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Growth Mindset: How Much Can It Counter Poverty's Damage?

By Sarah D. Sparks on July 20, 2016 10:10 AM

Guest Post By Evie Blad. Originally posted at Rules for Engagement.

Having a growth mindset may help buffer students from low-income families from the effects of poverty on academic achievement, researchers found in a large-scale, first-of-its kind study of 168,000 10th-grade students in Chile.

But poor students studied by researchers were also less likely to have a growth mindset than their higher income peers, researchers found.

Stanford Professor **Carol Dweck**—who coauthored the study along with Stanford researcher Susana Claro and **PERTS Lab** founder David Paunesku—popularized the idea of growth mindset.

Students with a growth mindset believe that skill and academic strength can be developed through effort and practice. That's contrasted with students with a fixed mindset, who believe their intelligence and skill sets are unchangeable, like eye color. Dweck's previous research has found that interventions that help students develop more of a growth mindset can have positive effects on their academic achievement.

This new study expands on those findings, showing them in nationwide data, and it explores how mindsets interact with family income to affect school achievement.

While students from low-income households typically score lower on standardized tests, researchers found that poorer Chilean students with higher levels of growth mindset had similar test scores to their fixed mindset peers from higher income families.

"Strikingly, students from low-income families (the lowest 10%) **who had a growth mindset** showed comparable test scores with fixed mindset students whose families earned 13 times more (80th percentile)," said the study, which was published Monday in the Proceedings of the National Academy of Sciences.

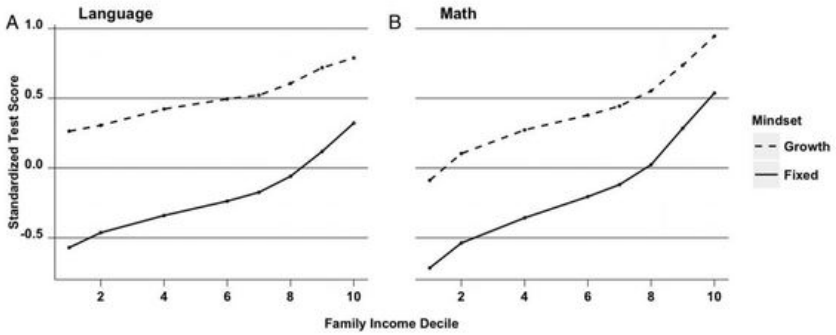


Fig. 1. Average standardized mathematics and language test scores for students with growth and fixed mindsets by family income decile. *A* shows language scores, and *B* shows mathematics scores. Dashed lines represent students with growth mindset, and solid lines represent students with fixed mindset. For clarity, only fixed mindset and growth mindset (not mixed mindset) students are included. However, we note that mixed mindset students consistently fell in between the two other groups.

Researchers used test scores and student survey responses from an entire class of students enrolled in public schools in Chile during the 2012 academic year to reach their conclusions. They measured students' mindsets by asking them to agree or disagree with statements like "you can learn new things, but you can't change a person's intelligence."

"Consistent with prior experimental studies, our results show that, for students with the same observable characteristics, those with a growth

mindset achieved at higher levels than those with a fixed mindset," the study says. "Furthermore, these results show for the first time, to our knowledge, that this relationship is comparably strong with that between family income and achievement and that it holds true systemically—across an entire nation's socioeconomic spectrum and across virtually all of its schools."

Researchers also found that a growth mindset was a greater predictor of success for poor students than it was for their higher-income peers.

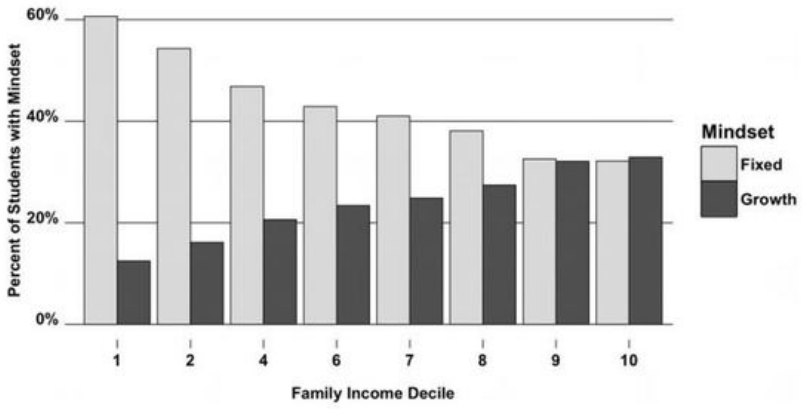
But what about reverse causation? Isn't it possible that "doing well in schools leads to a growth mindset rather than the other way around?" Dweck and her co-researchers asked. To try to answer this, they controlled their results using other survey questions.

They found that the relationship between a growth mindset and achievement "remained significant" even when controlling for factors like students' perceptions of their own academic skills. "Thus," they concluded, "our effect is not because of the fact that students who see themselves as doing well simply observe their academic growth and come to the conclusion that intelligence can be developed."

Low-Income Students Are Less Likely to Have a Growth Mindset

As one might expect, students living in lower-income households were more likely to have a fixed mindsets than their wealthier peers. It makes sense that a child dealing with poverty and its associated factors may perceive that people have less control over their circumstances—and possibly even their ability to learn and develop skills.

"At the extremes, students from the lowest-income families were twice as likely to endorse a fixed mindset as students from the top-income families and schools," the study says.



This touches on a common criticism of schools emphasizing concepts like growth mindset, grit, and persistence: Critics argue that such work can fail to take into account the systemic factors that contribute to poor achievement, putting the full responsibility for a students' learning on the student. Some label this a "bootstraps mentality."

Claro, Dweck, and Paunesku address these concerns head on:

> "To be clear, we are not suggesting that structural factors, like income inequality or disparities in school quality, are less important than psychological factors. Nor are we saying that teaching students a growth mindset is a substitute for systemic efforts to alleviate poverty and economic inequality. Such claims would stand at odds with decades of research and our own data. Rather, we are suggesting that structural inequalities can give rise to psychological inequalities and that those psychological inequalities can reinforce the impact of structural inequalities on achievement and future opportunity. As such, research on psychological factors can help illuminate one set of processes through which economic disadvantage leads to academic underachievement and reveal ways to more effectively support students who face additional challenges because of their socioeconomic circumstances."

Bonus reading: Dweck has worked recently to address these concerns and to clear up misconceptions about her research. That work includes this wildly popular *Education Week* commentary: **" Carol Dweck Revisits the 'Growth Mindset' "**

What do you think? Do schools do enough to address the psychological effects of poverty? Do you agree with the researchers' conclusions?

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