



Language Learning Improves Brain Function

A comprehensive study published last fall by the European Commission reveals evidence from diverse sources that learning a second language almost certainly brings benefits that go beyond the ability to use the language itself.

The report, entitled *The Contribution of Multilingualism to Creativity*, includes a statistical analysis of key research on the impact that knowing and using more than one language has on thinking and the brain. It argues that there is a dovetailing of results between studies conducted over the last 40 years, including recent findings from the neurosciences. The research, often involving the use of neuro-imaging techniques, is helping to reveal more clearly what happens in the brain when a person learns or uses more than one language.

The study reports six major benefits of language learning that were found in the research:

- **Enhanced Learning Capacity** (i.e., “The Learning Mind”): Knowledge of languages can lead to superior memory function, especially short-term “working” memory. This enables the brain to hold information for longer while the thinking processes are engaged. Enhanced memory can have a profound impact on cognitive function. One implication is the positive impact of languages on the learning of other educational subjects.
- **Enhanced Mental Flexibility** (i.e., “The Flexible Mind”): Seeing the world through “different lenses” opens up pathways to more options and avenues for thought. Knowledge of more than one language leads to added value which goes beyond language itself, and which enables the development of special multi-competences. This may be significant for developing certain types of skills in thinking and communication (digital literacy) for the Information Age.
- **Enhanced Problem-Solving Capability** (i.e., “The Problem-Solving Mind”): Superior performance in problem solving that is cognitively demanding, including abstract thinking skills, higher concept formation skills, and creative hypothesis formulation. These build people’s capacity to identify, understand, and solve problems. A key skill in problem solving is the ability to ignore distracting and irrelevant information. This form of inhibitory control acts like a filter enabling the individual to focus on a given task.
- **Enhanced Interpersonal Ability** (i.e., “The Interpersonal Mind”): Multilingualism can enhance interpersonal communication awareness and skills through helping people to better perceive the communicative needs of others; to be more insightful in “reading” situations through contextual sensitivity; and to develop multiple interactional skills in communication. A superior potential for social communication can be a powerful ingredient in enhancing personal creativity.
- **Expanded Metalinguistic Ability** (i.e., “The Metalinguistic Mind”): Metalinguistic ability leads to greater understanding of how language is used to achieve specific goals in life and how to achieve deeper understanding of how language functions. Multilingualism promotes a deeper understanding of “how to go beyond the words,” enriching the use of any language, and helps the person become a more skilled communicator.
- **Reduced Age-Related Mental Diminishment** (i.e., “The Aging Mind”): Multilingualism is linked to a slowdown of age-related mental diminishment such as certain forms of dementia. It appears to slow down the rate of decline of certain cognitive processes as a person ages by helping the brain to tolerate pathologies. The multilingual mind’s ability to resist neuropathological damage is considered to be in the range of 2–4 years. Delays in mental decline of even up to six months are viewed as having considerable implications for public health and for society. The link to creativity is the greater potential for cognitive health amongst the older age groups.

This study is the first known “macro” analysis of the available evidence about language learning. It involved searching through diverse studies for common findings, with particular attention given to recent research on the brain. Since 2000, there has been a steady increase in the number of reports being published in the educational neurosciences.

Find out more online at eacea.ec.europa.eu/llp/studies/documents/study_on_the_contribution_of_multilingualism_to_creativity/case_studies_en.pdf.

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