

Early Literacy

“**Providing children strong literacy education in the early years leads to better outcomes later on.**”

—Campbell, Ramey, Pungello, Sparling, & Miller, 2002

Children who are routinely read to day in and day out—and immersed in rich talk about books and the various activities in which they are engaged—thrive. And those children with less exposure to books face tougher learning challenges in school and beyond (Campbell et al., 2002; Dickinson, McCabe, & Essex, 2006; Neuman & Celano, 2006).

Brian Gallagher is the Acting Executive Director of Reach Out and Read, a program that promotes early literacy and school readiness in pediatric exam rooms nationwide by giving new books to children and advice to parents about the importance of reading aloud. Reach Out and Read understands both the advantages of early reading experiences as well as what's lost when children are deprived:

The brain develops faster than any other time between the ages of zero and three. Because of this, it's important to foster literacy during the early stages of life. If children are not stimulated, if they're not read to, if they're not engaged, if they're not asked questions, their brains actually atrophy. There's real opportunity in providing parents with books and encouragement to read to their children regularly, sing with their children, and engage their children in conversation—all of which prepares our next generation to be incredibly successful in school (2011).

Literacy development is less about a limited critical period and more about *windows of opportunity* that extend across early childhood, culminating perhaps around the age of 10. So even if a child has limited access to language and literacy experiences in the home,

1 Early Literacy

2 Family Involvement

3 Access to Books

4 Expanded Learning

5 Mentoring Partnerships

there's much ground to be gained through literacy-rich expanded learning or mentoring opportunities such as preschool, extended day programs, cross-age literacy partners, and the like. During late infancy and late childhood synaptic density reaches a plateau—this is the period of maximal responsiveness to environmental input (Huttenlocker et al., 2002).

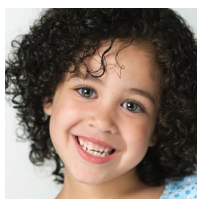
Pam Schiller, early childhood curriculum specialist, lists five key findings from the imaging technology used in neurobiology and early brain development research. They are as follows:

- The brain of a three-year-old is two-and-a-half times more active than an adult's.
- Brain development is contingent on a complex interplay between genes and the environment.
- Experiences wire the brain. Repetition strengthens the wiring.
- Brain development is nonlinear.
- Early relationships affect wiring.

Again, the “windows of opportunity” suggest especially fertile times when the developing brain is most susceptible to environmental input—and most able to “wire skills at an optimal level.”

How Literacy Develops and Predicts Later Academic Success

In 2008, the National Institute of Literacy issued its report, *Developing Early Literacy: Report of the National Early Literacy Panel*, and, among its many findings, stated that the foundational reading and writing skills that develop from birth to age five have a clear and consistently strong relationship with later conventional literacy skills. “These six variables not only correlated with later literacy as shown by data drawn from multiple studies with large numbers of children but also maintained their predictive power even when the role of other variables, such as IQ or socioeconomic status (SES), were accounted for.” The six variables are:



“**Seventy percent of what is given to us genetically is brought to fruition by our environmental experiences.**”

—Daniel Goleman, 2006

- **Alphabet knowledge**
Knowledge of the names and sounds associated with printed letters
- **Phonological awareness**
The ability to detect, manipulate, or analyze the auditory aspects of spoken language (including the ability to distinguish or segment words, syllables, or phonemes), independent of meaning
- **Rapid automatic naming of letters or digits**
The ability to rapidly name a sequence of random letters or digits
- **Rapid automatic naming of objects or colors**
The ability to rapidly name a sequence of repeating random sets of pictures of objects (e.g., *car, tree, house, man*) or colors

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Windows of Opportunity

Window	Wiring Opportunity	Greatest Enhancement
Social Development	0-48 months	4 years to puberty
Attachment	0-12 months	
Independence	8-36 months	
Cooperation	24-48 months	
Emotional Intelligence	0-48 months	4 years to puberty
Trust	0-14 months	
Impulse Control	16-48 months	
Motor Development	0-24 months	2 years to puberty
Vision	0-24 months	2 years to puberty
Thinking Skills	0-48 months	4 years to puberty
Cause and Effect	0-16 months	
Problem-Solving	16-48 months	
Language Skills	0-24 months	2-7 years
Early Sounds	4-8 months	8 months to ten years
Vocabulary	0-24 months	2-5 years

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- **Writing or writing name**

The ability to write letters in isolation on request or to write one's own name

- **Phonological memory**

The ability to remember spoken information for a short period of time

An additional five early literacy skills were also correlated with at least one measure of later literacy achievement, including:

- **Concepts about print**

Knowledge of print conventions (e.g., left-right, front-back) and concepts (book cover, author, text)

- **Print knowledge**

A combination of elements of alphabet knowledge, concepts about print, and early decoding

- **Reading readiness**

Usually a combination of alphabet knowledge, concepts of print, vocabulary, memory, and phonological awareness

- **Oral language**

The ability to produce or comprehend spoken language, including vocabulary and grammar

- **Visual processing**

The ability to match or discriminate visually presented symbols

These eleven variables consistently predicted later literacy achievement for both preschoolers and kindergartners. Typically, these measures were more closely linked to literacy achievement at the end of kindergarten or beginning of first grade, although oral language, when assessed by more complex measures, was found to play a bigger role in later literacy achievement. Children’s early phonological awareness—that is, their ability to distinguish among sounds within auditory language—also predicted later literacy achievement.

Within the Early Literacy Pillar, we will explore the research and practical recommendations related to language and literacy development around eight key understandings:

- Reading Begins at Birth
- Oral Language Is the Foundation of Literacy
- Young Children Can Easily Learn More Than One Language
- The Read-Aloud Plus Text Talk Maximizes Learning
- A Robust Vocabulary Promotes Early Reading
- The ABCs and Code-Related Skills Are Essential
- Reading and Writing Offer Mutual Support
- Early Readers Reap Benefits That Last a Lifetime

Reading Begins at Birth

“**Parents should begin reading aloud to children at birth. It feeds the child’s hungry brain with data for language development, speaking, and early word reading. It’s a wonderful way to bond and leads to cognitive, social, and emotional development.**”

—Richard Gentry, *Raising Confident Readers*, 2011

As the newborn hears sounds and discriminates the oral language, he or she begins to build the foundation of written language and reading and writing. Indeed, the “window into the developing brain allows us to see that stimulation from the environment changes the very physiology of the brain with implications for social, emotional, and cognitive growth” (Bowman, Donovan, & Burns, 2000).



EARLY LITERACY

Three-plus decades of research have detailed the benefits of reading aloud to children. Educators, pediatricians, and policymakers alike recognize the immense advantages for those children who enter school thoroughly immersed in the rich, inventive language of picture books. Robert Needlman (2006), a pediatrician who founded Reach Out and Read, a program that prescribes books and reading to its youngest patients, sums up the benefits:

A substantial body of evidence supports the efficacy of Reach Out and Read-like programs in promoting positive attitudes toward reading aloud, increasing the frequency and regularity of parent-child reading, and—probably as a result of these changes—stimulating vocabulary growth. Furthermore, the program seems to be most effective for children at greatest risk of developing reading problems, including children from low-income households and Latino children in particular.

The Building Blocks of Early Literacy

In the mid-eighties the term *emergent literacy* gained prominence as a theory that explains the origin of reading and writing in the youngest children. Emergent literacy comprises the skills, understandings, and attitudes that young children demonstrate before they are able to control conventional forms of reading and writing. Emergent literacy is based on the understanding that young children acquire literacy not only through direct instruction, but also as the result of exposure and encouragement—as they are immersed in print, recognize the pleasure and purpose of reading and writing, and are encouraged to try the processes themselves (Teale & Sulzby, 1986; Whitehurst & Lonigan, 1998; Landry & Smith, 2006).

- The building blocks of literacy begin to develop in infancy. Day-to-day activities expose babies and toddlers to sounds, words, speech, and print. Researchers have found strong evidence that children can learn reading and writing in their earliest years, long before they go to school (National Early Literacy Panel Report, 2008).
- Another strand of infant research that sheds light on fundamental early-reading abilities stems from auditory and visual discrimination. In general, infants prefer patterned displays; for example, six-week-old infants notice differences in orientation of identical line forms (for example, Y) and infants, starting at six months, begin to develop spatial relations and discern visual patterns—such as the difference between dot patterns and images of animals (Eimas & Quinn, 1994; cited by Paratore et al. 2011).





- Infants three and four months of age demonstrate that they have both finely tuned auditory and visual discrimination (Paratore, Cassano, & Schickedanz, 2011); and toddlers can discriminate word pairs that are minimally different and “hear those differences as accurately as adults” (Gentry, 2011).

In general, skilled reading in elementary school is shaped by early literacy experiences long before a child encounters formal reading instruction. Providing children strong literacy education in the early years leads to better academic outcomes and reading success later on (Campbell et al., 2002). Therefore, it seems evident that involvement in rich language and literacy experiences at home and in the community creates tremendous opportunities for the child. “Learning to read represents the weaving together of multiple skills, understandings, and orientations, many of which have their developmental origins in infancy and toddlerhood,” writes renowned literacy researcher Catherine Snow (Snow & Juel, 2005).

Long before children can read and write in the conventional sense, they are learning about literacy. From as early as the first months of life, children’s experiences with oral-language development and literacy begin to build a foundation for later reading success (Duke & Carlisle, 2011; Dickinson & Neuman, 2006). And what they are learning is no surprise: What, why, when, and how people read, write, and use written language. For example: to entertain and inform (picture books, newspaper, TV guide); communicate across time and distance (texts, emails, written notes and letters); to remember and plan (shopping lists, plans, and schedules); to instruct and guide (game directions, how-to manuals, recipes)—and on and on. For nearly every human enterprise, there exists a corresponding written genre and form of writing.

Fostering Early Literacy

Children do not have to “get ready” to learn how to read and write. Children begin learning language—and about language—from the moment of birth. It’s never too early to begin reading to your child—babies love hearing the sounds of their parents’ voices reading to them, even when it is the morning paper (Bernstein, 2010). What we know:

- Children thrive when they are immersed in rich language, oral and written, morning, noon, and night. Play with language, recite nursery rhymes, sing songs, and engage children in daily conversations and book reading. It’s best to weave in literacy throughout the day because “children learn best through repeated exposure to materials and experiences” (Bennett-Armistead, Duke, & Moses, 2005).
- Children quickly understand that written language serves multiple purposes—they embrace their written names as

“belonging to them,” recognize the regulatory nature of print on the street such as stop signs, and understand the role print plays in guiding daily life around the house and beyond. Read out loud from everything, even shopping lists, road signs, and bills to show your children how important reading is to you (Bernstein, 2010).

- Reading to your newborn makes it clear that your family believes reading for pleasure is worthwhile and sends the message that reading is fun. Young children have short attention spans, so try reading for short periods of time, several times a day (Bernstein, 2010).
- Story time rituals help even a toddler develop pre-reading skills and an understanding of the concepts of story beginning and end. Read-aloud and sing nursery rhymes and share board books. Ask open-ended questions about the books you are sharing with a young child.
- Visit the library on a regular basis and secure a library card for your baby; check out enough books to last for a week or two. Enroll children in the library’s summer reading program.

“**Both for building your own relationship with your baby and also for welcoming her into a very long relationship of her own with books, now is the time to encircle your baby with the love of language.**”

—Pam Allyn, *What to Read When*, 2010

13 Things Babies Learn When We Read With Them

by Julia Luckenbill

We all know that it’s good to read to our babies. But what exactly are they learning? Here are just some of the things your baby can learn as you read together.

1. Books contain wonderful stories and songs that I can hear over and over again.
2. Reading time is a time when I am held and loved.
3. You tell me the names of my body parts, the sounds different animals make, and that animals go to sleep, too.
4. Some books are especially enjoyable and I can hear them again and again.
5. Every time we read I hear how words are used, listen to rich language, and learn new words.
6. The letters, words, and pictures you point to all have meaning.
7. I can explore how books are the same and how they are different by tasting and touching them.
8. There is always something hiding behind the flap; my favorite pictures are always in the same place in a book.
9. Listening is part of communication and language includes listening and understanding.
10. Things come in different colors, sizes, and shapes.
11. It’s fun to play with language, and explore rhythm, rhyme and humor.
12. When I do something, another thing happens; if I point at a picture, my mom or dad will tell me its name. If I drop the book, we might stop reading.
13. I love books and one day I will love to read on my own.

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Oral Language Is the Foundation of Literacy

Oral language development precedes literacy and then parallels it; both oral and written language are developmental language processes that are mutually supportive and develop over time. Parents' interactive strategies, particularly the quality of their language that they share with their children and the books they read aloud, are strongly related with their children's language development (Hart & Risley, 2003; Landry & Smith, 2006). What understandings about reading do young children acquire through oral language? Snow, Burns, & Griffin (1998) identify the following:

“**Oral language is the foundation on which reading is built, and it continues to serve this role as children develop as readers.**”

—Elfrieda Hiebert, 1998

- Basic language components that both oral and written language hold in common (lexical, syntactic, and interpretive processes)
- Cognitive mechanisms (working memory)
- Conceptual memory (vocabulary, topic knowledge)

The Scientist in the Crib

Language development begins well before infants begin making their first words. In their widely read *The Scientist in the Crib* (2000), Gopnik, Meltzoff, and Kuhl maintain that processing speech sounds begins in early infancy. Infants quickly become language-specific listeners—by four months they pay attention only to sounds heard in the language to which they have been exposed. Infants make sounds that imitate the tones and rhythms of adult talk. They “read” gestures and facial expressions and begin to associate words and meanings. At birth, even before they speak or understand language, infants begin processing the speech stream around them in order to determine the sounds of the language (phonology), and the form and structure of the language (syntax). By the time they are 12 months of age, they will have “cracked the code” for many of these properties, as they prepare to produce their first spoken words. Here they will show they are mapping what they know about the form of language to what language means (semantics). Over the first 12 months, the infant is conducting many different analyses of the speech stream, working on all the dimensions of language at once—phonology, syntax, semantics. By the time children are about three years old, they will have mastered much of the basic system of the language around them (Lust, 2006).

We also know that sensitive parents adjust and simplify their language to correspond with their child's need. These adjustments include simplification of language, redundancy, a higher voice pitch, and a striking number of questions. Parents differ in the amount of structure they use; for example, as children grow and develop into the preschool years, many parents pull back from repeating and extending their child's language. They also ease up on directives

and invite the child to take the lead. The impact of directives varies across ages. In the early-toddler period, higher degrees can support language skills, but by preschool, it begins to interfere. While it's important to maintain a "moderate level" of linguistic challenge, it's also essential to let the child take the initiative with language and not be overly directive (Landry & Smith, 2006).

We can observe children's literacy development through their use of literacy materials. After babies can purposefully grasp and manipulate objects, board books become a part of their exploration. Infants between 8 and 12 months who are read to regularly progress from mouthing books to playing with the covers to turning pages. This book handling is usually accompanied by babbling, which reflects an adult's vocalizations during reading (Snow, Burns, & Griffin, 1998).

As children continue to develop as language users, they learn the grammatical structure of their language, expand their vocabulary, and gain metalinguistic skills. Metalinguistic skills involve not only the ability to use language but also the ability to think about it, play with it, analyze it, talk about it, and make judgments about correct forms (Bennett-Armistead, Duke, & Moses, 2005).

Young children also use their language in connection with everyday literacy events—such as, with their parents' help, searching for and clipping needed coupons, sorting the mail, checking the TV guide for favorite shows, following a recipe to make dinner— providing an opportunity for researchers and caregivers to observe their ideas about literacy. In these ways, children learn how to "connect life with literacy" (Morrow, 2008).

A Thirty-Million Word Gap: The Hart-Risely Study

In order to develop a robust vocabulary and extensive conceptual knowledge, children need rich language input that enables them to understand what objects are called and how they work or go together. Hart and Risely (1999) conducted a seminal longitudinal research study that examined parents' talk to children among families from varying socioeconomic levels—identified as welfare, working-class, and professional families—and discovered dramatic differences in the richness of words children from lower socioeconomic levels heard compared to those heard by their peers from middle or more affluent levels.

Their study of parent-child talk in families in Kansas was conducted over a decade. A team of researchers recorded one full hour of every word spoken at home between parent and child in 42 families over a three-year period, with children from seven months to 36 months of age, and then spent six additional years typing, coding, and analyzing 30,000 pages of transcripts.

Follow-up studies by Hart and Risely of those same children at age nine showed that there was a very tight link between the academic

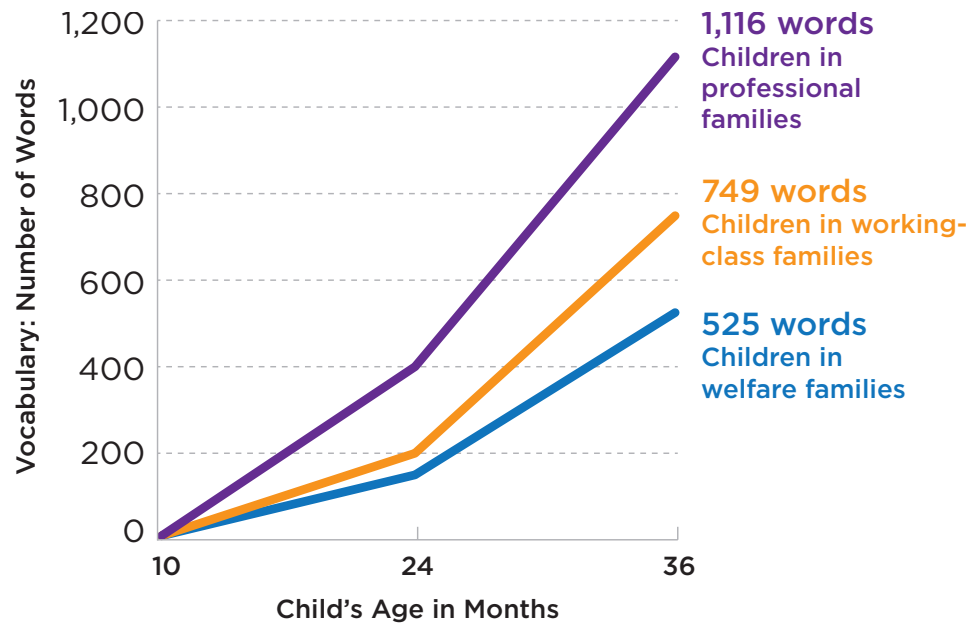
The Common Core on Oral Language

The Common Core State Standards address the role of oral language in relation to written language development:

"Oral language development precedes and is the foundation for written language development; in other words, oral language is primary and written language builds on it. Children's oral language competence is strongly predictive of their facility in learning to read and write: listening and speaking vocabulary and even mastery of syntax set boundaries as to what children can read and understand no matter how well they can decode."

For children in preschool and the early grades, receptive and expressive abilities do not develop simultaneously or at the same pace: receptive language generally precedes expressive language. Children need to be able to understand words before they can produce and use them (2010).

The Achievement Gap Starts Early



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success of a child and the number of words the child's parents spoke to the child at age three. We can summarize their three key findings:

1. The variation in children's IQs and language abilities is relative to the amount parents speak to their children.
2. Children's academic successes at ages nine and ten are attributable to the amount of talk they hear from birth to age three.
3. Parents of advanced children talk significantly more to their children than do parents of children who are not as advanced.

“**The single most important condition for literacy learning is the presence of mentors who are joyfully literate people.**”

—Shirley Brice Heath, sociolinguist, 1986

In general, children from the professional families heard over 1,500 more words each hour, on average, than children from economically challenged families (616 vs. 2,153 words each hour). Ultimately, children who are immersed in rich language may hear 30 million more words by the time they enter school than children who don't. What's more, they are more likely to hear language used to accentuate the positive and encourage, rather than discouraging language used to reprimand and criticize. And these essential differences are reflected in the test scores administered to the same children when they are nine and ten years old.

One word of caution: we want to avoid making assumptions about children's language or literacy level based simply on their families' professional, educational, or economic status. Children arrive at

school with a wide variety of experiences. The goal of an educator is to get to know each child as a unique learner and work with the family to promote literacy both at home and at school.

Fostering Oral Language

- Immerse children in rich language—both oral and written—beginning at birth. We need to speak directly to our young children every day; researchers suggest that for optimal development, infants and toddlers should hear 30,000 words per day.
- Children learn not only from language you address to them, but also from language they overhear around them (Au, 2002). Linguistic interaction has additional positive effects on linguistic development.
- Although exposure to language is essential, explicit “drilling” is not needed for the normally developing child. Parents don’t so much “teach” the child, as the child discovers language. As one linguist explains, children are “spontaneous apprentices” (Miller, 1977); they latch themselves to their caregivers and follow and learn from their every move, including absorbing the almost innumerable ways in which adults use language, both oral and written.
- Read to children, encourage them to ask questions and to talk about what is read, and surround them with language through literacy; reading aloud to children is tremendously important, but reading and *discussing the reading* is even more potent and beneficial (Whitehurst et al., 1988).

Three Dimensions of Oral Language Experience Linked to Later Literacy Success

By David Dickinsen and Patton Tabors

- 1. Exposure to varied vocabulary.** Knowing the “right word” is vital if one is to communicate information clearly. We have long known that large vocabularies are instrumental to reading success; a robust vocabulary also signals that children are building the content knowledge about the world that is so critical to later reading.
- 2. Opportunities to be part of conversations that use extended discourse.** Extended discourse is talk that requires participants to develop understandings beyond the here and now and that requires the speaker to use multiple sentences to build a linguistic structure, such as in explanations, narratives, or pretend talk.
- 3. Home and classroom environments that are cognitively and linguistically stimulating.** Children are most likely to experience conversations that include comprehensible and interesting extended discourse, and that are rich with vocabulary, when their parents are able to obtain and read good books and when their teachers provide classrooms with a curriculum that is varied and stimulating (2002).

Young Children Can Easily Learn More Than One Language

Young children are very good at learning more than one language—and not only can they learn multiple languages, but also they learn *when* to speak and write each language and *to whom*. And the earlier they learn the second or third or fourth language, the more likely they are to achieve native-like proficiency. What's more, children who are learning English as a second language are more likely to become readers and writers of English when they are already familiar with the vocabulary and concepts in their primary language (Wong Fillmore, 1991).

“**Language does not need to be only accepted. It needs to be explored, expanded, celebrated.**”

—Alma Flor Ada, *Fostering the Home-School Connection*, 1995

Linguistic Geniuses

Spend time with a little one who is learning to speak, and in no time you'll hear language that surprises and delights with its unique *inventiveness* as children invent their way into conventional language. Children do, indeed, say the darnedest things, but what they say is always systematic and rule-governed, and it reflects their brilliant hypotheses about “how language works” and how they can use it to accomplish what they're trying to do—whether they are learning one language or more.

- One of the greatest feats of human development is language learning. Children are well equipped, beginning at birth, to accomplish the complex task of learning language (Lust, 2006).
- Learning a second language does not cause language confusion, language delay, or cognitive deficit, which have been concerns in the past. In fact, according to studies at the Cornell Language Acquisition Lab (CLAL), children who learn a second language can maintain attention despite outside stimuli better than children who know only one language (Lust, 2006).
- Becoming bilingual creates cognitive advantages, which contribute to a child's future academic success (Espinosa, 2008; Lust, 2006).
- Research demonstrates that bilingualism enhances the development of executive attention and facilitates superior performance in bilinguals as compared to monolingual counterparts on an executive-attention test (Yang & Lust, 2009).
- Children will learn two languages best if they know that both languages are important and valued. Children also need to have lots of fun and meaningful opportunities to talk, read, and pretend-write in both languages (Freeman & Freeman, 2007). Learning a second language also means learning a second culture and way of being.
- A sound foundation in the first language—spoken and written—creates the best conditions for the acquisition of a second

language. Research demonstrates the importance of literacy in the first language for students' full development of proficiency in the language of instruction, subsequent academic success, and high levels of self-confidence. What's more, academic and linguistic skills transfer to the second language, even when the target language has a dissimilar writing system from the first language (Cummins, 1991; Goldenberg, 2011).

Speaking Two or More Languages Is Better Than One

What's the best way to support bilingualism—or even multilingualism, which is quite often the norm in other countries where children have easy access to multiple languages that serve real purposes in their daily lives? Consider the following:

- Surround children with more than one language through conversations and social groups using different languages—the earlier the better.
- Maintain home (heritage) language when children are learning a second language outside the home.
- Expose children to multilingual settings and give them plenty of opportunities to play with children who speak the target (second or third) language.
- Provide fun and interactive language-learning environments (e.g., books, songs and music, dance, and film) in both languages, and, if possible, with children of similar age. Promote reading and storytelling in multiple languages.

English Learners in the United States

Linguist Claude Goldenberg (2011) provides these telling statistics:

- There are more than 5 million ELs or 1 in 9 public school students, K-12.
- This is a 150% increase since 1990 during a period when the overall school population has increased by only about 20%.
- Even states not typically associated with ELs, such as South Carolina, North Carolina, Tennessee, Georgia, and Indiana, have seen an increase of 400% or more during 1993-94 and 2003-04.
- ELs in the United States speak more than 400 languages collectively.
- Most ELs were born in the United States; less than one-quarter of elementary students and less than one-half of secondary students are foreign-born.
- The majority of ELs (80%) are Spanish-speaking, from Central America and Mexico.
- Speakers of Asian languages such as Vietnamese, Hmong, Chinese, Korean, Khmer, and Hindi, comprise 8% of the EL population.

- Maintain a positive attitude toward all languages and cultures children learn. Children will take risks in their new language only if they feel it's safe to make mistakes. Keep stress levels low by keeping language demands appropriate: difficult enough to promote learning, but easy enough to be achievable (Einhorn, 2002).

The Read-Aloud Plus Text Talk Maximizes Learning

The interactive read-aloud, or the read-aloud plus text talk, is based on three essential understandings. The read-aloud together with text talk:

1. Encourages the child to become an active learner during book reading
2. Provides feedback that models more sophisticated language
3. Challenges the child's knowledge and skills by raising the complexity of the conversation to a level just above the child's current ability (De Temple & Snow, 2003; Lane & Wright, 2007)

The Critical Importance of the Interactive Read-Aloud

- Researchers maintain that the most valuable aspect of the read-aloud is the experience it gives young children with decontextualized language, requiring them to make sense of ideas that are about something beyond the here and now (Beck & McKeown, 2001).
- The interactive read-aloud results in student gains in vocabulary (Beck & McKeown, 2001), comprehension strategies and story schema (Pinnell & Fountas, 2011), and concept development (Wasik & Bond, 2001). However, simply inviting children to talk during interactive read-alouds doesn't provide the needed learning boost. It's the *close reading*—and deep, intentional conversation about the text—that makes the difference.
- Wasik and Bond (2001) investigated the learning potential of the interactive read-aloud. Their study, which included 121 four-year-old children from low-income families, 94% of whom were African American, engaged the treatment group in interactive book reading and book reading extension activities. The interactive read-aloud included defining vocabulary words, providing opportunities for children to use words from the books, asking open-ended questions, and giving children the chance to talk and be heard.

“**By employing research-based methods for reading aloud—such as the interactive read-aloud—teachers and parents can maximize the effectiveness of reading aloud, thereby enhancing the reading experiences and the achievement of students.**”

—Holly Lane and Tyran Wright, 2007

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- Children come to school well able to think and reason about the world in situations that make sense to them. What they have to learn to do in school is to think and reason in “disembedded contexts” ... to use symbols systems and deal with representations of the world.

Control teachers received all the books treatment teachers did. These books were read as often in control classrooms as they were in treatment classrooms; however, control teachers did not receive the interactive read-aloud training that treatment teachers did.

For the first four weeks of the intervention, an experienced teacher modeled the shared book reading techniques in each treatment classroom and assisted with reading extension activities. For the next 11 weeks, treatment teachers ran the program on their own. At post-test, treatment classes scored significantly higher on the Peabody Picture Vocabulary-III than did control classes. Treatment classes also scored significantly higher on their knowledge of target vocabulary words. Classroom observations found that teachers in the treatment group were significantly and substantially more likely than control teachers to use the target words during related activities.

- Programs that promote early at-home reading foster positive attitudes toward reading aloud, increase the frequency and regularity of parent-child reading, and stimulate vocabulary growth. What’s more, early literacy programs are most effective for children at greatest risk of developing reading problems, including children from low-income households and Latino children in particular, whose parents want to help but may not always have the resources or know-how to do so (Juel, 2006). Early readers have a head start in their academic career that will last a lifetime, while poor readers often fall behind and may never catch up. Connie Juel (2006) found that if a child is a poor reader at the end of first grade, there is a .88 probability that that child would still be a poor reader at the end of fourth grade.
- We’ve long believed that the parent-child read-aloud plays a pivotal role in helping youngsters learn to read. An intergenerational reading study provides the research to back that belief; indeed, the research demonstrates that the read-aloud is not only effective, but also the strength of the relation between parent-preschooler reading and outcome measures “is as strong a predictor of reading achievement as is phonemic awareness (Bus, van Ijzendoorn, & Pellegrini, 1995).
- The available data on the read-aloud supports intergenerational literacy programs intended to stimulate parent-preschooler reading as an effective way to better prepare young children



for beginning reading instruction. The results also support the hypothesis that book reading particularly affects acquisition of the *written language register* or *storybook language*—syntax and vocabulary (*once upon a time*, for example) that’s unique to the written language used in children’s literature. Children acquire this language as they hear stories read aloud—which eventually aids in reading comprehension. Furthermore, this meta-analysis shows that the effect of book reading is not restricted to children of preschool age. However, the effect seems to become smaller as soon as children become conventional readers and are able to read on their own. The data makes clear that the parent-preschooler reading is a necessary preparation for beginning reading instruction at school (Bus, van Ijzendoorn, & Pellegrini, 1995).

“**Children who have strong oral-language skills often have strong reading and writing skills. In contrast, children with oral-language problems are at a higher risk of reading and writing difficulties.**”

—Hollis Scarborough, 2001

Read Aloud and Talk About It

We can begin to read to babies on the day they are born. Set aside time every day for “reading time”; read aloud to children, and as they grow, ask them to read aloud to you, or encourage independent reading—and discuss with your children the different materials that you are reading and why; the books you are reading to them; and the books that they are reading on their own. As Jairels (2009) notes, when children are read three stories a day, by the time they enter first grade they will have heard more than 6,000 books.

- Create a “reading culture” inside the home, including cozy places to nestle with books; reading routines throughout the day; and dinner table discussions about what family members are reading—including all the different print materials that pour into the house every day. Talk with children about their interests, plan trips to the library, and find books that will support and extend what interests your children most. Make books their first go-to resource.
- As they move closer to kindergarten entry, some children will begin to track print and most will do so by the middle of kindergarten year. The real challenge to the beginning reader is not memorizing a word in isolation, but reading it within the continuous text while keeping meaning in mind.

A Robust Vocabulary Promotes Early Reading

The best way to help our children become readers is to read to them. As young children hear stories read aloud, they learn new words, begin to figure out how letters and sounds are related

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(phonological awareness), and learn how words are conceptually related (Biemiller & Boote, 2006). And furthermore, a robust vocabulary predicts reading comprehension; in other words, the larger a child's vocabulary, the stronger her reading comprehension (Duke & Carlisle, 2011).

- The linkages between early exposure to reading aloud and enhanced language development and between preschool vocabulary and later literacy are well documented (Whitehurst & Lonigan, 1998). The majority of vocabulary growth occurs not as a result of direct instruction, but as the result of reading voluminously—hearing stories read aloud and reading independently (Krashen, 2004; Hargrave & Senechal, 2000).
- “Vocabulary instruction ... must be more than merely identifying or labeling words. Rather, it should be about helping children to build word meaning and the ideas that these words represent. By understanding words and their connections to concepts and facts, children develop skills that will help in comprehending text” (Neuman & Dwyer, 2009).
- Vocabulary growth is heavily influenced by the amount and variety of material children read. And conversely, reading comprehension is influenced by the depth and breadth of the reader's vocabulary (Tannenbaum, Torgeson, & Wagner, 2006).
- Biemiller and Boote (2006) have demonstrated that in order to get the biggest instructional bang for the buck, children not only need to hear engaging read-alouds, but also, they need explicit explanations of the words. It's this combination—word explanations plus read-aloud—that leads to the greatest vocabulary growth.

These findings also confirm that the more words young children know, the more sensitive they are to the ways in which words are put together, and the more likely they are to become successful readers. Ultimately, the enhanced vocabulary that young children acquire through the read-aloud aids their ability to crack open texts themselves as independent readers (Biemiller and Boote, 2006).



The ABCs and Code-Related Skills Are Essential

“Children who know alphabet letters and the sounds they represent, who can hear sounds in words, and who can understand how print works are far more likely to be good readers in kindergarten and in the grades that follow.”

—Susan Bennett-Armistead, Nell Duke, & Annie Moses, 2005

Paratore, Cassano, and Schickedanz (2011) explain that “three areas of early literacy skills knowledge provide important foundations for the development of code-related skills: print awareness, phonological awareness, and alphabet knowledge.” Researchers Linnea Ehri and Theresa Roberts (2006) maintain that the ABCs are pivotal. They suggest that in order for young children to succeed in reading in English, they must understand our alphabetic writing system and, specifically, acquire phonemic awareness and letter knowledge.

The Building Blocks of Early Literacy

In order to understand their spoken language, children must be able to hear and distinguish the sounds that make up their language.

Almost without exception, all children raised in a normal linguistic environment can distinguish between different speech sounds in their native language. Almost all native English speakers then can hear the difference between similar English words such as *pop* and *plop*.

- Phonemes are the smallest sounds in speech—for example, *no* consists of two phonemes: /n/ and /o/. Phonemic awareness (PA) refers to the ability to manipulate phonemes in spoken words. So if we ask a child what letter she hears at the beginning of *stop*, at some point, she should be able to say /s/. And then if we take away the *s*, the child with PA will know we’re left with *top* (Ehri & Roberts, 2006). This kind of awareness develops as children are immersed in print, hear many, many stories read aloud, and participate in rich talk about letters and the sounds they represent. But Ehri and Roberts also believe young children need instruction as well as immersion. “To write messages the children must come to terms with the distinctive features of letters which make any one letter different from all the others” (Clay, 2005). Letter and word learning are essential in the process of becoming literate (Pinnell & Fountas, 2011).



- Numerous longitudinal studies have identified critical early foundational skills that predict success in both beginning and later reading achievement—these include both code-related and oral language abilities. In 2002, Storch and Whitehurst assessed more than 600 Head Start preschoolers using a range of instruments, including the Developmental Skills Checklist, to determine the children’s alphabet knowledge, phonological awareness, and print concepts, as well as their story retelling and emergent writing, including name and message writing. Code-related skills predicted decoding skill in beginning readers. Code-related skills and oral language skills were highly related in the preschool years (48% variance), somewhat related in kindergarten (less than 10% variance), and unrelated in first and second grade (that is, reading ability—word recognition accuracy—in grades one and two was not directly related to language abilities).
- The National Institute of Child Health and Human Development (NICHD) Study (2000) examined results from more than 1,000 children from birth to third grade and found that code-related skills were the best predictors of early reading, while language-based skills were more influential by third grade. Code-related skills predict the largest amount of variance in early grade reading skill, while oral vocabulary contributes to reading comprehension in Grades three and four.
- Name recognition correlates with age (.86) for three-year-olds, while for four and five-year-olds, name production correlates with alphabet knowledge (.55 to .77), word recognition (.49 to .62), and concept of word (.39 to .66). Personal “name letters” represent approximately 40% of children’s random-letter written characters. The children’s literacy skills reflect reciprocal relationships; for example, automaticity in name writing paralleled control of the alphabet, recognition of several sight words, and emerging tracking ability. The ability to control the writing of one’s own name transfers to other aspects of young children’s literacy development in positive ways (Bloodgood, 1999).

Learning Sound-Letter Relationships

- Typically, children first access the ABCs through their own written names. For little ones, there are no more magical letters in the world than those in their own personal names and the names of their family members and friends, so that may be the best place to begin identifying the names of the letters and pointing out the sounds each letter makes (Pinnell & Fountas, 2011).
- Combined with many opportunities to manipulate letters (felt and magnetic letters, letter cards, etc.) and talk about letters and the sounds they make, this sort of name exploration helps children understand the ABCs and their foundational role in supporting early reading.

- Children need to see letters in many different contexts—and they need specific teaching to learn how to look at letters, even though they also absorb information about the alphabet and how it works as they attempt to read and write on their own. There are dozens and dozens of fun and engaging letter, sound, and word games and books that play with speech sounds through rhyme, alliteration, and phonemic manipulation (Pinnell & Fountas, 2011).
- Children need to learn the *concepts of letter* and *word* and understand how they are different; they also benefit from specific instruction on words and from practice in locating words within connected print (Pinnell & Fountas, 2011).

Reading and Writing Offer Mutual Support

Reading and writing are complex developmental language processes involving the orchestration and integration of a wide range of understandings, strategies, skills, and attitudes. Both processes should develop as a natural extension of the child’s need to communicate and make sense of his or her varied experiences. A reader needs to make sense of what the writer is communicating through the text and the writer needs to make sure that his or her message is clear and understood by the reader. Children should understand the responsibilities of an author; that is, others will be reading their writing. So all young writers must write with their potential readers in mind.

Reading and Writing Are Mutually Beneficial

- Beginning readers and writers need to learn to use many sources of information including memory, experience, pictures, and their knowledge of language—sound/symbol connections, or phonics (Blevins, 2011). Listening, speaking, reading, and writing are four interrelated language processes; all are mutually reinforcing and called into play as the young child approaches print. Successful readers bring to the reading task a wealth of background experience and both linguistic and conceptual knowledge.
- While specific early reading skills such as letter naming, letter-sound correspondences, phonemic segmentation (the ability to break up a word into its component sounds, e.g., /ka-at/), and the acquisition of a sight vocabulary correlate with learning to read successfully, there are other more basic aspects of early literacy. For example, young readers must come to understand the nature of “decontextualized language”—that is, the language they encounter in books is often used to talk about ideas, or about events distant in time or place (Duke & Carlisle, 2011).

“**Reading and writing are interdependent processes that are essential to each other and mutually beneficial.**”

—S.L. Holt and JoAnne Vacca, 1984

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- Children must also understand that print carries meaning and the illustrations in picture books help illuminate the meaning. Children also learn that books are sources of pleasure and information, which builds the motivation they need to do the hard work of mastering letters and sounds. Developing a love of reading begins early in life, as children are exposed to print in early, affectionate, and positive settings.
- Research shows clearly that even very young children engage in literacy when they use “print to represent their ideas and to interact with other people” (Dyson, 1992). Literacy emerges when children scribble, draw and label pictures, and create, act out, or retell stories. During these times they are engaged in literate behaviors that are essential parts of the language development process.

The Early Authors Program

In the Early Authors Program (EAP), a 12-month early literacy intervention based primarily in diverse, high-poverty communities, young children, aged three to five, learn to be writers and readers by creating their own self-authored storybook texts, supported by sensitive guidance of adults. The initial project, based in Dade-Miami County, Florida, involved a group of 57 teachers at 32 childcare centers, 1,179 children and 800 families, many of whom included Spanish-speaking parents who had little formal education and limited access to printed materials. Together, using the bookmaking equipment in each EAP classroom, the children and teachers authored a total of 3,286 books, which emphasized their personal stories and family photographs. Many of the books featured the child as the protagonist. The books were stored in classroom and family libraries.

The EAP children showed greater gains than control children in language and literacy development according to all measures: expressive and receptive language development (children became more verbal, formed fuller sentences, and saw the connections between writing and reading), teacher reports of children’s interactions with the books, and development of literacy skills. Perhaps most importantly, they grew in self-esteem. “Seeing their own books displayed along with the other books legitimizes their own creations, takes away the mystery of books and literate activities, and shows children how they can be literate as well” (Ada & Campoy, 2003; Bernhard et al., 2008).



Early Readers Reap Benefits That Last a Lifetime

Even very young children acquire complex understandings about print and how it works when they have been involved with innumerable print encounters and interactions—noticing print in the environment, talking with adults about the functional print they use every day (e.g., the print on kitchen appliances, on food products, on electronic gadgets, and so on), listening to and discussing stories that are read aloud to them from a favorite storybook, playing with language through riddles, rhymes, songs, and so forth.

And as they engage with print, young children are not only learning about written language and how it works, but they are also learning about the world and how it works. The conceptual knowledge they acquire and the background knowledge they build is cumulative and invaluable.



“Children exposed to lots of books during their early childhood will have an easier time learning to read than those who are not.”

—Dr. Henry Bernstein,
Harvard Medical School, 2010

Unfortunately, surveys show that fewer than 50% of parents with children younger than three years read to their children every day (Bernstein, 2010), and, too often, those children who need the read-aloud the most go without. There’s much work needed to get the word out.

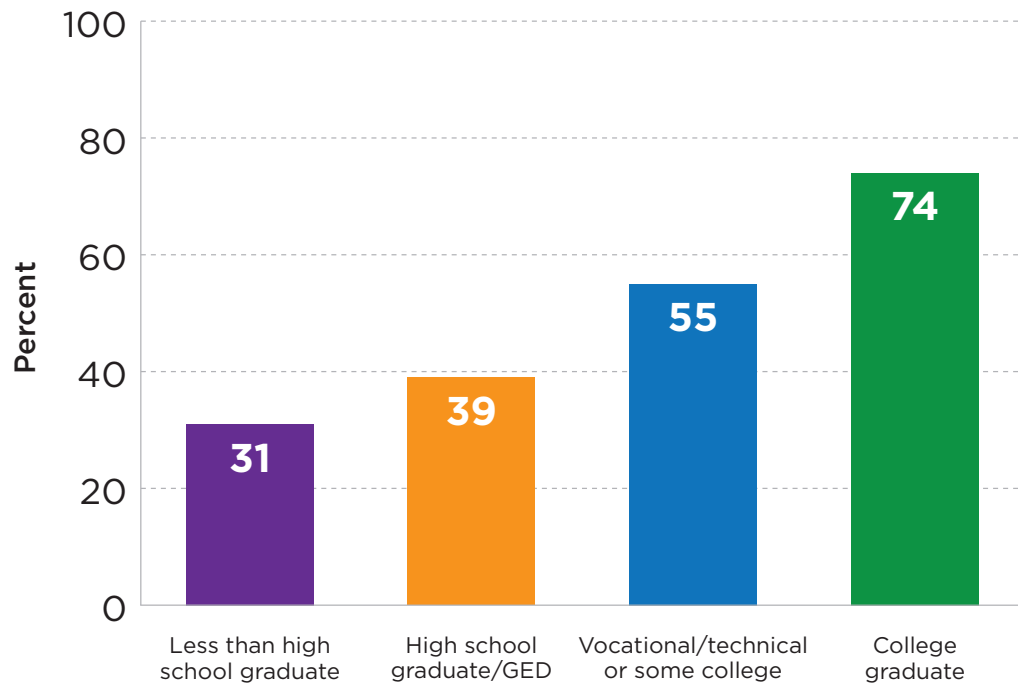
Why does it matter so much? Justine (2005) explains, summarizing and dividing the research on early literacy development into two primary strands:

1. Individual differences among children in early literacy skills are *meaningful* and *predictive*: early differences contribute significantly to long-term outcomes in children’s reading achievement.
2. The prevalence of reading difficulties is more likely to be influenced through *prevention* rather than remediation, since once a particular child shows a reading delay in elementary school, the odds suggest the delay is likely to persist and limit his or her overall academic success.

Print Immersion

As Dr. Robert Needlman writes (2006), “Pediatricians understand that experience shapes synaptic development, providing a biological rationale for efforts to enhance the early learning environment.” What’s more, given the windows of opportunity when the neural systems underlying auditory perceptions, attention, and language are developing rapidly during the first five years of life (Dickinson, McCabe, & Essex, 2006), educators should feel a sense of urgency as experiences with books and reading aloud strengthen these systems, a boost that provides lasting benefits.

Percentage of Children Ages 3-5¹ Who Were Read to Every Day in the Last Week by a Family Member, by Mother's Education Level (2007)



¹Estimates are based on children who have yet to enter kindergarten.

Source: Federal Interagency Forum on Child and Family Statistics. America's Children: Key National Indicators of Well-Being, 2009.

Table ED1. Federal Interagency Forum on Child and Family Statistics, Washington, DC: U.S. Government Printing Office. Based on National Household Education Survey analysis.

Children who know print through encounters and interactions with print expect:

- To use knowledge of the ways books are organized to predict likely events and outcomes
- To know how sentences “work”— they have a capital letter at the beginning, a period at the end, etc.
- To use their understanding of syntax and meaning to predict sentence patterns and words
- To use their knowledge of letters and sounds to pronounce words
- To make sense, have logical connections, reflect unity of meaning, relate to children's experiences and interests
- To use natural or predictable language or interesting repeating patterns
- To use pictures to support or extend the text (Pinnell & Fountas, 2011; Juel, 2006)

Third Grade Nonreaders Are More Likely to Drop Out of High School

As stated in the Kids Count report, *Early Warning! Why Reading by the End of Third Grade Matters*, “Reading proficiently by the end of third grade (as measured by NAEP at the beginning of fourth grade) can be a make-or-break benchmark in a child’s educational development” (2010). In a similar vein, researchers Catherine Snow et al. maintain that “academic success, as defined by high school graduation, can be predicted with reasonable accuracy by knowing someone’s reading skill at the end of third grade. A person who is not at least a modestly skilled reader by that time is unlikely to graduate from high school” (1998).

Failure to achieve reading proficiency by third grade *disproportionately* affects children from high poverty households and communities—typically, the result of differences in resources and opportunities for healthy physical, linguistic, cognitive, social, emotional, and behavioral development. Children who must live with the challenges of poverty have a higher incidence of health problems that interfere with learning, and, what’s more, they often lack the early interactions that foster linguistic development, such as rich verbal interactions with their families (Hart & Risley, 2003), access to books, and the daily read-aloud.

In his study, “Double Jeopardy: How Third-Grade Reading Skills and Poverty Influence High School Graduation,” researcher Donald Hernandez notes that third grade is a pivotal point: “We teach reading for the first three grades and then after that children are not so much learning to read but using their reading skills to learn other topics. In that sense if you haven’t succeeded by third grade it’s more difficult to [remediate] than it would have been if you started before then.” Drawing from the data of the Bureau of Labor Statistics’ National Longitudinal Study of Youth, Dr. Hernandez examined the reading scores and later graduation rates of 3,975 students born between 1979 and 1989. His findings, as reported in the Annie B. Casey Report, are convincing:

He found 16 percent overall did not have a diploma by age 19, but students who struggled with reading in early elementary school grew up to comprise 88 percent of those who did not receive a diploma. That made low reading skills an even stronger predictor than spending at least a year in poverty, which affected 70 percent of the students who didn’t graduate. In fact, 89 percent of students in poverty who did read on level by third grade graduated on time, statistically no different from the students who never experienced poverty but did struggle with reading early on. By contrast, more than one in four poor, struggling readers did not graduate, compared with only 2 percent of good readers from wealthier backgrounds. Mr. Hernandez found that gaps in graduation rates among white, black, and Hispanic students closed once poverty and reading proficiency were taken



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into account. 'If they are proficient in reading, they basically have the same rate of graduation, above 90 percent,' Mr. Hernandez said. 'If they did not reach proficiency, that's when you see these big gaps emerge' (2011).

The best way to prevent failure to thrive as a proficient reader is to marshal the support of all involved: families, schools, and communities. When all work together to surround children with meaningful literacy experiences and closely monitor their progress, children are more likely to enter the third grade pivotal point as proficient readers, thus making it more likely they'll continue to excel in school and graduate from high school. Early literacy, in other words, is the gift that keeps on giving, providing benefits that extend well beyond the primary grades and carry students all the way through a successful school career to on-time high school graduation.

Early Literacy Promotes Academic Achievement

Learn about the action steps, as outlined by the Department of Education *Handbook on Family and Community Engagement* (2011) that will help you work successfully with your families and communities: developing class and school demographic profiles, parenting contracts, parent vision statements, and parent informant literacy groups; providing school materials in students' home languages; presenting parent-student-teacher workshops on school reading and literacy; building relationships with child-care providers in the community; and expanding parent education services to include child-care providers. Understand that home-school communication and cooperation are lifelines that will improve the academic achievement of all students regardless of race or economic status, cultural or linguistic background.

In Sum

A "complex web of factors" (Dickinson & Neuman, 2006) including social, environmental, cognitive, linguistic, and emotional forces are at play in early literacy development. Children who know their letter names (and often their letter sounds, phonemic segmentation, concepts of print, and how to write their names) are almost always the same children who are immersed in rich language and literacy at home. These children also typically understand that literacy is a tool that they can use to accomplish multiple purposes as they start to venture out into the world. These are lessons young children begin to learn from the day of birth—lessons that they develop, extend, and refine during the first five years before school, a critical window of opportunity. As Dickinson, McCabe, and Essex (2006) note, "We are making hopeful advances in our endeavor to enrich the preschool experiences of children, but far more must be done to improve their classrooms and communities if we are to take full advantage of the window of educational opportunity provided us by biology." 🧑

“**Make every moment count—whether you’re feeding children, transitioning them or diapering them, you are in a literacy-learning moment. Don’t waste it!**”

—Susan Armistead-Bennett,
Nell Duke, Annie Moses,
Beyond the Bedtime Story, 2005