

# Behind the Numbers



For a look at more data and discussion, go to page 18.

## Kindergarten Readiness: Can Thirty Million Words Close the Gap?

If you put “thirty,” “million,” “words,” “Hart,” and “Risley” into an internet search engine you’ll find over 50,000 links. If the average number of words on each of those Web pages is 600, that suggests at least 30,000,000 words may have already been written about the famous study by Betty Hart and Todd Risley.<sup>1</sup>

Why such an explosion of interest? Perhaps Hart and Risley captured the urgency in the title of their follow-up report, “The Early Catastrophe: The 30 Million Word Gap by Age 3.”<sup>2</sup> The researchers had been testing ways to intervene in the lives of young children in order to prevent the negative effects of poverty on academic growth. They grew increasingly frustrated as their results, initially promising, failed to be sustained as the children grew.

Hart and Risley were particularly interested in the children’s acquisition of everyday language. They were constantly struck by the discrepancy between the high rate of vocabulary growth among the children of fellow professors and the low rate among children from an inner city, poor neighborhood. Hart and Risley wondered whether what the children were exposed to at home affected vocabulary size.

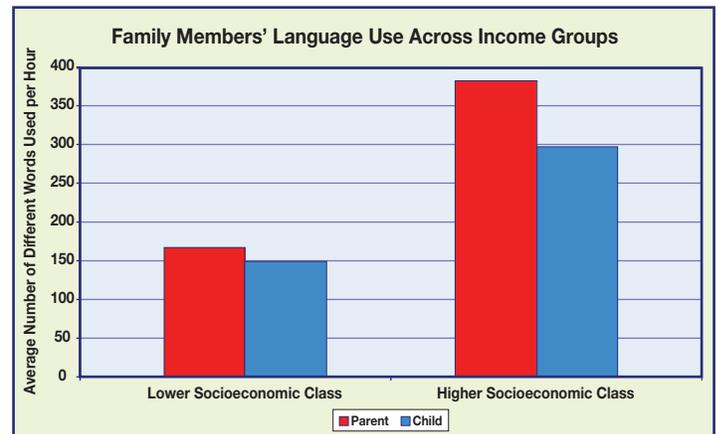
They decided to examine what was happening in the early lives of these children. Was there something measurably different going on in upper socioeconomic class families compared to lower socioeconomic class families? The researchers recorded and analyzed hours of conversation in different homes for 2½ years, starting when the children were seven to nine months old and ending when they were three years old.

Hart and Risley were – to use their own description – “astonished” at some of the differences in vocabulary across income groups. (See Figure 1.) Based on the average number of words that children in each income group were hearing per hour as they approached three years of age, Hart and Risley predicted how many words each will have heard by the time he or she was four years old. (See Figure 2.)

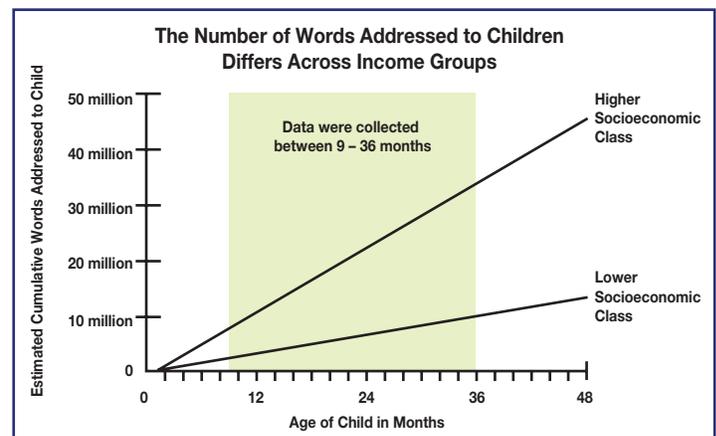
In addition to observing the *quantity* of language, Hart and Risley made judgments on the *quality* of language, e.g., sentence structure, the use of questions and affirmations, etc. This aspect of their work has led to criticism of a cultural bias by implying that the *quality* of language in the home of a poor family is inherently inferior,<sup>3</sup> and has led to thoughtful debate among developmental linguists.

Nevertheless, the *quantitative* aspect of Hart and Risley’s work – the “30 million word gap” – remains a significant

finding that symbolizes for many how important it is to stimulate young brains. Early childhood professionals speak frequently of the rapid brain growth that occurs before a child enters kindergarten and of the importance of exposing children to enriching and stimulating environments during this time. Efforts to boost children’s vocabularies are a vital part of helping them get ready for kindergarten.



**Figure 1.** Parents and children in a higher socioeconomic class use, on average, twice as many words per hour as parents and children in a lower socioeconomic class. Word use by parents is the average during the period when the child was 13 – 36 months old; word use by children is the average when the child was 33 – 36 months old. Source: Hart and Risley (2003).



**Figure 2.** By the time children in a higher socioeconomic class are four years old they will have had 30 million more words addressed to them than children from a lower socioeconomic class. Source: Hart and Risley (2003).

<sup>1</sup> Hart, B. and Risley, T.R. (1995). *Meaningful differences in the everyday experiences of young American children*. Baltimore, MD: Brookes.

<sup>2</sup> Hart, B. and Risley, T.R. (2003). The Early Catastrophe: The 30 Million Word Gap by Age 3. *American Educator*, 27(1), 4-9.

<sup>3</sup> See, for example, Dudley-Marling, C. (2007). Return of the Deficit. *Journal of Educational Controversy*, 2(1) accessed on Jan. 24, 2010 at <http://www.wce.wvu.edu/Resources/CEP/eJournal/v002n001/a004.shtml>.