

A Wealth of Words: Lessons from Research

“Almost all children learn to talk, suggesting that language acquisition is a relatively resilient process, although they do not all learn to talk well, suggesting that language acquisition includes some more fragile elements.” (From *Neurons to Neighborhoods*,¹ p. 126)

Language Milestones Birth to Three	
In utero	Tuning in to language, voice, & cadence
0-6 months	Back & forth, “serve & return” interaction – attunement with parents & caregivers
4-12 months	Babbling
6-15 months	Joint attention, imitation, & communicative babbles & gestures
10-18 months	Symbolic gestures; “expressive jargon,” & first words
15 -24 months	Putting words together; word spurt
18-30 months	Verbal language (or ASL) becomes the child’s dominant mode of communication

“Meaningful Differences”² in Early Language Experience

- Babies who hear more words and take more “conversational” turns develop richer language as toddlers.³
- Parents who talk more with babies tend to also talk more with toddlers. Habits persist.
- For most children, expressive vocabulary “takes off” between 16 and 24 months. But it takes off much faster for children who have heard more words.
- Hart and Risley reported a language input gap of 32 million words heard in the first four years between the children in the lowest and highest groups. At 3, children in the highest group had more than twice the vocabulary of children in the lowest.
- Children with larger vocabularies heard
- “We found that the large differences in the amount of parent talk that infants and toddlers received, particularly the amount of non-business conversation and commentary, was powerfully related to large differences in ... toddlers’ vocabulary growth and to ... measures of their intellectual achievement at age 3 ... and later at age 9 ... **Parental talkativeness to babies accounted for all the correlation that existed between socio-economic status (SES)—and/or race—and the verbal intellectual accomplishments of these American children.**” (Risley & Hart, 2006)⁴
- Non-business talk, or “play talk” (chit-chat, conversation, singing, humor, story-telling, word play) is richer in vocabulary, description, varied verb forms, relatively rare words, open-ended questions, information, affirmations and encouragements, and responsiveness to the child.
- The children who heard more words and developed richer vocabularies heard many more affirmations (encouraging words) and fewer prohibitions, more “yeses” than “no’s.” Positive discipline matters.

¹ National Research Council and Institute of Medicine (2000). *From neurons to neighborhoods: The science of early childhood development*. Committee on Integrating the Science of Early Childhood Development. Jack P. Shonkoff and Deborah A. Phillips, eds. Board on Children, Youth, and Families, Commission on Behavioral and Social Sciences and Education. Washington, DC: National Academy Press

² Hart, B. and Risley, T. (1995). *Meaningful differences in the everyday experiences of young American children*. Baltimore, MD: Paul H. Brookes Publishing.

³ Gilkerson, J. & Richards, J. (2009). *The power of talk, 2nd Edition: Impact of adult talk, conversational turns, and TV during the critical 0-4 years of child development*. LENA Research Foundation.

⁴ Risley, T., & Hart, B. (2006). Promoting early language development. In N.F. Watt, C. Ayoub, R.H. Bradley, J.E. Puma, & W.A. LeBoeuf (Eds.), *The crisis in youth mental health: Critical issues and effective programs* (Vol. 4, pp. 83–88). Westport, CT: Praeger.

Toddlers' language takes off faster when...

- Parents pair Baby Sign with spoken words⁵
- Family language input is richer – mother's and father's both contribute⁶
- Child care quality is higher⁷
- Child is read to more frequently⁸
- Child has more opportunities to participate in back-and-forth conversation⁹
- TV is off most or all of the time – before children have mastered language well enough to use it as their primary means of communication. ¹⁰ Background TV distracts from play, interaction, and “play talk.”¹¹

Early vocabulary differences compound because children who understand and use more words and are more effective storytellers and communicators get more opportunities for learning new words in conversation with peers and adults, as well as from books.¹²

Preschool-aged children build richer vocabulary and language when...

- Family talk goes beyond the here and now (“decontextualized language”) and includes longer and more complex conversations (“extended discourse”)
- Parents engage children in talking about books, making inferences & connections
- Parents use more sophisticated vocabulary in conversations and play with children
- Parents model and encourage reading and writing
- Teachers use “cognitively engaging talk,” more sophisticated words and complex language, a content-oriented curriculum, and a setting rich in words, books, writing materials, and opportunities to imitate reading and writing¹³

⁵ Goodwyn, S.W., Acredolo, L.P., & Brown, C. (2000). Impact of symbolic gesturing on early language development. *Journal of Nonverbal Behavior*, 24, 81–103.

⁶ Pancsofar, N., & Vernon-Feagans, L. (2006). Mother and father language input to young children: Contributions to later language development. *Journal of Applied Developmental Psychology*, 27(6), 571–587.

⁷ NICHD Early Child Care Research Network (Eds.). (2005). *Child care and development: Results from the NICHD study of early child care and youth development*. New York: Guilford Press.

⁸ Mendelsohn, A., L. N. Mogilner, B. P. Dreyer, J. A. Forman, S. C. Weinstein, M. Broderick, K. J. Cheng, T. Magloire, T. Moore, and C. Napier (2001). The impact of a clinic-based literacy intervention on language development in inner-city preschool children. *Pediatrics* 2001; 107:1 130-134; Raikes, H.H., Raikes, H.A., Pan, B.A., Luze, G., Tamis-LeMonda, C.S., Rodriguez, E.T., et al. (2006). Mother-child book reading in low-income families: Correlates and outcomes during the first three years of life. *Child Development*, 77(4), 924–953.

⁹ Oller, K. (2010). All-day recordings to investigate vocabulary development: A case study of a trilingual toddler. *Communication Disorders Quarterly* August 2010 vol. 31 no. 4, 213-222; Gilkerson & Richards, op. cit.

¹⁰ American Academy of Pediatrics (2011). Policy statement: Media use by children younger than 2 years. *PEDIATRICS* Vol. 128 No. 5 November 1, 2011 pp. 1040 -1045

(doi: 10.1542/peds.2011-1753); Gilkerson, & Richards, op cit.; Zimmerman, F., & Christakis, D. (2007). Associations between media viewing and language development in children under age 2 years. *Pediatrics*, 151(4), 364-368.

¹¹ Kirkorian, H.L., Pempek, T.A., Murphy, L.A., Schmidt, M.E., & Anderson, D.R. (2009). The impact of background TV on parent-child interaction. *Child Development*, 80, 1350-1359.

¹² Bardige, B. (2009). *Talk to me, baby!: How you can support young children's language development*. Baltimore, MD: Paul H. Brookes Publishing.

¹³ Dickinson, D.K., & Tabors, P.O. (2001). *Beginning literacy with language: Young children learning at home and school*. Baltimore: Paul H. Brookes Publishing Co.

Vocabulary at kindergarten entry predicts 10th grade reading comprehension.¹⁴

Two through six year olds build richer vocabulary, storytelling, and reading skills when...

- Adults engage them in “elaborated reminiscing,” adding detail to stories of past events¹⁵
- They engage in sophisticated pretend play with peers, with adult support and expansion¹⁶
- Early education and care settings emphasize child-initiated exploration and play, small group projects and conversations, and teacher talk that supports learning in extended conversation.¹⁷
- Children watch age-appropriate, research-informed educational TV shows¹⁸ or informational or story videos that spark extended conversation with adults

“Part of vocabulary acquisition is learning words that are going to be important in school, the words that second-grade teachers think when a child uses them, ‘Oh, wow, that was a good word; that’s a smart kid.’ ... The difference between knowing 3,000 words and knowing 15,000 words when you arrive at kindergarten is enormous. The child who knows 3,000 words knows words like *shoes* and *milk* and *jump*. The child who knows 15,000 words knows words like *choice* and *possibility* – words that index a more complex array of possibilities for dealing with the world.”

--Catherine Snow, in *Mind in the Making*,¹⁹ p. 128

Children hearing two languages:

- Go through the same developmental steps in both languages
 - Learn the sound and grammatical patterns of each language
 - May shift languages in different settings or mix languages, even in the same sentence
 - Develop total vocabularies that are just as large as those of children learning only one
- Children with delays or disabilities show the same patterns as monolingual speakers, in both languages.²⁰

Strengths of Dual language Learners

- Superior executive function and cognitive flexibility²¹
- Connection to family and heritage²²
- Ability to build upon first language conceptual and linguistic knowledge and communication skill to learn a new language²³
- Ability to use print concepts & decoding skills to decode a new language, even if the alphabets are different²⁴
- Ability to speak and become literate in both languages – as long as learning continues in both

14 Porche, M., P.O. Tabors, S.R. Harris, & C. Snow (2007). *Is literacy enough? Pathways to academic success for adolescents*. Baltimore, MD: Paul H. Brookes Publishing.

15 Engel, S. (1997). The emergence of storytelling during the first three years. *ZERO TO THREE*, 17, 1-9; Fivush, R., Haden, C.A., & Reese, E. (2006). Elaborating on elaborations: Role of maternal reminiscing style in cognitive and socioemotional development. *Child Development*, 77(6), 1568–1588.

16 Barnett, W. S., Jung, K., Yarosz, D., Thomas, J., Hornbeck, A., Stechuk, R., & Burns, S. M. Educational effects of the Tools of the Mind curriculum: A randomized trial. *Early Childhood Research Quarterly*, 23(3), 2008; Bergen, D. (2002). The role of pretend play in children's cognitive development. *Early Childhood Research & Practice*, Vol 4, No 1.

17 Montie, J.E., Xiang, Z., & Schweinhart, L. (2007). The role of preschool experience in children's development: Longitudinal findings from 10 countries. Ypsilanti, MI: High/Scope Press.

18 Corporation for Public Broadcasting (2011). Findings from Ready to Learn, 2005-2010. <http://www.cpb.org/rtl/FindingsFromReadyToLearn2005-2010.pdf>

19 Galinsky, E. (2010). *Mind in the making: The seven essential life skills every child needs*. NY: William Morrow Paperbacks.

20 Genesee, F. (2008). Early dual language learning. *ZERO TO THREE*, 29(1), September, 2008, 17-23.

21 Bialystok, E. & Viswanatha, M. (2009). Components of executive control with advantages for bilingual children in two cultures. *Cognition*, Volume 112, Issue 3, September 2009, Pages 494-500

22 Wong Fillmore, M. (1991). When learning a second language means losing the first. *Early Childhood Research Quarterly*, 6, 323-346.

23 August, D., Calderón M., & Carlo M. (2002). *The transfer of skills from Spanish to English: A study of young learners*. Washington, DC: Center for Applied Linguistics.

24 Wang, Min, Park, Yoonjung, & Lee, Kyoung Rang. Korean-English biliteracy acquisition: Cross-language phonological and orthographic transfer. *Journal of Educational Psychology*, Vol 98(1), Feb 2006, 148-158.

Benefits of reading with young children (whether you read all the words, make up the story, or engage the child in interacting with the pictures)

- Children who live in print-rich environments and who are read to during the first years of life are much more likely to learn to read on schedule.
- Reading aloud to young children is not only one of the best activities to stimulate language and cognitive skills; it also builds motivation, curiosity, and memory.
- Early language skills, the foundation for reading ability and school readiness, are based primarily on language exposure - resulting from parents and other adults talking to young children.
- Research shows that the more words parents use when speaking to an 8-month-old infant, the greater the size of their child's vocabulary at age 3. The landmark Hart-Risley study on language development documented that children from low-income families hear as many as 30 million fewer words than their more affluent peers before the age of 4.
- Books contain many words that children are unlikely to encounter frequently in spoken language. Children's books actually contain 50% more rare words than primetime television or even college students' conversations.
- The nurturing and one-on-one attention from parents during reading aloud encourages children to form a positive association with books and reading later in life.
- Reading aloud is a proven technique to help children cope during times of stress or tragedy.
-- Reach Out and Read: <http://www.reachoutandread.org/impact/importance.aspx>

“It is the talk that surrounds the story book reading that gives it power.”²⁵

--National Association for the Education of Young Children & International Reading Association, p. 46

“The key to literacy is language – fostered in caring relationships through back-and-forth conversations that build on children’s natural curiosity and desire to connect.”

-- Betty Bardige

“The poetry and prose of the best children’s books enter our minds when we are young and sing back to us all our lives.”²⁶

-- Vivian Gussin Paley, *The Boy Who Would Be A Helicopter*, p. 44

All parents can build their children’s vocabularies – even if they don’t think that their own vocabularies are rich. Talking, telling stories, explaining, describing and comparing, asking and answering questions, exploring interests in depth, singing songs, sharing humor, using positive discipline techniques, and talking about books – these daily activities make a difference. Visits to the library, work sites, stores, museums, religious services and celebrations, and exploration of neighborhood and nature are likely to introduce additional rare words. Parents’ and caregivers’ vocabularies are likely to be richer in their home languages. Effective programs that have capitalized on these insights have dramatically reduced or eliminated the “vocabulary gap.”²⁷

²⁵ National Association for the Education of Young Children, & International Reading Association. (1998). Learning to read and write: Developmentally appropriate practices for young children. A joint position statement of the International Reading Association and the National Association for the Education of Young Children. In *Young Children*, July 1998, 53(4): 30-46.

²⁶ Paley, V. G. (1991). *The Boy Who Would Be A Helicopter*. Cambridge, MA: Harvard University Press.

²⁷ Bardige, B. (2005). *At a loss for words: How America is falling our children and what we can do about it*. Philadelphia, PA: Temple University Press.