounds that make them up
ALPHABETIC PRINCIPLE	Written language is made up of symbols we call letters and these letters or groups of letters match the words we say in a systematic way.
CONCEPTS ABOUT PRINT	Print works in specific ways; it can be talked about and manipulated, and is stable—it stays the same over time.
COMPREHENSION	Ability to make meaning from print using prior experiences, making predictions, connections, and inferences about the structure of the text

Box 1.3   Key Understandings and Abilities

Oral Language Ability

- **Vocabulary knowledge.** Children build up a dictionary of words and word meanings or descriptions of concepts that form the basis of understanding how things go together and how to interpret ideas.
- **Ability to understand and use more complex sentence structure.** More complex sentence structures include more relationships between words and concepts and more cognitively challenging talk, talk about nonpresent topics, generalizations, the future and past, and human motivations.

■ **Ability to have an extended conversation.** In a conversation, a speaker and a listener exchange ideas, taking turns. A listener responds immediately to what a speaker has said, and can ask questions to clarify and extend understandings.

Understanding About Print and Language

■ **Reading and writing serve many of the same functions that oral language does.** These purposes include revealing or asserting one's needs and wants; connecting with oneself and with others; and creating, comprehending, and expanding one's knowledge about the world (Christie, Enz, and Vukelich, 2003).

■ **Written language conveys meanings but without the cues oral language has**. When making predictions about the meaning of a story the reader does not have vocal and body language cues. The content of the story is not about events happening now. The reader must make inferences, use prior experiences, make connections, and construct an understanding without being able to ask questions directly of the author.

■ **Language is something that can be talked about and manipulated as well as used to communicate.** This metalinguistic awareness enables a child to step back from a message to begin to see the structure of language. As children become metalinguistically aware, they begin to learn the labels we use to talk about language, labels such as "word," "sentence," "sound," and "letter."

■ **Language can be broken up into parts and pieces, and those pieces can be manipulated.** These pieces include breaking sentences up into the words that make them whole and breaking words into their different parts, including being able to count syllables in words, to identify and form rhyming words, to recognize words that begin with the same sound, to segment sounds in words or blend sounds to form words.

■ **Print is stable and can be revisited over time.** Print does not disappear after it is used. Since it is stable, it can be used to help people remember what was said or what they would like to tell others. It can be used to communicate with others who are not present.

■ **There are specific ways that print works.** These concepts about print include that we read and write from left to right, top to bottom, and front to back; that writers leave a space between words to set them apart from each other; and that punctuation gives cues to the reader about what is going on.

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> ■ **Written language is made up of symbols or letters, and those symbols match the sound of oral language in a systematic way.** Children need to understand that each symbol or letter has particular characteristics, that these characteristics cannot be changed or the resulting symbol is not the same letter, that the letters all have names, and that these letters, either by themselves or in a group, represent particular speech sounds.

Rebecca, Juan, Michael, and Annie all began to develop their oral language skills at home before they came to their different preschool classrooms. However, because they each come from a different home setting, they have had different exposure to words and conversations. It is likely that Juan, Michael, and Annie have had fewer conversations with adults, have been exposed to fewer words and experiences since their families are struggling either to break the cycle of poverty or to just make ends meet (Snow, Tabors, & Dickinson, 2001). Because they potentially have a smaller lexicon or dictionary of words, they may not have built up the store of concepts that are networked together in conceptual structures (Duchan, 2004). These conceptual structures give children the basis to learn new information, understand how things go together, and interpret ideas. All of these things are important for comprehending stories and books.

Rebecca's middle-class family has more time to engage in conversations and more resources to provide her with a myriad of experiences, including reading to her from different books and taking her to places such as the zoo and the natural history museum. Her parents have modeled complex sentence structures in many types of verbal communication. Examples include discussing what they are seeing on everyday outings and asking Rebecca questions about the motivations of characters in stories. They have also asked her to make generalizations about what she saw at the museum, and have given her information about the animals seen there and when and where they lived. This cognitively challenging talk (Dickinson, 2001b) has helped Rebecca use decontextualized language, that is, language about people or events that are not present (Watson, 2001) as she has conversations with adults.

All four children have been exposed to both talk and print in their environments. They have begun to develop key understandings about how print and oral language work, the relationship between talk and print, and the conventions of print use. Juan and Michael often demonstrate

their understanding of the functions of language as they inform the other children in their classrooms not to touch their constructions. At their teachers' prompting, both boys have begun to leave signs on their unfinished block constructions that say, "Don't touch! Under construction." Annie also demonstrates that she understands how print can be used to connect with others as she plays and talks to imaginary companions and the dolls in the housekeeping center, reading soup can labels as she asks the dolls and imaginary friends what they would like her to cook for them for lunch and then making a list of what to buy at the store.

All four children understand that in a conversation, a speaker communicates something and the listener responds to what the speaker has said. They know that language is an important mode of communication in their lives. Juan has conversations with his parents about the religious activities they participate in each weekend. Michael enjoys talking to the children around him about what he is doing as he experiments with the funnels and water wheels at the water table. Annie knows she may respond to the teacher's questions during group time. Rebecca often asks questions to clarify her understanding and responds at length to questions from adults or peers. She uses voice tone, gestures, and body language to get her message across and as cues to build her own understanding. Because books have been read to her from the time she was a baby, she also knows that books do not always have those cues to help her make predictions about what is happening in a story. She has built up an understanding that the content of books can be about events that are not realistic and that are not occurring in the immediate context. She has become familiar with book language, which uses different structures than conversations, and is decontextualized from the immediate setting.

Because of her exposure to mainstream literacy in her home, Rebecca has also begun to demonstrate metalinguistic awareness (the ability to pay attention to the characteristics of words separate from their meanings), phonological awareness, concepts about print, and alphabetic principle knowledge. While the other three children have a bit of understanding of these things as well, Rebecca's knowledge base is the most comprehensive. She often talks to herself in the writing center about what she is writing. For example, when making a card to send to her grandmother who has just had surgery, she said, "I better write some words on the front to tell her to get better. Then I better put some different words inside. I think I'll write a E first then a R and then a B." She continues talking to herself, naming the letters as she writes them down. As she completes the cover of the card, she reads it to herself, saying, "Get better soon." She then opens the card, and repeats the process, writing a variety of letters in a left-to-right, top-to-bottom fashion. As she finishes writing, she again reads the card to herself. "Dear Grandma, I hope you get better.

I hope it doesn't hurt too much where they cut you. I love you." She then writes her name at the bottom of the page, slowly stretching out the sounds in her name and writing a letter for each sound she hears. When she is finished writing her name, she shows the card to her teacher who asks Rebecca to read it to her. Rebecca responds, "I drawed a picture of my grandma in a bed 'cuz she is in the hospital and these letters say 'get better soon.' And then I wrote 'Dear grandma. I hope you get better soon. I hope you don't hurt too much where they cut you. Love, Rebecca.' Do you think she will like it?"

Rebecca's reading of her card demonstrates that she knows that print is stable. While the words that she read to herself after she finished writing and the words she read to her teacher are not exactly the same, the message she conveys is consistent both times. She demonstrates metalinguistic awareness by talking about what she is doing to construct the message and using terms such as "word" and "letter." She demonstrates her understanding of concepts of print by distinguishing between the picture she has drawn and words that she has written, and by writing from left-to-right and top-to-bottom. She demonstrates alphabetic principle knowledge when she names the letters as she writes them and combines that knowledge with phonological awareness as she stretches out her name, saying the sounds and writing the letters.

Annie, Michael, and Juan also demonstrate their understanding of print and language in how they interact with print. Michael and Juan know that print is stable as they put signs on their block constructions and make sure to tell the children around them that the sign says not to touch their block constructions. Annie demonstrates her concepts of print as she writes her grocery list in the housekeeping center, writing from left-to-right and top-to-bottom and as she points to the words on a can of food and tells the doll what kind of soup it contains.

SUPPORTIVE CLASSROOM ENVIRONMENTS

Although Annie, Michael, Rebecca, and Juan live in different communities and attend different types of preschools, all of their teachers know that children learn about literacy at both home and school. The teachers realize that children construct their first understandings of language and literacy as they interact with their families. These understandings develop as children observe and participate in the print and language practices used by their parents and older siblings (Gee, 2001; Rogoff, 1990). Active participation at home and at preschool supports the development of each child's ways of thinking, talking, knowing, and acting in connection with print. This process is sometimes called an apprenticeship in thinking

(Rogoff, 1990). Through this apprenticeship, children learn and begin to demonstrate the behaviors of literate people.

The children's teachers know that there are two key elements to support children's literacy learning: (1) the environment in which they are immersed, and (2) the adults who plan and support children's active participation in that environment. While the resources available in each classroom are different, there are similarities across them. All four classrooms have an environment that is rich in literacy materials—including a wide variety of books and writing materials as well as both functional and environmental print. The teachers also provide opportunities for children to engage in activities incorporating oral language and literacy play.

The books in all four classrooms can be found in a comfortable and inviting library as well as in other learning centers (Roskos & Neuman, 2001). The books are easily accessible so that children can refer to them during centers time or sit down with one in the library. The writing materials are also easily accessible in both a dedicated writing center and other learning centers. Additionally, children can experiment with writing using different writing tools (such as pencils, markers, chalk) and writing surfaces (such as paper, blank books or journals, chalkboard).

The children see functional and environmental print all around them. Functional print is print that is part of every day activities in a particular setting (Christie, Enz, & Vukelich, 2003). Functional print demonstrates how literacy is used in everyday life for different purposes. For example, in each of the four classrooms children use a sign-in system to indicate they have arrived. Printed labels describe the play materials on shelves. Alphabet charts, posters, and stories written by the class are displayed on the walls and in the library.

Environmental print is print that is found in the everyday environment of the children. In the housekeeping area, children find many materials containing environmental print. Examples include phone books, food cans and boxes, junk mail, and fast food menus. When the housekeeping center is transformed into another setting such as a veterinarian's office, the center contains magazines and posters. In addition, children fill out forms, write prescriptions, and hand out bills for services rendered. They also read magazines and signs about pet food and pet care. Enriching play centers with this type of environmental and functional print extends children's literacy interests and allows them to practice the literate behaviors that they see the important adults in their lives use (Makin, 2003; Roskos & Neuman, 2001; Yaden, Rowe, & MacGillivray, 2000).

The teachers in these classrooms know that while having a variety of materials is important, it is just as important for the children in their classrooms to have activities available that encourage interaction with the materials. One important activity all of the teachers provide is interactive

book reading. The goal of interactive book reading is to involve the children in the book, encouraging them to extend the ideas, make predictions, discuss aspects of the story, and tie the book to their own experiences. In this co-constructive reading (Dickinson, 2001a), the teacher and the children co-construct the meaning of a book using cognitively challenging talk.

Cognitively challenging talk is part of the interactional environment of the classroom. It takes children beyond the here and now and out of the context of their own lives, helping them to develop comprehension skills and strategies (Yaden et al., 2000). Asking children to think and talk about things that are not present requires them to decontextualize. This means they must glean meaning from words without the benefit of situational cues, facial expressions, or gestures. Teachers can engage children in cognitively challenging talk through complex, elaborate conversations. Other important aspects of cognitively challenging talk include using rare words (words children do not know) and asking open-ended questions (Dickinson, 2001b; Dickinson & Tabors, 2001). Much of teacher talk is brief and simple; elaborate and open-ended exchanges with children do not occur very often (Dunn, 1993). Therefore teachers should consciously think about using cognitively challenging talk in the classroom. See Box 1.4.

> Cognitively challenging talk takes children beyond the here and now.

Box 1.4   Cognitively Challenging Talk

Cognitively challenging talk:

- Is decontextualized
  - □ takes children out of the current situation, asks children to think and talk about things that are not present or events that happened in the past
  - □ conveys meaning through words instead of the context, gestures, or facial expression
- Includes the use of rare words
  - □ words that children do not know
- Involves extended, complex conversations
- Uses open-ended questions and elaborative comments
- Includes information children do not know

The teachers of our four preschool children provide many opportunities for cognitively challenging talk between children and adults as well as opportunities for children to talk to each other. Extended conversations occur as children play together in centers, when the teacher joins their conversations in a learning center, or while the teacher leads small and large group discussions. Using cognitively challenging talk, the teachers address topics and events that may not be immediately present, such as asking children what they did over the weekend or to remember an experience from the previous day. They ask open-ended questions that encourage children to elaborate on what they are saying. They often ask "Why?" or "What do you think?" to encourage higher-order thinking and to extend the conversation. They include information that children may not know and words not in the children's vocabulary.

Mrs. Jones, Mr. Gonzalez, Kathi, and Ashley are active figures in their classrooms. They pay attention to what the children do and say as they participate in the life of the classroom. They understand the literacy practices of the community outside of the classroom so they can then build on what the children bring with them. They carefully and intentionally plan a curriculum that blends opportunities for children to use literacy to learn about their world with opportunities to learn literacy (Dickinson, McCabe, & Clark-Chiarelli, 2004; Hall, 2003). They model their own thinking, reading, and writing processes so that children see these tasks as an important part of life (Hall, 2003). For example, Mr. Gonzalez might think aloud about his interpretation of a story or Kathi might talk about her experiences related to a topic during an interactive book reading. Ashley might model writing a list of tasks that need to be accomplished in the classroom, or Mrs. Jones might model the writing of a sign reminding others that a painting is wet. They also enter play as coplayers, extending the use of literacy items in the center beyond what the children are doing. For example, Kathi might enter the doctor's office play as a nurse and hand the "doctor" a prescription pad to write down the medicine the "patient" needs to take.

Children learn by having meaningful experiences that allow them to create new understandings about the world. But what is a meaningful experience? A look into classrooms serving preschool-age children reveals a confusing array of interpretations. Common practices range from permissive and unstructured environments in which children play as they choose, to structured seat-work with traditional worksheets and flash card drills, to specific learning centers requiring children to explore specific materials and concepts. It is this latter strategy that is most likely to produce meaningful experiences that lead to learning. This book provides information on how teachers can create goal-directed learning

experiences that actively engage children in meaningful, authentic expe-
riences that lead to becoming readers and writers. It will help you under-
stand each of the important precursors to learning to read successfully
and how to support children's learning of each one. Finally, it will help
you plan your curriculum, bring the community into the classroom, and
help parents support literacy learning.

SUMMARY

This chapter focuses on the developmental processes of language and liter-
acy development. Children begin to learn about print from birth through
the environment around them. We refer to this learning about reading and
writing as emergent literacy. The learning process is described as active—
children construct their own knowledge through experiences in the world.
Piaget's and Vygotsky's views of learning and development are explained
to provide a framework that can help us understand literacy learning.
Piaget described learning as an adaptation process which includes assimi-
lation of information, the process of fitting new information into existing
knowledge, and accommodation, the process of restructuring existing
knowledge. Vygotsky described learning as a social process. From Vygotsky
we have the term "zone of proximal development," or learning that is
actual to a child with the help of someone at a higher skill level.

Three areas of development that are crucial to a child's literacy learn-
ing are physical-motor, language, and cognitive or intellectual. Fine motor
development is needed for children to manipulate writing tools and focus
on print. Language development begins in infancy with cooing and bab-
bling, and by the time a child is in preschool she will be learning nearly ten
new words a day. However, language learning includes more than vocabu-
lary development. It also includes acquiring conversational turn-taking
skills, understanding that the purpose of language is communication, and
developing knowledge about how words are put together to form sentences
(syntax of language). Language development is closely tied to cognitive
development. The development of symbolic thinking, an aspect of cogni-
tive development, is important to literacy learning because language is
symbolic. Children explore the symbolic nature of language in their play
when they use the props in their play (i.e., toy telephone) to represent real
objects in their environment. In this chapter, we also introduced the four
children who will be featured in subsequent chapters of this book as we
describe how early childhood classrooms can become centers of excellence.