Researchers find that education intervention doesn't live up to its promise
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New research suggests the "growth mindset" strategy favored by some educators to improve student performance hasn't lived up to its promise—resulting in time and effort dedicated to growth mindsets in the classroom without meaningful gains in grades or test scores.

More than 30 years ago, noted psychologist Carol Dweck proposed that students with a growth mindset—those who believe their intelligence can "grow" with effort—focus more on learning, work hard, seek challenges and are resilient to setbacks.

Teaching students to hold a growth mindset, Dweck has said, will lead to greater academic achievement.

But recent research from Brooke Macnamara of Case Western Reserve University and Alexander Burgoyne of the Georgia Institute of Technology, examining all relevant studies on the topic, has found little to no positive effect of growth mindset interventions on student performance.

Growth mindset popularity

Since Dweck's theory first emerged in the 1980s and especially following her 2006 book, "Mindset: The new psychology of success," an entire industry of nonprofit organizations and for-profit companies has emerged.

Some of those organizations distribute the interventions to schools, teachers, parents and students, claiming the motivational materials boost academic achievement.

Despite growth mindset's popularity in schools and other settings, the interventions may be largely ineffective and may even be causing harm by pulling resources away from more promising efforts, the researchers said.

"Taken together, the research suggests that time and money might be better spent elsewhere," said Macnamara, an associate professor of psychology at Case Western Reserve and the study's lead author. "Those resources could be used to update class materials, develop more promising interventions, or make systemic changes."

Their findings, based on analyzing previous studies of interventions designed to give students a growth mindset, were published recently in the journal Psychological Bulletin.

The research

Macnamara and Burgoyne examined every study they could find—more than 60—that compared the academic achievement of students receiving a growth mindset intervention to a control group. They also evaluated the quality of each intervention study and whether the study authors had potential financial conflicts of interest.

The researchers found that:
• Study authors with a financial incentive to report positive effects—such as those employed by a company that sells growth mindset interventions—were more than twice as likely to report positive effects;

• Financial incentives also appeared to influence which results were published and which were not. In one study, thousands of students whose academic achievement suggested the growth mindset intervention was ineffective were discarded from the main results pre-publication;

• Many growth mindset interventions couldn’t demonstrate they changed students’ beliefs about intelligence—the intervention’s primary aim;

• Of the interventions that did change students’ mindsets, there was no observable impact on academic achievement. This suggests that a student’s mindset might not mean much when it comes to performing well in school; and

• When low-quality studies were analyzed, such as those where teacher expectations were not controlled and where the researchers had financial incentives to report positive effects, growth mindset interventions appeared to work, but the effect was very small. Achievement was only a fraction higher for students who received an intervention than students in the control groups. By contrast, when only the highest-quality studies were examined, the effect disappeared.

Why might low-quality studies yield more promising results?

"We found that teachers frequently knew which students had been assigned to receive the intervention," Burgoyne said. "Expectations can influence study outcomes. Teachers may expect students who receive growth mindset training to work harder, which could, in turn, influence how they interact with those students and grade them. Couple that with financial incentives and popular-press hype, and you have a recipe for the widespread adoption of growth mindset interventions in schools without much solid evidence to back it up."