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Learning Other Languages Boosts Memory

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Speaking more than one language boosts brain power as well as working memory, according to new research by the University of Granada and the University of York in Toronto.

The study, published in the *Journal of Experimental Child Psychology*, revealed that bilingual children are better able to retain, process, and learn new information — the hallmarks of working memory — than those who speak only one language.

Working memory is tied to intelligence and a wide range of mental activities, such as calculation and reading comprehension.

"Other studies have demonstrated that bilingual children are better at planning and cognitive control (i.e. tasks involving ignoring irrelevant information or requiring a dominant response)," said lead researcher Julia Morales Castillo, of the Department of Experimental Psychology at the University of Granada. "But, to date, there was no evidence on the influence of bilingualism on the working memory."

To fill that gap, Morales Castillo and her colleagues performed a series of memory tests on bilingual children, between 5 and 7 years of age, and compared them to those who spoke only one language.

The results showed bilingual children performed better on working memory tasks and, in fact, the more complex the assignments the better their performance.

"The results of this study suggest that bilingualism does not only improve the working memory in an isolated way, but they affect the global development of executive functions, especially when they have to interact with each other," Morales Castillo said.

She explained that working memory generally develops in the first years of life, but it can be trained and improved with experience. It generally involves the storage and processing of information over short periods of time and is a key component of "executive functions" associated with planning and self-regulation of human behavior.

Morales Castillo noted other studies have found children who engage in other mental activities such as music education have better cognitive abilities.

"However, we cannot determine to what extent children perform these activities due to other factors such as talent or personal interest," she add. "[But] the children in our study were bilingual because of family reasons rather than because of an interest in languages."

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