

Learning a new language can make us forget vocabulary in mother tongue

by Bend Weekly News Sources

Immersion works, but can joggle your recall

Can't recall the right word? People returning from immersion in a second language often report such confusion. University of Oregon scientists have found that such lapses reflect the successful inhibition of memory that allows one to quickly learn a new language.

Their study, detailed in the January issue of *Psychological Science*, finds that repeatedly producing words in a new language inhibits the ability to produce corresponding words in the native language. That finding provides a mechanism for understanding how a person temporarily loses words from their first language (known as first-language attrition), said co-author Michael C. Anderson, professor of psychology.

Lead author Benjamin J. Levy, a doctoral student working in Anderson's Memory Control Lab, said the study also suggests that people participating in language-immersion courses should find time outside of class to practice their native languages.

The researchers drew their conclusions after conducting two experiments with about 100 English-speaking University of Oregon undergraduates who had completed at least one year of college-level Spanish. The students were shown line drawings of objects, and were cued to respond in English or Spanish based on background colors. For example, a student would answer "snake" or "culebra." For some pictures, students were required to respond in Spanish up to 10 times.

"Those who had repeated the word culebra for snake 10 times had a much more difficult time coming up with the proper English word later on," Levy said.

At the end of the experiment, students were given a rhyming word, such as "brake," as a hint for recalling a previously presented object (snake). Switching back to the native language wasn't easy. Many participants couldn't come up with the correct word at all, Anderson said.

Less-fluent Spanish speakers showed clear phonological inhibition. They were 13 percent less likely to produce the English word if they had named a drawing in Spanish 10 times than if they had never named the drawing in Spanish.

"When you are trying to speak a second language, it is extraordinarily difficult to express concepts when you

don't know the words to best represent yourself," Anderson said. "What you have to do is actively inhibit the native-language words to successfully recall second-language words, and that actually helps you speak more fluently."

Levy and Anderson said the findings of their study have implications for the growing number of study-abroad programs offered at U.S. universities that immerse students in a new language. Anderson noted that a good friend returned from overseas after a long period of speaking another language. While walking down a street, the friend tried to warn him about a hole in the pavement, but he couldn't come up with the English word for pothole.

The project grew out of Anderson's last decade of research involving executive control mechanisms associated with forgetting suppressed information. Work in his Memory Control Lab has focused on establishing the basic properties of inhibition. In presenting his work at conferences, Anderson said, he often had been asked if learning new languages may involve the same mechanisms.

Nathan D. McVeigh, an honors undergraduate student, and Alejandra Marful of the University of Salamanca in Spain, were co-authors with Levy and Anderson.

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