# Study finds infants can learn to communicate from videos

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Credit: Anna Langova/public domain

Children under two years old can learn certain communication skills from a video, such as how to use signs in sign language, and perform similarly in tests when compared to babies taught by their parents, according to a new paper in the journal *Child Development*.

Led by researchers at Emory University, the study is the first to isolate

the effects of purportedly educational commercial videos on infant learning. The results contradict previous research, which showed little evidence of learning from video in children under the age of two, or less robust learning than more traditional forms of parent instruction.

Emory's study found that babies were consistently able to understand the signs and pick out a photo of the corresponding object after watching an instructional video for 15 minutes, four times a week for three weeks. Babies who watched the video performed just as well in tests as babies who had been taught signs by their parents under similar conditions (15 minutes of instruction, four times per week for three weeks) but without a video.

Importantly, after a week without instruction, babies in all experimental groups were still able to produce the signs—a much more difficult task than simply recognizing them. However, babies in parent-supported groups were able to produce a greater number of signs overall.

## Isolating the effect of video

The study was able to isolate the effect of commercial video instruction by focusing on a skill to which children under two would not be exposed in other areas of their lives, says Shoshana Dayanim, a lead researcher on the project, post doctoral researcher in psychology at Emory when the study was conducted and now on the faculty at Keiser University. Other skills, such as general vocabulary building, are things infants experience on a daily basis, so learning effects for these abilities are difficult to attribute to video instruction, Dayanim adds.

Four groups of parents and children participated in the study: (video with parent, video only, parent instruction only, control). Parents were instructed not to sign to their children or provide sign instruction of any kind outside of the video or parent instruction learning session.

"This is the first controlled study to show that babies as young as 15 months can learn communicative skills from commercial videos just as well as from parents," Dayanim says. "They could recognize a novel photo of an object and label it using signs that they had only been exposed to from the video."

## Babies signed similarly

The study, funded by the National Institute of Health's Eunice Kennedy Shriver National Institute of Child Health and Human Development, included a group of 92 15-month-old children from the metro Atlanta area and lasted for four weeks. Babies, many who could not yet speak, were shown an infant signing instructional video pieced together from several different commercially available videos.

"We didn't want this to be a test of a specific product such as Baby Einstein," says Laura Namy, professor of psychology at Emory and a researcher on the study. "The content was deliberately varied, so we can't speak to the effectiveness of any given video or company."

Babies were shown the 15-minute video four times each week. They were then brought to the Emory University Child Study Center and shown photos they'd never seen before of common objects (including a shoe, hat, airplane, fish and cookie) for which they'd learned a sign in the video and asked to select the picture that matched a sign produced by the researcher.

Control group babies who had neither seen the video nor received parental instruction could not produce or select a sign to label the photo. Babies who had watched the video performed similarly to babies taught by parents. A group of babies who watched the video with their parents performed on tests similarly to babies who had watched the video unsupervised.

When the babies were tested after a week without parent instruction or video watching, the infants not only recognized which photos went with which signs, but also were able to produce the signs themselves from memory. Infants who had been taught by their parents retained more of the signs during testing than babies who had watched the video.

## So should babies watch videos?

The researchers caution that the results should not be seen as an endorsement of video watching for children under two, which has been recommended against by the American Academy of Pediatrics.

"We can't speak to the short-term or long-term cognitive effects of video exposure for infants overall—only the potential for instruction," Namy says. "There are many caveats to our research: the nature of the learning material matters and a lot may depend on the learning context and the formal features of the video."

The research does, however, demonstrate that video can be an effective teaching tool for children under two under the right circumstances.

"The key takeaway is that babies can learn from commercial videos—at least signs," Dayanim says. "The majority of parents continue to expose their babies to video. It will be important to determine the conditions under which videos do and do not support infant learning."

Provided by Emory University