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## Pointing can boost toddlers' language skills, say researchers

Hand signals give babies a head start and can improve chances at school

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Ian Sample in Chicago  
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By learning to gesture, toddlers prompt parents to name objects, boosting the child's chance of remembering the word. Photograph: Design Pics Inc/Rex

Encouraging toddlers to use hand gestures can improve their vocabulary and boost their chances of doing well at school a few years later, according to new research.

Pointing and other hand signals seem to give babies a head start in learning language skills, possibly by helping them to make connections between words and the objects in the world around them, psychologists found.

The research highlights how interacting with toddlers can have a marked impact on their brain development, even before they have started talking, the researchers said.

Children are known to perform better at school if they have a large vocabulary when they start, but precisely why some are able to master more words than others before reaching school age has been hard to pin down. The parents' education plays a major role, because more-educated parents use a wider range of words, but psychologists suspected other factors were also important.

Meredith Rowe and Susan Goldin-Meadow, from the University of Chicago, worked with 50 young families from different socio-economic backgrounds to investigate why some toddlers seemed to grasp language more quickly than others.

They filmed 14-month-old children during an hour and a half of play with their parents and noted down the words and gestures that were used. Later, when the children were aged four and a half, they were given a vocabulary test to assess their language skills.

The video sessions showed that better-educated parents used gestures more often, and

as a result, their children learned to use hand signals themselves in a variety of ways. On average, toddlers from well-educated families used gestures to convey 24 different meanings during a 90-minute play session. Toddlers from less-educated families used gestures to convey only 13.

"At 14 months of age, children are in the very early stages of productive language, they are saying very few words," said Rowe. "We didn't see any differences in their spoken language, but we did see a difference in their gestures and that's what we think is so striking."

The study, published in the journal *Science*, goes on to find that once in school, the children who gestured most as toddlers scored on average 26% higher in the language test than the other children.

By learning to gesture, toddlers pick up new words more quickly because it prompts parents to name the object the gesture is directed at. For example, if a child points at a doll, the parent might repeat the word "doll" a few times, boosting the child's chances of remembering the word.

Writing in the journal, the psychologists suggest that teaching babies to gesture early on could help to boost their performance at school.

"Whether or not early gesture plays a direct or indirect role in word learning, it is clear that gesturing partially accounts for the relation between socio-economic status and later vocabulary skill," they write. "The next step is to explore whether increases in gesturing lead to vocabulary gains in early childhood."

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