

## Let the children talk (to themselves) -- it helps memory

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Boys Town, Neb. - It happens all the time. The moment you enter the kitchen, you've completely forgotten what you wanted. You muse aloud, "why did I come in here?" and talk yourself through the sequence of events that led to your arrival. Adults commonly use these self-talk strategies as a memory device.

In 1966, Flavell, Beach, and Chinksy showed 60 children --5, 7, and 10-year-olds -sequences of pictures. After each sequence, the researchers laid out the pictures and asked the child to point to the pictures in order. Meanwhile, another researcher discretely watched the child's mouth for subtle movements that indicate the child was talking to herself. In the original study, only the 7- and 10-year-olds spontaneously took advantage of self-talk (rehearsal) to help remember the lists.

In 2017 Dr. Emily Elliott of Louisiana State University, Dr. Candice Morey of Cardiff University and Dr. Angela AuBuchon of Boys Town National Research Hospital® noticed that results from 1966 didn't coincide with recently published research.

Drs. Elliott, Morey, and AuBuchon decided to find out if the inconsistency could be explained by differing methods or the passage of time, so they proposed to lead a multi-site registered replication report of the 1966 study. After their proposal was accepted by the journal Advances in Methods and Practices in Psychology Science (AMPPS), they made all of their materials – from the study protocol and experimental program to the data analysis code – available on Open Science Framework (OSF). They invited researchers around the world to conduct the experiment in their own labs and contribute data. Ultimately, the replication included 977 children from 17 labs.

Careful attention was paid to preserving key elements of the original study. However, the replication was modernized to reflect current research practices. For example, pictures were presented on a computer to standardize the experiment across the labs. Children were video recorded, when possible, to assure that lip movements were reliably monitored. The new study also included a subset of 6-year-olds to better assess the presumed transition from non-verbal memorization in younger children to rehearsal in older children.

The replication upheld the core of Flavell and colleagues 1966 finding – fewer 5- and 6year-olds than 7- and 10-year-olds used self-talk. Importantly, though, many more 5- and 6- year-olds used self-talk than would have been predicted by the original 1966 study. With the expanded study size, 75% of 5-year-olds verbalized as a memory tool at least part of the time, versus 10% in the Flavell study.

The updated research also suggests that increased verbalization led to increased memory span performance in the participating children regardless of the participants' age. The benefits of pointing and verbalizing in these memory exercises were particularly prominent in 6-year-olds, who were added to the replication study and were not present in Flavell's original study. So when the kids want to talk to themselves, let them!

Click here (https://journals.sagepub.com/doi/full/10.1177/25152459211018187

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