

Toddler brains resist learning from screens, even video chat

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Little ones may be fascinated by the cartoon character or person on TV asking them questions and pausing for a response. But science shows that children under the age of 30 months don't tend to learn from such

encounters.

Unlike [older children](#), infants and toddlers need responsive, face-to-face encounters with real, live humans in order to learn new information. But what about video chat? Can infants and toddlers learn from a person on a screen who, unlike a TV show or app, can call them by name and interact with them in real time?

Vanderbilt University researcher Georgene Troseth made that question the focus of her latest study. Troseth is an associate professor of psychology at Vanderbilt Peabody College of education and [human development](#), and a leader in the field of early childhood development.

Video chat is fun, but is it an effective teaching tool?

For this study, Troseth and her team studied 176 toddlers in two age groups (24 months and 30 months) to see under which conditions they would best learn the name of a novel object. The children in the study did not have prior experience with video chat.

The researchers selected a funny shaped object that they chose to name a "modi." The toddlers were charged with learning the name of the object and putting it in a bin.

They were studied under these four conditions:

- Responsive live: the person making the request was present and engaged with the child;
- Unresponsive video: the speaker on the screen looked at the camera and smiled at scripted times;
- Unresponsive live: although present, the speaker behaved as she did on the unresponsive video; and
- Responsive video: a speaker on closed-circuit video engaged with

the child, just as they might on video chat.

The researchers found that the toddlers in both age groups reliably learned the toy's name in the responsive live condition, and older toddlers learned in the unresponsive live condition.

But neither group learned in either of the video conditions.

Troseth says that's because to toddlers, a flat image of a person on a screen isn't "real," so their brains tell them what they are seeing isn't personally relevant and not something they can learn from.

Even though video chat includes more communicative social cues and interaction than a nonresponsive video, the medium still was not sufficient to support learning in the study.

How do toddlers learn best?

The best way for infants and toddlers to learn, says Troseth, is through positive interactions with an adult, whether playing a board game, reading a book or having screen time. When adults use dialogic questioning—asking the child questions and inviting them to interject their own thoughts, feelings and ideas—that's when learning is most likely to happen, she has found.

The results of the study were not surprising to the researchers. These findings support Troseth's past research examining the impact of children's videos and [television shows](#) on [toddler](#) learning.

Despite these results, Troseth emphasizes that [video](#) chat may hold some promise for teaching toddlers.

"Video [chat](#) is unique in that it allows [children](#) and the on-screen adult to

coordinate their attention to share focus and interact in [real time](#)," she says. "So, it is possible that toddlers could learn to respond to and learn from [video chat](#) over time—but only if they have an adult present to support that learning."

Provided by Vanderbilt University

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