



When Students Zone Out, Zero In on Their Desire to “Matter” in Life

RESEARCH SUMMARY | MAY 2015

“I’m bored”: The refrain is common in family homes and classrooms. Even the most academically oriented students dread certain assignments. Nearly 70 percent of American K-12 teachers say students’ lack of interest in learning poses a problem in class.¹

AND BOREDOM ISN’T JUST A THREAT TO CLASSROOMS AND MINDS but to our economy; jobs in the STEM sector—subjects shown by studies to often bore students²—are set to grow by more than 20 percent in the next few decades, and, needless to say, will demand employees who are interested and skilled in the topics.³

Of course, teachers cannot conjure interest where none exists. Mindset scholars hypothesized whether a “self-transcendent” purpose for learning—a goal motivated by both a self-serving opportunity and an opportunity to have an effect on the world—could help students persist with tedious tasks.

STUDY DESIGN

To test whether a self-transcendent purpose for learning correlated with greater perseverance and other elements of self-regulation, researchers asked 1,364 college-bound, low socioeconomic status (SES) seniors at 17 urban high

schools to rank a list of reasons why they wanted to go to college.⁴ Included were self-oriented motives such as “I want to become an independent thinker,” and self-transcendent motives such as “I want to become an educated citizen that can contribute to society.” They also completed measures of grit and self-control, as well as a diligence test, where they were given the opportunity to either complete math problems or be entertained by media. They were told there was no negative consequence for their choice, but were shown studies endorsing the future value of gaining math skills, so they could see that option as potentially worthwhile.

SELF-TRANSCENDENT LEARNING GOALS ARE CORRELATED WITH PERSEVERANCE

The results showed that those who expressed more of a self-transcendent purpose for learning also viewed tedious activities as more personally meaningful and had greater academic self-regulation. These students did

Featured Article: Yeager, D. S., Henderson, M., Paunesku, D., Walton, G., Spitzer, B., D’Mello, S., & Duckworth, A. L. (2014). Boring but important: A self-transcendent purpose for learning fosters academic self-regulation. *Journal of Personality and Social Psychology*, 107, 559-580.

**MINDSET
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Hosted at the Center for Advanced Study in the Behavioral Sciences at Stanford University, the Mindset Scholars Network is a group of leading social scientists dedicated to improving student outcomes and expanding educational opportunity by advancing our scientific understanding of students’ mindsets about learning and school.

not find the material more interesting—all students reported that the problems were, indeed, quite boring. But those who reported a self-transcendent purpose for their learning were more likely to continue toward their stated goal of going to college (the researchers would later track how many enrolled in college). For example, only 30 percent of students with the lowest-ranking “purpose” orientation were actively enrolled at college in the fall following high school graduation.

For students who scored highest on the purpose scale, 64 percent were enrolled in college later that fall. All these effects were independent of cognitive ability. In contrast, a self-oriented, intrinsic motive for learning on its own did not significantly predict the number of math problems solved. It was a significantly weaker predictor of reported grit and self-control compared to a purpose for learning.

BRIEF INTERVENTIONS CAN INSTILL A PURPOSE FOR LEARNING

Yeager and colleagues also developed a one-time intervention promoting a self-transcendent purpose for learning. They hypothesized that the intervention could promote self-regulation in the face of daily boring tasks and ultimately raise GPAs in STEM courses months later. They brought the intervention to 338 freshmen in a middle-class suburban high school.

In the experiment, students were shown that their peers care about social injustice and often have prosocial motives for learning. The intervention primed students’ self-transcendent thoughts by having them reflect on their own such motives by writing an essay about social injustices they found particularly egregious.

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The intervention conveyed to them that “many students like you” have a self-transcendent purpose for learning. They also read quotes purportedly from upperclassmen explaining that they are driven to learn in order to help the world around them. To cement the ideas, participants were also asked to write a testimonial to future students.

Several months later, the students who had received the intervention had higher grades in STEM courses

than those who had not. The experiment was designed with a control group, which allows researchers to say definitively that the intervention, and not something else, caused the change. The difference was significant among low-performing students, whose STEM grades were 0.2 points higher than their control group peers. For the students who were already higher-achieving, the difference was a non-significant 0.05 points.

A PROSOCIAL OUTLOOK HELPS STUDENTS SELF-REGULATE AND ENGAGE IN DEEPER LEARNING BEHAVIOR

In correlational, experimental, and longitudinal studies involving roughly 2,000 high school and college students, a self-transcendent purpose for learning predicted or caused more effective academic self-regulation in the immediate term and over time. A self-transcendent purpose was correlated with more diligence in the face of tempting alternatives and also greater college persistence rates among low-income students. A brief intervention to promote a self-transcendent purpose increased overall STEM-course grades several months later.

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Further studies clarified the nearer-term effects of the intervention: a self-transcendent purpose doubled the amount of time students spent on tedious exam review questions, which enabled deeper learning. It also increased by 35 percent the number of boring math problems students in the treatment group solved compared to their peers in the control group, even when they had the option to consume entertaining Internet media at any time.

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to contribute to the world in a larger way, not just make money. And when they endorsed this prosocial purpose, they were more likely to demonstrate progress toward long-term goals. The studies do not discount the benefit of self-interest-based motives for learning and self-regulation. Rather, they show the power of a self-transcendent purpose for learning (which often was attached to self-oriented motives, too).

Teachers and parents cannot convince kids—or adults, for that matter—to enjoy a task that does not naturally strike their interest. What they can do, this research suggests, is encourage a prosocial, self-transcendent purpose for learning. These studies also challenge potential stereotypes about how to motivate low-SES high school students. These students said they wanted

Lastly, the intervention is not meant to be a singular solution to underachievement, whose causes are manifold and often structural. Instead, this approach could be an efficient, inexpensive tool that could work in certain contexts to help students persist at tedious tasks that may be boring, but are also critical to mastering academic material.

¹ Bridgeland, J., Bruce, M., & Hariharan, A. (2013). *The missing piece: A national teacher survey on how social and emotional learning can empower children and transform schools*.

² Raytheon Company. (2012). *Math relevance to U.S. middle school students*.

³ U.S. Congress Joint Economic Committee. (2012). *STEM education: Preparing jobs for the future*.

⁴ Yeager, D. S., Henderson, M. D., Paunesku, D., Walton, G. M., D’Mello, S., Spitzer, B. J., & Duckworth, A. L. (2014). Boring but important: A self-transcendent purpose for learning fosters academic self-regulation. *Journal of Personality and Social Psychology*, 107, 559.