Sometimes, no matter how hard we work to create a good lesson plan or provide high-quality feedback, some students don’t stay as motivated or learn as much as we would like. When confronted with a problem in our courses — students falling behind in math, for example — we tend to focus on what we teach and how we teach it. We tend to try solutions that take the perspective of the teacher or professor, such as How can we teach math differently?

Research by Aronson, Fried & Good (2002), Dweck (2006), Garcia & Cohen (2012), Walton & Cohen (2011) and Yeager et al (2014) suggests that it can also help to think about the perspective of the student. How does the classroom look to the student in front? In the back or the third row? How does the student feel about his or her potential? Does the student feel accepted by his or her professor or classmates?

The self-esteem movement of the 1990s attempted to motivate students by promoting positive belief, trying to motivate students by making them feel good about themselves, their abilities, and their prospects of success in school. Unfortunately, the self-esteem movement had the erroneous view that telling students they were smart or talented would raise their self-esteem and motivate them to do well in school (Baumeister et al, 2005). Research has now shown that well-intended practices, such as praising students’ intelligence or talent (as opposed to their efforts or strategies), often backfired (Dweck, Walton & Cohen, 2014). Such ill-reasoned yet major policy interventions have been common in the history of education - and expensive in terms of both human and economic costs. While the psychological interventions cited here have an extensive research base, like many good ideas it is all too easy to implement them poorly, which is why research is so important and why an evidence-based approach to is so critical. We need to know which mindsets and non-cognitive skills matter and how best to impart them in which settings.

A common problem for students is that have they have beliefs and worries in school that prevent them from taking full advantage of learning opportunities. For example, students who struggle in math may think that they are “dumb” or that teachers or peers could see them as such. Girls in advanced math or minority students in general may wonder if other people will look at them through the lens of a negative stereotype about their group instead of judging them on their merits. Dweck (2006) showed that many students believe that the amount of intelligence is fixed and immutable. This belief, called a fixed mindset, can dissuade students from even attempting to learn a difficult subject. Countering this belief can have significant favorable effects on performance.

Teaching students that intelligence can be developed — that, like a muscle, it grows with hard work and good strategies — can help students view struggles in school not as a threat but as an opportunity to grow and learn. In randomized experiments, even relatively brief messages and exercises designed to reinforce this growth mindset improved student achievement over
several months, including the achievement of low-income and minority students (Aronson, Fried, & Good, 2002; Blackwell, Trzesniewski & Dweck, 2007).

Another body of research has shown that students entering high school or college can have incapacitating doubts that they belong in school, and seemingly simple interventions have been reported to help these students through this critical period. Walton and Cohen (2011) showed that an intervention showing minority students that they are not alone in such fears improved minority college students’ grades for three years with no further reinforcement, halving the achievement gap comparing experimental and control groups.

My initial proposal to the college will be to design interventions for students preparing to begin the teacher education program as college juniors – another critical period in students’ careers, yet perhaps with significant differences from students beginning either high school or college. For example, there seems to be a preponderance of students entering elementary education programs (labelled “Early Childhood” in Georgia) who have little faith in their ability to perform well in mathematics, yet these students face extensive mathematics preparation during the two years of the bachelor’s degree preparation program. Designing interventions to attempt to minimize their fears – and follow their performance both in their coursework as well as on their certification examinations – would be only one of many possible arenas for research in this area.

This research could have far-reaching effects: If teachers believe they can become better teachers, then it might be that their students can learn to believe that they can become better students – and so forth. I look forward to discussing such work with my peers across the state.

References


