

Study finds that learning by repetition impairs recall of details

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Michael Yassa, an assistant professor of neurobiology & behavior, said other memory techniques should be used to complement repetition.

When learning, practice doesn't always make perfect.

UC Irvine neurobiologists Zachariah Reagh and Michael Yassa have found that while [repetition](#) enhances the factual content of memories, it can reduce the amount of detail stored with those memories. This means that with repeated recall, nuanced aspects may fade away.

In the study, which appears this month in *Learning & Memory*, student participants were asked to look at pictures either once or three times. They were then tested on their memories of those images. The researchers found that multiple views increased factual [recall](#) but actually hindered subjects' ability to reject similar "imposter" pictures. This suggests that the details of those memories may have been shaken loose by repetition.

This discovery supports Reagh's and Yassa's Competitive Trace Theory – published last year in *Frontiers in Behavioral Neuroscience* – which posits that the details of a [memory](#) become more subjective the more they're recalled and can compete with bits of other similar memories. The scientists hypothesize that this may even lead to false memories, akin to a brain version of the telephone game.

Yassa, an assistant professor of neurobiology & behavior, said that these findings do not discredit the practice of repetitive [learning](#). However, he noted, pure repetition alone has limitations. For a more enriching and lasting learning experience through which nuance and detail are readily recalled, other mnemonic techniques should be used to complement repetition.

More information: *Learning & Memory*,
learnmem.cshlp.org/content/21/7/342.short

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