

Research network aims to improve learning outcomes for students underrepresented in STEM

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Science, technology, engineering and mathematics (STEM) fields lack diversity. It is an issue that a group of University of Minnesota-led

biology education researchers is aiming to address through a targeted effort to bring diverse perspectives to the foreground.

Their report published in *CBE—Life Sciences Education* lays out gaps in the biology education field and proposes leveraging an existing research coordination network called Equity and Diversity in Undergraduate STEM (EDU-STEM) to tackle them.

The vast majority of biology education research is completed at leading public research universities, known as R1 institutions, where the student populations tend to be majority middle- and upper-class white students. Research conducted in these settings informs teaching strategies and content that is leveraged in classrooms with more diverse demographics, including tribal universities and colleges, community colleges, minority-serving institutions, and historically Black colleges and universities. These institutions serve a much larger portion of historically underrepresented groups than R1 institutions.

"As it stands now, biology education research does not capture student experiences across diverse institutions," said Seth Thompson, the director of outreach in the College of Biological Sciences (CBS) and a lead author on the report.

EDU-STEM consists of education researchers from across STEM disciplines who focus on addressing gaps in introductory courses. The network first launched in 2017 and is co-led by CBS Associate Professor Sehoya Cotner and Cissy Ballen, a former postdoc in the Cotner Lab and now a faculty member at Auburn University. Although the network currently consists of [biology](#) educational researchers, the group hopes to expand and include [education](#) researchers in other STEM disciplines.

EDU-STEM is seeking additional collaborators to join the network. Instructors from tribal universities and colleges, [community colleges](#),

minority-serving institutions, and historically Black colleges and universities are encouraged to join.

"Student experiences are very different across institutions and thus the effect of educational interventions can be wildly different," said Thompson. "The majority of recommendations highlight student experiences from predominantly white R1 institutions. This collaborative network seeks to change that."

More information: Seth K. Thompson et al, A Call for Data-Driven Networks to Address Equity in the Context of Undergraduate Biology, *CBE—Life Sciences Education* (2020). [DOI: 10.1187/cbe.20-05-0085](https://doi.org/10.1187/cbe.20-05-0085)

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