Guidance counselors could help female high schoolers erase the STEM gender gap: Report

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Credit: Max Fischer from Pexels

New research from the Rice University Kinder Institute for Urban Research's Houston Education Research Consortium (HERC) finds that

female students may be more likely to stick with STEM curriculum when they receive support from high school guidance counselors.

In 2013, the Texas legislature introduced "endorsements," which function like college majors to provide high school students the opportunity to specialize in an area aligned with their long-term goals. To earn an endorsement, Texas students must take specific course sequences, or paths, in one or more areas of focus.

In the Houston Independent School District, the first students to graduate under the new endorsement system in 2018 did not receive formal guidance about their endorsement tracks after their initial choice in ninth grade. However, in 2019, the school district added a check-in session with guidance counselors for all students to support them in completing their endorsements.

In "The Role of Guidance Counselors in Narrowing the Gender Gap in STEM Endorsements" published last month, HERC researchers found that when HISD implemented these check-ins, female students' probability of completing the STEM endorsement increased significantly—and the effect was particularly strong for female students from less privileged backgrounds. As a result, the gender gap in completing the STEM endorsement in HISD almost completely disappeared, declining from 6.2% in 2018 to 0.8% in 2019.

"The endorsement counseling program wasn't necessarily geared toward gender, it was geared toward helping students succeed in light of the recent policy change. But there is burgeoning research that shows male and female students react differently to social capital interventions," says Brian Holzman, the lead author of the study who is now an assistant professor of educational administration at Texas A&M University. "Both male and female students were switching to STEM in the second cohort. We just found that the effects of the program were stronger for female

students."

HERC Director Erin Baumgartner notes that while there could be several reasons for the increase in overall STEM endorsement completion during this period, the findings suggest that guidance from school counselors may be a potential solution to the gender gap in STEM and an especially promising strategy for increasing access to STEM for female students from lower socioeconomic backgrounds.

"There's a lot of research that shows students benefit from access to effective counselors, who can deliver tailored support based on students' unique experiences and needs," Baumgartner said. "The challenge is for schools to provide the right ratio of trained counselors to students to offer adequate support."

The researchers said they hope this work will shed light on the impact of support for students, especially females, pursuing STEM education.

More information: STEM Endorsement and the Pathway to College (Briefs 1-4): kinder.rice.edu/research/stem- … y-college-briefs-1-4

Provided by Rice University

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