Quality of Words, Not Quantity, Is Crucial to Language Skills, Study Finds

By Douglas Quenqua
New York Times
October 16, 2014

It has been nearly 20 years since a landmark education study found that by age 3, children from low-income families have heard 30 million fewer words than more affluent children, putting them at an educational disadvantage before they even began school. The findings led to increased calls for publicly funded prekindergarten programs and dozens of campaigns urging parents to get chatty with their children.

Now, a growing body of research is challenging the notion that merely exposing poor children to more language is enough to overcome the deficits they face. The quality of the communication between children and their parents and caregivers, the researchers say, is of much greater importance than the number of words a child hears.

A study presented on Thursday at a White House conference on "bridging the word gap" found that among 2-year-olds from low-income families, quality interactions involving words — the use of shared symbols ("Look, a dog!"); rituals ("Want a bottle after your bath?"); and conversational fluency ("Yes, that is a bus!") — were a far better predictor of language skills at age 3 than any other factor, including the quantity of words a child heard.

"It's not just about shoving words in," said Kathryn Hirsh-Pasek, a professor of psychology at Temple University and lead author of the study. "It's about having these fluid conversations around shared rituals and objects, like pretending to have morning coffee together or using the banana as a phone. That is the stuff from which language is made."

In a related finding, published in April, researchers who observed 11- and 14-month-old children in their homes found that the prevalence of one-on-one interactions and frequent use of parentese — the slow, high-pitched voice commonly used for talking to babies — were reliable predictors of language ability at age 2. The total number of words had no correlation with future ability.

The idea that quality of communication matters when it comes to teaching children language is hardly new.

"Our field has been pretty consistent in recognizing all along that there has to be quality and quantity," said Dr. Hirsh-Pasek. Even the 1995 study that introduced the notion of the 30-million-word gap, conducted by the University of Kansas psychologists Betty Hart and Todd R. Risley, found that parental tone, responsiveness and use of symbols affected a child's I.Q. and vocabulary.

But this year's studies are the first time researchers have compared the impact of word quantity with quality of communication. The findings, said Dr. Patricia K. Kuhl, a director of the Institute for Learning and Brain Sciences at the University of Washington and an author of the April study, suggest that advocates and educators should reconsider rallying cries like "close the word gap," that may oversimplify the challenges facing poor children.

"I worry about these messages acting as though what parents ought to focus on is a word count, as though they need a Fitbit for words," she said, referring to the wearable devices that tally steps.

The use of the word "gap" may be counterproductive, said Dr. Hirsh-Pasek. "When we talk about gaps, our natural tendency is to talk about filling them," she said. "So we talk about the amount as if we're putting words inside the empty head of a child."

"But in the same way that you can't drop the shingles and the siding for a house on the ground, you need to have the foundation there first if language isn't going to just roll off the child's back and become background noise."

For the new study, Dr. Hirsh-Pasek and colleagues selected 60 low-income 3-year-olds with varying degrees of language proficiency from the National Institute of Child Health and Human Development

Study of Early Child Care and Youth Development, a long-term, wide-ranging study of 1,300 children from birth to age 15. Other researchers reviewed video of those children at age 2 in play sessions with their parents. The researchers watching the video were unaware of how the children would later develop.

"We were able to ask whether those interactions held any clues accounting for the differences we saw at age 3," said Dr. Hirsh-Pasek, who was an author of the long-term study. "It turned out we were able to account for a whole lot of the variability later on."

Quality of communication accounted for 27 percent of the variation in expressive language skills one year later, she said. The results were not significantly changed when the researchers controlled for the parents' educational level.

But those who urge parents to talk to their children more say that increased quantity of language inevitably leads to better quality.

"It's not that one mother is saying 'dog' and the other is saying 'dog, dog, dog,' " said Ann Fernald, a psychologist at Stanford. "When you learn to talk more, you tend to speak in more diverse ways and elaborate more, and that helps the child's cognitive development.

Dr. Ferald, author of a 2013 study that found a vocabulary gap between affluent and poor children as young as 18 months, is a scientific adviser to Providence Talks, a program in Providence, R.I., that outfits children with devices that record the number of words they hear each day.

"People emphasize the quantity because that's what you can measure," she said. But she noted that the program also sent counselors into children's homes to more closely evaluate their exposure to language and teach parents how best to communicate with children.

Still, Ann O'Leary, director of Too Small to Fail, a joint effort of the nonprofit Next Generation and the Bill, Hillary & Chelsea Clinton Foundation that focuses on closing the word gap, acknowledged that messages to parents could do more to emphasize quality.

"When we're doing these campaigns to close the word gap, they do capture the imagination, they do get people understanding that we do need to do a lot more talking," she said. "But we also need to be more mindful that part of what we need to do is model what that talking looks like."