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ONE KEY TO TEACHING TODDLERS WITH TV: TRICKERY

New research suggests why kids under 3 don't learn from video

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BALTIMORE—To get toddlers to learn new information from educational television shows or DVDs, don't bribe them or bully them — just trick them. One way to teach young children with video is to convince them that what they see on the screen is as real as anything they encounter in person, new research presented March 12 at the International Conference on Infant Studies shows. Through an elaborate experimental deception, researchers were able to erase much of the "video deficit" in learning that has previously been observed in children under age 3.

"Under normal circumstances, television and videos may be so captivatingly interesting to young children that they have difficulty learning from these media," said psychologist Sarah Roseberry of Temple University in Philadelphia. In the experiment, overcoming that obstacle hinged on youngsters believing that researchers could turn stuffed animals into real animals by putting the toys inside a "magic Sesame Machine," Roseberry said. She and her colleagues devised a colorful contraption made from decorations, tubing and a television screen that played videos of "Sesame Street" characters teaching children the meanings of real and nonsense words.

Almost no studies have tried to unravel reasons for the video deficit, remarked psychologist Patricia Kuhl of the University of Washington in Seattle. Makers of educational videos for young children and funders of developmental research at the National Science Foundation are watching initial results such as these with special interest, Kuhl said.

Roseberry's study built on recent evidence from another team showing that 2-year-olds in a lab room generally can't retrieve an object after seeing a video clip of an adult hiding the object in the same room — unless they think they're looking through a window at the adult.

In the new study, 20 toddlers ages 30 to 35 months and 20 kids ages 36 to 42 months watched 10-minute videos in which "Sesame Street" characters taught them about two novel verbs, one real and the other made up. Only the older group demonstrated substantial word learning afterward. In one example, a large majority of older, but not younger, kids learned the word "bouncing" from a video. When later shown a picture of a woman holding a child in her lap, older kids correctly looked at the woman when asked to find "bouncing," in expectation of seeing her bounce the child. Younger kids often looked elsewhere in the picture.

In a second experiment, 20 children age 24 to 29 months and another 20 kids age 30 to 35 months watched videos on the magic Sesame Machine. Beforehand, children watched a researcher place a stuffed animal inside a yellow tube on one side of the machine, as if putting it inside the television console. A video showing the stuffed animal then began to play and the researcher explained the machine's magical properties. Once the video concluded, the

researcher removed a real version of the stuffed animal from a tube on the other side of the console.

After watching the same educational videos in the magic machine, younger but not older toddlers showed evidence of having learned most words from the program. That reflects the fact that younger children told their parents that they believed in the magic machine, whereas older children usually weren't tricked, Roseberry noted.

Toddlers find it too taxing mentally to think about and learn words presented on videos or television shows, she proposed.

The video deficit for word learning can also be substantially counteracted by exposing toddlers to recorded social interactions rather than mere demonstrations, psychologist Georgene Troseth of Vanderbilt University in Nashville reported at the same session. In a study she directed, 2-year-olds learned new words equally well when a live experimenter directly demonstrated word meanings to them and when they observed a videotaped experimenter explaining word meanings to another adult.

"That's a surprising finding, and it underscores how important social engagement is for early language learning," Kuhl said.

Citations & References:

Roseberry, S., K. Hirsh-Pasek, R. Golinkoff. 2010. Honey, We Shrunk the Sesame Characters! Going Beyond Symbols to Increase Language Learning. Presented at the International Conference on Infant Studies, Baltimore, March 12.

Georgene L. Troseth, Gabrielle Strouse, Kate O'Doherty, Brian N. Verdine. 2010. Do Toddlers Learn Words From Video? Presented at the International Conference on Infant Studies, Baltimore, March 12.