

Academic culture, institutional factors pushing college women out of STEM majors

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Young women in STEM majors responding to a survey reported wanting to feel that the things they are learning in school are tangibly connected to their real-world professional goals and to making a difference in the world, according to a new study by Danielle Lindemann of Lehigh University and Dana Britton and Elaine Zundl of the Center for Women and Work at Rutgers.

"In this particular study, we wanted to look at why so many women who originally intend to major in STEM drop out early in their college careers," Lindemann says.

Research has examined various aspects of this topic before. However, the research team focused on how institution-level factors might be impacting young women's decisions to remain in, or drop out of, these majors.

"We found that a lot of the processes keeping women out of STEM majors were being reinforced by things that were happening at the college level," Lindemann says. They discuss, for instance, "weed out" culture and the impact of large lecture classes.

Through unique access to multi-year data from a highly diverse single-institution sample, follow-up surveys, and focus groups, the researchers examined the patterning of students' STEM major selection and persistence among a freshmen cohort at a women's residential college.

"We found that many of these [young women](#) wanted to feel that they were 'helping people' or 'making a difference.' This sentiment compelled many to remain in STEM fields while, for others, it actually pushed them out of these majors," Lindemann explains. "They want to see the 'human' side of what they're learning."

The authors detail their findings in a [study](#) called "'I Don't Know Why They Make It So Hard Here": Institutional Factors and Undergraduate Women's STEM Participation" published in the *International Journal of Gender, Science and Technology*.

Results of the study suggest that higher education institutions might consider how they can more clearly draw bridges between the material being discussed in lecture and real-world "helping" practices.

It's not about making the material less difficult, Lindemann explains, "It's about helping students better conceptualize the implications of what they're studying. Otherwise, these disciplines are excluding people who might perhaps make valuable contributions to these fields."

In addition, the authors found that when colleges put in place a program to encourage retention in STEM majors, it had a positive impact - when students knew about them.

"We suggest that policies should focus not only on incorporating resources for students in STEM but on increasing and maintaining awareness of these resources," she explains.

Provided by Lehigh University

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