

YOUNG CHILDREN MAY REMEMBER MORE THAN WE THINK

Can young children remember things as well as older children? A new study questions long-standing assumptions on memory development.

Traditionally, it has been thought that older children are better at remembering things because the part of the brain involved in metamemory is more developed. Metamemory refers to awareness, monitoring and regulation of the contents of memory.

A new study suggests that while neural maturation is a factor, the main constraint for young children is that they don't yet have enough general knowledge to create rich representations, or mental pictures, of their experience. Because young children see the world in broad terms (e.g. cheese and apples are both foods, whereas older children will distinguish between dairy and fruit), their representations are poorer. Researchers found that when these representations are equal in quality, young children remember just as much as older children.

It began with an experiment in which children were presented with a series of pictures of toys, animals and vehicles, shown in rooms of houses on posterboards. The children were given two tasks: a recognition task, where they were shown the original items and new items, and asked which items they had previously seen; and a source monitoring task, where they were asked questions to determine how much they had encoded (remembered) about each situation.

As expected, older children recognized more of the pictures. Yet when it came to the items that children said they didn't remember seeing, younger children remembered more of the contextual attributes (e.g. room location or colour of posterboard) than older children.

"This goes against the traditional view of memory development," says Stanka A. Fitneva, a researcher in the Department of Psychology at Queen's University, and one of the study's authors. "The classical account is that children will claim to know something that they don't know. We found the opposite: they claimed not to know, when in fact they did know."

The researchers hypothesized that young children do this because of the structure of

their representations. "They remember the context, but have not integrated the context with the item," Fitneva explains. This was confirmed in another experiment that showed that for younger children, remembering just one or two attributes was generally not sufficient for them to remember the item itself, as compared to older children.

Researchers also examined the issue of suggestibility — the notion that children may internalize something that has been suggested and then think that it is true or has actually happened. Children were given an illustrated story of a trip to the zoo, and then asked questions about items that had appeared (or not) in the story. Children were also asked to mark if they remembered an item, or didn't exactly remember the item but thought it had been there. "Remember/know judgments indicate an ability to monitor the contents of memory, i.e. metamemory," Fitneva explains.

To assess children's representations of the items in the story, children were presented with three items and asked which one didn't belong. This told researchers how similar (close together) or distinct (far apart) children perceived the items to be. "What we found was that when younger and older children's representations of the items were similar, their remember/know accuracy was the same," Fitneva points out.

Nicholas Bala, a law professor at Queen's University specializing in child witness issues, says these findings offer promising avenues for training investigators, police officers and social workers who interview children. "This research suggests that there are ways children can be questioned that will enhance their reliability."

Usually, child witnesses are testifying about situations of physical or sexual abuse (either as victim or witness). "Often, the defence strategy is not 'you're lying,' but 'you must have been influenced by suggestions from the person who questioned you,'" says Bala. "This new work qualifies issues of suggestibility and makes clear that children can be very reliable witnesses."

From a learning perspective, Fitneva sees this paper as empowering. "For as long as research on memory has existed, the importance of neurological development has been stressed. But if memory is controlled by biological processes, there's little we can do about it," she says. "We argue that no: we can do a lot to improve how children learn and remember." 🦋

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