Brain game doesn't offer brain gain

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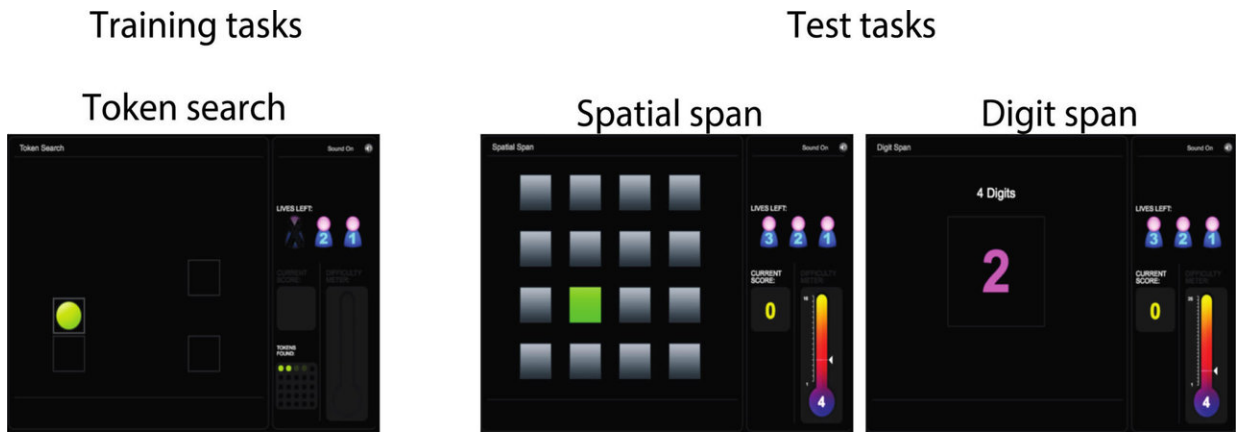

Credit: University of Western Ontario

A new study led by a team of Western University neuroscientists has debunked claims that getting better at a brain training game can translate to improved performance in other, untrained cognitive tasks.

This study, published in the journal *Neuropsychologia*, set out to test whether hours of 'brain training' in one game could give someone an edge in a second game that uses the same area of the brain. If that result was found, it would lend credence to claims that 'brain-training' apps can improve working memory, which is vital for learning and retaining information and in staving off memory loss.

But researchers found such transference simply didn't happen:

participants' high scores in the first game (the one they trained on) didn't improve performance in the second game, and were equivalent to scores attained by the 'untrained' control group.

"We hypothesized that if you get really, really good at one test by training for a very long time, maybe then you'll get improvement on tests that are quite similar. Unfortunately, we found no evidence to support that claim," says Bobby Stojanoski, a research scientist in the Owen Lab at Western's world renowned Brain and Mind Institute and lead author of the paper. "Despite hours of brain training on that one game, participants were no better at the second game than people who tested on the second game, but hadn't trained on the first one."

A groundbreaking 2010 study led by renowned Western neuroscientist Adrian Owen, Canada Excellence Research Chair in Cognitive Neuroscience and Imaging, monitored cognitive performance in 11,000 people who 'brain trained' for six weeks. It found that getting good at brain games doesn't improve working memory or enhance IQ.

Owen is the senior author of the new study, which was supported by BrainsCAN—Western's $66 million Canada First Research Excellence Fund program in cognitive neuroscience. The new study was designed to search for any transference between two specific and similar games but instead, the results reinforce and extend his previous findings.

Stojanoski concludes, there are other, proven ways to improve memory and brain health: "Sleep better, exercise regularly, eat better, education is great—that's the sort of thing we should be focused on. If you're looking to improve your cognitive self, instead of playing a video game or playing a brain training test for an hour, go for a walk, go for a run, socialize with a friend. These are much better things for you."

More information: Bobby Stojanoski et al. Targeted training: