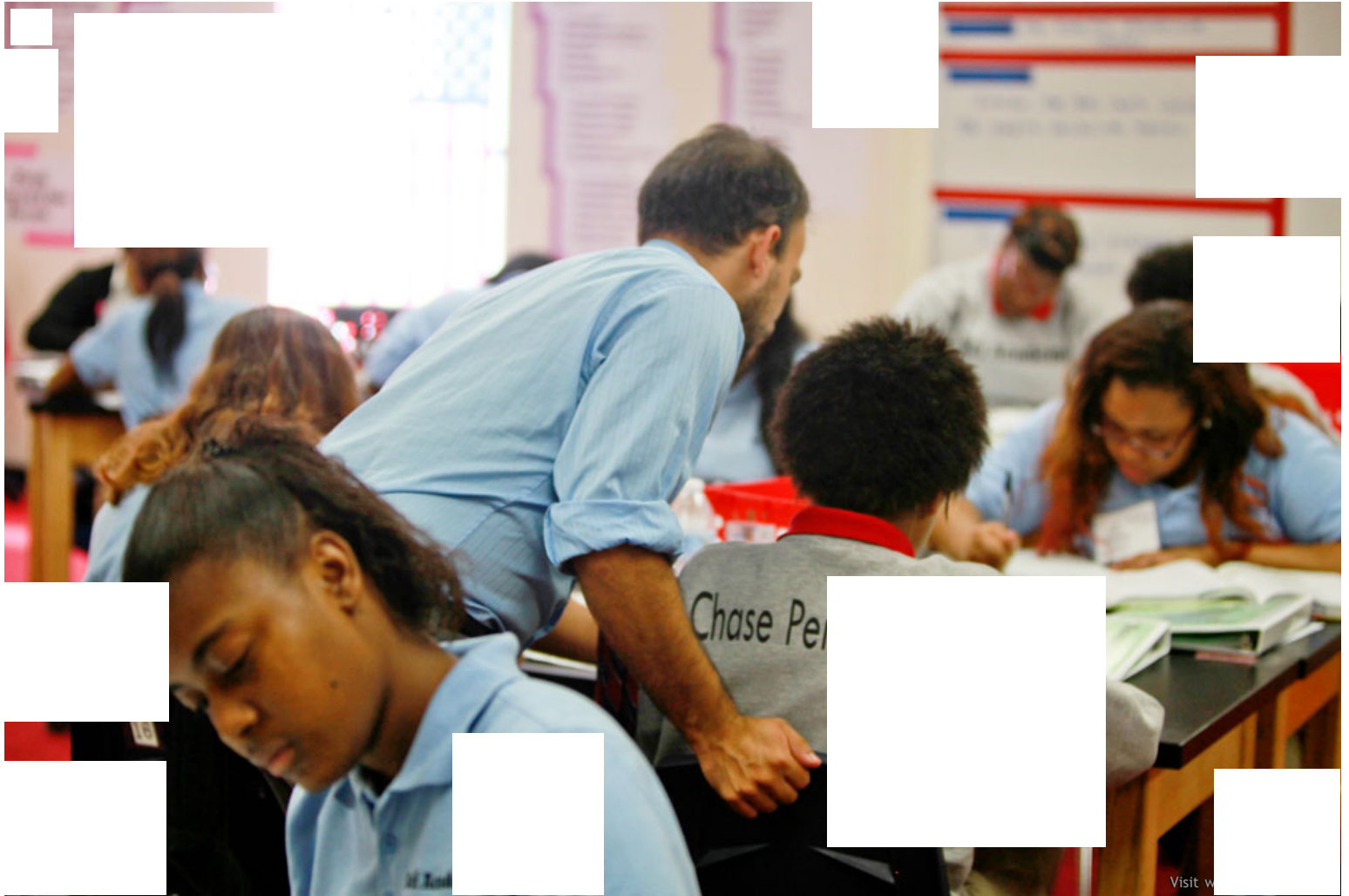


EDUCATION WEEK

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'Growth Mindset' Gaining Traction as School Improvement Strategy**By Sarah D. Sparks***New Orleans*[← Back to Story](#)

It's one thing to say all students can learn, but making them believe it—and do it—can require a 180-degree shift in students' and teachers' sense of themselves and of one another.

While expressions like the "soft bigotry of low expectations" underscore the effects of teachers' and students' mindsets on academic success, it has proved difficult to pin down whether and how it's possible to change those attitudes once established.

Nonetheless, attempts to change that dynamic, from targeted interventions to restructured schools, are gaining traction as many states overhaul their curricula to match the Common Core State Standards and incorporate student-growth measures into accountability systems.

Three decades have passed since the Stanford University psychologist Carol S. Dweck and others first linked students' motivation to the way they perceived intelligence. Students who believe intelligence or skill can be improved by effort and experimentation—what Ms. Dweck calls a "growth mindset"—seek challenges, learn from mistakes, and keep faith in themselves in the face of failure.

By contrast, those who believe intelligence and skill are traits you are born with—a "fixed mindset"—can be discouraged by failure and reluctant to challenge themselves.

Those mindsets are self-reinforcing, and Ms. Dweck, her colleagues, and other researchers have found in dozens of studies that students with a growth mindset improve more in academics and other skills, and can even be **less aggressive** and more socially engaged.

"When we understand that we can build our intelligence, rather than it being fixed, we take risks; we are interested in learning from mistakes rather than focusing on how people see us and wanting to do things perfectly and quickly," said Eduardo Briceño, a co-founder and the CEO of Mindset Works, a company based on the research by Ms. Dweck and Lisa S. Blackwell, the program's co-founders.

'Brainology' Approach

Mindset Works, based in San Carlos, Calif., won a small-business-innovation grant from the federal Institute of Education Sciences to scale up its "Brainology" curriculum, which provides six to 12 hours of online and in-person instruction and activities over five to 12 weeks.

The software targets grades 5-9, though the program as a whole can be implemented schoolwide. Lessons include brain development and learning, fixed-vs.-growth mindsets, and different strategies students can use when they hit difficulty in a particular subject or problem.

The program is being used in about 600 schools nationwide, and the District of Columbia school system is rolling it out this fall in middle school advisory classes.

It's also been integrated into Scholastic Inc.'s Math 180 curriculum this fall, so that students in grades 6-12 begin math instruction with two weeks of lessons explaining mindsets and neuroplasticity—the concept that the brain changes with experience—followed by periodic refreshers during the year, according to Tyler Reed, the corporate-communications director for the New York City-based publisher.

"The thing is, kids don't mind failing," said David Dockterman, Scholastic's chief architect of learning sciences and an adjunct lecturer at the Harvard Graduate School of Education. "When kids play video games, they fail 80 percent of the time. They look at failure there as an opportunity to learn."

However, students can find school mistakes humiliating, he said.

"How you set it up for kids matters; they hear you. There's a lot of implicit meaning for kids," Mr. Dockterman told 600 middle and high school math teachers at a professional-development seminar in the Baltimore County, Md., school district last month.

For example, a teacher setting out a problem from a new unit might say, "Let's start with an easy one," which can discourage students who struggle or get the problem wrong; but a teacher might set students more at ease by introducing the same problem with, "This might take a few tries."

Focus in New Orleans

At the SciAcademy Charter School here in New Orleans, Anthony McElligott's sophomore chemistry class is learning to pose hypotheses about the dispersion patterns of two drops of identical ink in two identical beakers of water. Strolling around the class, the teacher points to one furiously scribbling student: "Chris' paper has 'because,' which shows he's supporting his answers with evidence. If you think you are done, add more evidence, give an example."

After demonstrating the experiment, Mr. McElligott finds about half the class correctly predicted the ink would have different dispersion patterns even though the water and beakers were the same and the ink was dropped in the center of each beaker. When those who answered incorrectly mutter in frustration, he smiles: "We're going to see in this class really great scientists who were wrong again and again."

The three-school Collegiate Academies charter network, of which SciAcademy was the first, sees cultivating growth mindsets as its first and most important mission. Founder Ben A. Marcovitz launched SciAcademy six years ago as one of the first charter high schools to open after Hurricane Katrina.

SciAcademy, the neighboring George Washington Carver Collegiate Academy, and George Washington Carver Preparatory Academy high schools, hire teachers based on multiple classroom observations, not just interviews.

Typically, Mr. Marcovitz estimates, 60 percent of interviewees don't stick around for the classroom observations, in which they teach a lesson, receive feedback, and teach again a few weeks later.

"But the 40 percent who do have already made a commitment to growth," he said. "[The hiring process] allows us to weed out people evincing growth mindset who haven't internalized it."

That's common, Mr. Briceño of Mindset Works said. In professional-development sessions, he has found about a third of teachers have heard the terms "fixed" and "growth" mindsets, "but might not know exactly what it is."

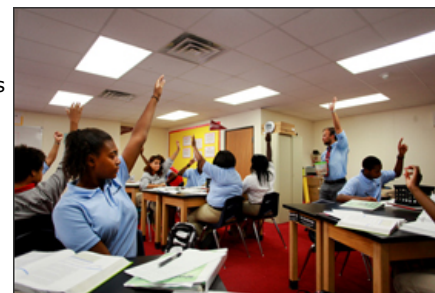
Teachers often confuse "teaching a growth mindset and exhorting kids to try hard," Ms. Dweck said. "You can't just tell a child to try hard without giving them strategies and supporting their efforts."

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Instead of calling on the first student to raise a hand, chemistry teacher Anthony McElligott waits for all his students to do so at SciAcademy in New Orleans. Such approaches put the focus on the process of learning rather than the race to the correct answer.
—Jennifer Zdon for Education Week

'It's Not a Right or Wrong Answer'



—Jennifer Zdon for Education Week

As part of an ongoing series of studies of growth-mindset teaching practices, Ms. Dweck and other researchers tracked more than 250,000 students learning fractions via the online Khan Academy program. Minor changes to student feedback—such as providing improvement-related praise vs. general encouragement—improved student persistence and math achievement, they found.

Praising students' strategies, focus, effort, persistence, and improvement "takes the spotlight off fixed ability and puts it on the process of learning," Ms. Dweck said.

At SciAcademy, the approach means students' learning problems are discussed privately, after class, while improvements are always called out in public, and in detail—even for a student moving from a 62 percent on the last test to a 65 percent on the next.

"Students of the week" are not only recognized during Friday gatherings, but also are asked to describe the steps they used to reach the goal.

It's important for teachers to go into detail when citing a student's correct answer, Mr. Dockterman said.

"If you talk about what the kid did [to get the right answer], other students can model it," he said. "If you just say, 'You're so smart,' they can't learn anything from that."

SciAcademy went so far as to ban the word "smart" on campus.

"That sounds like it has a weird 1984 connotation but it's really important," said Spencer Sherman, the 12th grade dean and environmental science teacher. "You get in the habit of saying 'smart,' and you find yourself saying it to kids, and you give kids the expectation that [intelligence] is fixed. We'll call each other out on it, because adult culture very quickly becomes scholar culture."

'Designed to Fail'

It can be particularly challenging to focus on effort with students who do excel easily. While teachers often notice struggling students who think they are "no good" in a subject, it's easier for high-achieving students to slip under the radar, Mr. Dockterman said.

"You think you are good at math and so it comes easy for you, but you stick to the things that are easy, and if you get to something hard, you shut down," he added.

SciAcademy found that out the hard way.

The school initially enrolled students in Advanced Placement classes on the basis of their having received top grades in similar subjects, Mr. Sherman explained. Many previously high-achieving students who "hit the wall" in the harder classes grew demoralized and reluctant to tackle other challenging work.

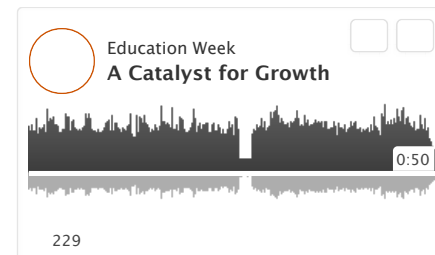
In response, the school opened Advanced Placement to anyone, but pitched the courses differently—"This will be the hardest class, with the most homework, but you'll learn more," Mr. Sherman said—and required an entry essay based on text difficult for even advanced students. "It is a task you're designed to fail, because we want students to figure out how to respond to that," he said. "We're trying to weed out for fixed mindset. Now the students in AP don't think they got there by being smarter than everyone else, but because they worked really hard for it."

Collegiate Academies staff see a growth mindset as a necessity for their campuses, which are made up of interlocking trailers, and located in a post-Katrina neighborhood still dotted with abandoned houses and shopping centers.

"We have to believe that a student who comes to us reading at a 2nd grade level can go to college in four years," said Margo Bouchie, Collegiate Academies' chief academic officer. "You can't come to work everyday if you don't believe that, and we have to be very honest with the scholars about where they are."

School leaders acknowledge there can be a fine line between realistic and pie-in-the-sky growth. But SciAcademy students like junior Eugene Thomas provide some support for optimism: He entered high school reading on a 5th grade level, and moved up to a 10th grade level by the end of the year.

Mr. Thomas said teachers noticed every time he read slightly better and pushed him harder, urging him to read 30 minutes every day on his own time. "It's not really difficult; you just have to work hard," he said.



At SciAcademy in New Orleans, chemistry teacher Anthony McElligott talks his sophomore class through their first experiment of the year. As the students predict ink dispersion patterns, listen to the way Mr. McElligott frames his focus on the process of science, rather than chasing a "right" answer.

The Stockdale Paradox



—Jennifer Zdon for Education Week



What can a Vietnam War prisoner teach sophomores about personal growth? Listen in as English teacher Katie Bubalo of SciAcademy in New Orleans launches a discussion in her sophomore class with a quote from former POW U.S. Admiral Jim Stockdale.



Taylor Hagans, a sophomore, listens to a lesson by chemistry teacher Anthony McElligott at SciAcademy in New Orleans, where teachers emphasize the importance of process, rather than speed, in learning.
—Jennifer Zdon for Education Week

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Quiz: What's Your Mindset

In some schools, a "growth mindset," or the idea that people can improve by seeking challenges and learning from mistakes, has reformed how teachers approach their instruction. How do you approach learning? Are certain skills naturally born to students, or can they really improve by effort alone? Using questions from [Mindset Works](#), we've put together an exercise (not a test!) for you to try out.

What's Your Mindset?

Take the test

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