

Growth mindset found to temper impact of poverty on student achievement

July 19 2016, by Bob Yirka



Larkmead School. Credit: CC-BY-SA-2.5,2.0,1.0

(Phys.org)—A trio of researchers from Stanford University has found that high school children living in poverty who have a growth mindset tend to do better in school than those with a fixed mindset. In their paper published in *Proceedings of the National Academy of Sciences*, Susana Claro, David Paunesku and Carol Dweck describe a study they carried out with high school sophomores in Chile, what they learned, and what their findings may indicate regarding children, education and poverty.

The concept of intelligence is difficult to pin down, much less measure. So, too, is answering the question of whether it is possible for a person to

become more intelligent by trying—most scientists in the field believe that it is mostly fixed at birth. But because it cannot be proven, people tend to have their own opinions—those who believe that a person can become more intelligent through [hard work](#) are referred to in psychological terms as having a growth mindset. Conversely, those who believe that intelligence is fixed at birth are referred to as having a fixed mindset.

In order to gain some insight into whether such beliefs can have an impact on academic performance, the researchers worked with the public school system in Chile in 2012—they tested 75 percent of the entire class of 10th grade [students](#) and then monitored their [academic performance](#). In addition to demographic questions, students were also asked questions about whether they believed intelligence was fixed at birth or whether it could be improved through hard work, such as by studying schoolwork.

In studying the data, the researchers found that as expected students living in [poverty](#) tended to have much less academic success. They also found that students living in poverty were much more likely to have a fixed mindset. But they also found that those students living in poverty who had a growth mindset tended to do much better academically than those living in poverty who had a fixed mindset—so much better that their scores were nearly equal to students who were not living in poverty but who had a fixed mindset. These results, the researchers suggest, indicate that targeted interventions may help low-achieving students living in poverty perform at a higher level; however, the researchers are quick to point out that they are not advocating substituting mindset manipulation for poverty reduction programs.

More information: Susana Claro et al. Growth mindset tempers the effects of poverty on academic achievement, *Proceedings of the National Academy of Sciences* (2016). [DOI: 10.1073/pnas.1608207113](https://doi.org/10.1073/pnas.1608207113)

Abstract

Two largely separate bodies of empirical research have shown that academic achievement is influenced by structural factors, such as socioeconomic background, and psychological factors, such as students' beliefs about their abilities. In this research, we use a nationwide sample of high school students from Chile to investigate how these factors interact on a systemic level. Confirming prior research, we find that family income is a strong predictor of achievement. Extending prior research, we find that a growth mindset (the belief that intelligence is not fixed and can be developed) is a comparably strong predictor of achievement and that it exhibits a positive relationship with achievement across all of the socioeconomic strata in the country. Furthermore, we find that students from lower-income families were less likely to hold a growth mindset than their wealthier peers, but those who did hold a growth mindset were appreciably buffered against the deleterious effects of poverty on achievement: students in the lowest 10th percentile of family income who exhibited a growth mindset showed academic performance as high as that of fixed mindset students from the 80th income percentile. These results suggest that students' mindsets may temper or exacerbate the effects of economic disadvantage on a systemic level.

© 2016 Phys.org

Citation: Growth mindset found to temper impact of poverty on student achievement (2016, July 19) retrieved 23 April 2024 from <https://phys.org/news/2016-07-growth-mindset-temper-impact-poverty.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.