

# Kids Learn Words Best by Working out Meaning

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Not a 'blicket' in the bunch. Meredith Brinster uses nonsense words to determine how toddlers acquire and comprehend unfamiliar vocabulary. Photo by Will Kirk / HIPS

Toddlers learn new words more easily when they figure out the words' meaning for themselves, research by a 22-year-old Johns Hopkins undergraduate from Medford, N.J., suggests.

Meredith Brinster's original research, suggesting that learning words by inference is more powerful for 3-year-olds than just being told their meaning, is intriguing and may have important implications for the future of teaching, her faculty adviser said.

"One of the things that is particularly exciting about the work Meredith

is doing is its potential to change the way we think about education and learning," said Justin Halberda, assistant professor of psychological and brain sciences at Johns Hopkins.

Brinster's work was funded by a Johns Hopkins Provost's Undergraduate Research Award. One of about 45 PURA winners this academic year, Brinster, a senior, will present the results of her research at an awards ceremony held at Johns Hopkins on March 8. A graduate of Shawnee Regional High School in Medford, she will also present at a meeting of the Society for Research in Child Development, to be held in Boston March 29 to April 1.

Interested in how very young children learn to attach the names of objects to the objects themselves, Brinster designed a study to measure which word-learning strategy was more effective: direct instruction, in which an adult "directly" points to and names an unfamiliar object, or inference, in which toddlers use reason (such as process of elimination) to mentally "fasten" an unfamiliar word to an unfamiliar object. Based on previous research, Brinster posited that the young children would learn words more quickly via inference.

According to her preliminary results, she was correct.

"We found that our hypothesis was true, and that inference is better than instruction," said Brinster, a psychology major.

Over the summer, Brinster worked with 100 children, ages 36 to 42 months, who came to the Laboratory for Child Development on the Johns Hopkins Homewood campus. One trial tested how well children learned words through inference, and the other how well they learned through direct instruction.

During the inference trial, Brinster showed the youngsters both familiar

and strange objects (for instance, a ball and a plumber's "T" connector). After saying a nonsense word ("blicket," for instance), she would ask them to either point to or grab hold of the "matching" item. Since a ball is a "ball," the children might conclude that the unfamiliar object — the "T" — was the "blicket".

In the direct instruction trial, the child was simply shown an unfamiliar item and heard the nonsense word.

A short while later, Brinster would invite the children to play with typical, familiar toys in the Lab's waiting area. During the relaxed play period, she would bring out a "blicket" or a "dax" that the children had seen during the trial, and ask the youngsters a question.

"For instance, I might say, 'I think one of these is called 'blicket,' but I can't remember which one it is. Can you help me? Do you know which one is the 'blicket?'" Brinster said. "This way, I could ascertain how well they learned the word. Once we analyzed all of our data, it was clear that inference worked best."

Halberda, Brinster's mentor, called his student's results "important."

"While we know that active engagement is the key to rapid learning," he said, "Meredith's result suggesting that knowledge gained via a child's own inferences is sometimes more powerful and longer lasting than knowledge gained through instruction may have powerful repercussions for how we teach new material. These implications have yet to be explored, but this first result is tantalizing."

Source: Johns Hopkins University

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