Mindsets and the Learning Environment: Evidence from Half a Million Students on the Importance of Belonging in Schools

BY JESS HENNESSEY

Schools and teachers shape students' feelings of belonging, which matters for many important outcomes. For example, students who feel they belong and are valued by their teachers and peers are able to engage more fully in learning. This study examines how self-reported sense of belonging in school is related to gains in a range of student test and non-test outcomes.

The project, led by Matthew Kraft, leveraged a large sample of students in the California CORE districts to examine how feelings of belonging in school affect academic, behavioral, and social-emotional experiences and outcomes. The size and diversity of the sample allowed the research team to explore whether levels of self-reported belonging and relationships between reported belonging and later outcomes vary by students' race/ethnicity and gender.

Study Design

The researchers used data that were collected over three years (from 2014-2017) on students attending five of the largest participating CORE districts, totaling more than 600,000 students from over 1,000 schools.

The data contained measures of students' self-reported levels of belonging using the following four questions:

- I feel close to people at this school
- I am happy to be at this school
- I feel like I am part of this school
- I feel safe in my school

Students were surveyed on their self-reported feelings of belonging. The researchers also collected data on academic, behavioral, and social-emotional outcomes to examine their relationship with belonging (see Table 1).

Key Findings

- There are large disparities in students' self-reported sense of belonging by racial/ethnic group and gender

- Self-reported belonging correlates with a host of other psychologically adaptive and prosocial beliefs

- Increases in students' self-reported sense of belonging in school were positively related to gains in academic and behavioral outcomes

Research Team

- Matthew Kraft (PI), Brown University
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Areas of Expertise: Economics, Education, Psychology, and Data Analysis

Sample

625,134 students in grades 4-12 attending five major school districts that make up the CORE districts in California. The researchers used data that were collected over three years, from 2014 to 2017.

The school districts that were sampled predominately served Latinx students (41%), however there was considerable racial/ethnic diversity with Black students (6%), Asian students (7%), Multiracial students (7%), and White students (7%). 29% of the sample did not report on their race/ethnicity.

Table 1. Outcome measures

Academic	Behavioral	Social-Emotional
Math standardized test scores	Days absent	Self-management
ELA standardized test scores	Total number of disciplinary incidents	Growth mindset
		Self-efficacy (academic)
		Social awareness

Key Findings

There are large disparities in students' self-reported sense of belonging by racial/ethnic group and gender

Black students reported a lower sense of belonging on average relative to their Asian, Latinx, White, and Multiracial peers, even when comparing students who attended the same school. Across all students, Black female students reported the lowest sense of belonging, with Black male students reporting higher belonging than Black female students, but still significantly lower than all other students. These findings suggest that schools may differentially shape a sense of belonging for students in ways that systematically vary by race/ethnicity and gender.

Self-reported belonging correlated with a host of other psychologically adaptive and prosocial beliefs

Students who reported a greater sense of belonging also reported higher on social-awareness, self-management, self-efficacy, and growth-mindset scales, regardless of students' racial/ethnic background or gender. The relationship between sense of belonging and social-awareness was particularly strong.

Increases in students' self-reported sense of belonging in school were positively related to gains in academic and behavioral outcomes

On average, an increased sense of belonging from one year to the next was associated with corresponding improvements in attendance at school, declines in behavioral infractions while at school, and to a lesser degree, gains in math and reading test scores. Here again, the positive relationship between increases in belonging and outcomes was consistent across students of differing genders and racial/ethnic backgrounds. These results suggest that improving students' sense of belonging may have added benefits for other important outcomes among all students.

Insights & Future Directions

The researchers found evidence suggesting that belonging influences a host of academic, behavioral, and social-emotional outcomes in a sample of over half a million students. These results suggest that if practitioners focus on improving feelings of connectedness and belonging among students, it may have added benefits for other important outcomes. They also point to the potential importance of school-wide efforts to develop a culture of diversity and inclusion that engenders belonging among all students.

Going forward, the researchers will continue to explore the relationship between sense of belonging and student outcomes by individual characteristics (i.e., race/ethnicity) and school characteristics (i.e., racial/ethnic composition of the school). They will also explore what school climate factors are related to higher levels of belonging among students.