

## Practice makes perfect? Not so much

May 20 2013



New research led by Michigan State University's Zach Hambrick suggests practice doesn't necessarily make perfect. Credit: Michigan State University

Turns out, that old "practice makes perfect" adage may be overblown. New research led by Michigan State University's Zach Hambrick finds that a copious amount of practice is not enough to explain why people differ in level of skill in two widely studied activities, chess and music.

In other words, it takes more than hard work to become an expert. Hambrick, writing in the research journal *Intelligence*, said natural talent and other factors likely play a role in mastering a complicated activity.



"Practice is indeed important to reach an elite level of performance, but this paper makes an overwhelming case that it isn't enough," said Hambrick, associate professor of <u>psychology</u>.

The debate over why and how people become experts has existed for more than a century. Many theorists argue that thousands of hours of focused, deliberate practice is sufficient to achieve elite status.

Hambrick disagrees.

"The evidence is quite clear," he writes, "that some people do reach an elite level of performance without copious practice, while other people fail to do so despite copious practice."

Hambrick and colleagues analyzed 14 studies of <u>chess</u> players and <u>musicians</u>, looking specifically at how practice was related to differences in performance. Practice, they found, accounted for only about one-third of the differences in skill in both music and chess.

So what made up the rest of the difference?

Based on existing research, Hambrick said it could be explained by factors such as intelligence or innate ability, and the age at which people start the particular activity. A <u>previous study</u> of Hambrick's suggested that <u>working memory</u> capacity – which is closely related to general intelligence – may sometimes be the deciding factor between being good and great.

While the conclusion that practice may not make perfect runs counter to the popular view that just about anyone can achieve greatness if they work hard enough, Hambrick said there is a "silver lining" to the research.



"If people are given an accurate assessment of their abilities and the likelihood of achieving certain goals given those abilities," he said, "they may gravitate toward domains in which they have a realistic chance of becoming an expert through deliberate practice."

## Provided by Michigan State University

Citation: Practice makes perfect? Not so much (2013, May 20) retrieved 10 May 2024 from <a href="https://medicalxpress.com/news/2013-05-practice-makes-perfect-not-so.html">https://medicalxpress.com/news/2013-05-practice-makes-perfect-not-so.html</a>

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