

How psychological cues can limit black students' academic learning, success

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(PhysOrg.com) -- Like a gnawing stomach or pesky runny nose, a looming stereotype can make it difficult to focus and perform well in school. Based on existing research, black students, Latinos, and women in math and science are known to perform poorly when a mistake could seem to confirm a negative stereotype about their group.

A new study by Stanford [psychologists](#) has found that [negative stereotypes](#) can also prevent [minority students](#) from [learning](#) new academic material. But alleviating concerns about stereotypes dramatically improves black students' learning.

The idea that a person's work might suffer if he or she believes a poor performance will reinforce a negative stereotype about that person's group is known as "stereotype threat." Studies have shown that stereotype threat is a likely cause of educational achievement gaps.

"What hadn't been done was to see whether the same stereotype threat affects how well people learn new academic material," said Greg Walton, an assistant professor of psychology and co-author of a new study published in the Personality and Social Psychology Bulletin.

When students of color walk into a classroom, "They might be aware of stereotypes that their group lacks intelligence," said the study's lead author, Valerie Jones Taylor, a former Stanford graduate student who is now at Princeton. "These concerns could impact how well they acquire novel information."

To determine if stereotype threat actually affects learning in addition to performance, Taylor and Walton set up a two-part experiment.

First, black and white students studied the definitions of 24 obscure English words. Half of the students studied in a threatening environment designed to make intellectual stereotypes relevant. They were told that the task would assess their "learning abilities and limitations" and "how well people from different backgrounds learn."

Meanwhile, students in the non-threatening environment were told that the study focused on identifying "different learning styles."

One to two weeks later, the students were tested to see how many word definitions they could remember. They were first given a low-stress warm-up exercise with half of the word definitions. Then, in order to evoke concerns about stereotypes, a test was given which was described as evaluating "your ability to learn verbal information and your performance on problems requiring verbal reasoning ability."

The results were eye-opening.

On the warm-up, black students who had studied in the threatening learning environment performed about 50 percent worse than black students who had studied in the non-threatening environment, demonstrating that learning had indeed been impeded by stereotype threat.

But even when black students who had studied in the non-threatening environment took the test, their scores plummeted. Though they had demonstrated learning during the warm-up, they couldn't reproduce it on the threatening test.

"Black students who studied and performed in threatening conditions

performed worse than any other group," said Walton. "But this entirely flipped in non-threatening conditions."

In a second experiment, Taylor and Walton sought to reduce the effects of stereotype threat. Groups of black students were again recruited to learn difficult words. All the students studied in the threatening environment. But this time, half of the students were asked to do a "value affirmation" exercise before they started memorizing definitions.

"We got a list of things that people value – academic ability, religion, artistic ability etc. – and asked [students] to choose the value that mattered most to them and to explain why it mattered to them," said Taylor. "Reflecting on these personally important values allows people to experience less psychological threat and stress. It helps people feel good about themselves."

The rest of the students were asked to write about a value that mattered little to them. A week later, students did the warm-up and the test. Black students who had written about a meaningful value scored nearly 70 percent better on the warm-up than black students who had written about other values.

But why did writing about important values help?

It seemed that the exercise helped [black students](#) stop worrying so much about negative stereotypes. The value affirmation also reduced students' focus on preventing failure – not the best mindset for learning - and helped them strive for success instead.

Since interventions like the value-affirmation exercise are relatively inexpensive and simple to execute, they offer a promising way to tackle the achievement gap.

"By implementing such psychological interventions in the classroom, we can change how students experience the learning environment so that stereotypes don't drag down students' learning and performance," said Taylor, who will join the faculty at Spelman College in Atlanta in the fall.

Provided by Stanford University

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