

Parents can influence children's choice and success in STEM major

December 7 2021, by Cristina Rojas



Credit: Unsplash/CC0 Public Domain

If one of your parents majored in a STEM (science, technology, engineering or math) field, there's a better chance you'll also major and persist in a STEM field, according to a new Portland State University

study.

Sociology researchers—second-year doctoral student Ned Tilbrook and associate professor Dara Shifrer—found that students whose parents have a bachelor's degree in STEM are not only more likely to choose and persist in a STEM major than students whose parents have no bachelor's degree, but they are also significantly more likely to choose and persist in a STEM major than students whose parents graduated with a degree in some other field.

Tilbrook and Shrifler call this STEM-specific cultural capital. They suggest that parents pass it on to their children through a variety of ways: engaging in activities or conversations on scientific topics; fostering a [home environment](#) that values STEM and thereby ingraining the values, attitudes and academic work habits needed to succeed in STEM fields; and encouraging their kids to participate in math- and science-focused extracurricular activities. What happens at home then has an impact on their experience at school with teachers rewarding them with more challenging work, leading to good grades, [higher test scores](#) and ultimately degrees.

Tilbrook added that parents with STEM degrees may be better suited to communicate the value of STEM majors and prepare their children for common barriers along the way such as the so-called "weeding-out" introductory science courses in college.

"Talking to faculty in STEM fields, they have this idea that it all happens meritocratically where people who have the most natural ability end up in a STEM major and do well in it," Shifrer said. "But [social inequality](#) does play a factor in who majors in STEM and who does well in STEM."

Shifrer said that schools—both K-12 and [higher education](#)—need to fill in the gaps and provide the kind of knowledge and confidence needed to

succeed in STEM.

"STEM majors shouldn't only be accessible to kids whose [parents](#) also majored in it," she said.

The study was published in the journal *Social Science Research*.

More information: Ned Tilbrook et al, Field-specific cultural capital and persistence in college majors, *Social Science Research* (2021). [DOI: 10.1016/j.ssresearch.2021.102654](#)

Provided by Portland State University

Citation: Parents can influence children's choice and success in STEM major (2021, December 7) retrieved 28 April 2024 from <https://phys.org/news/2021-12-parents-children-choice-success-stem.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.