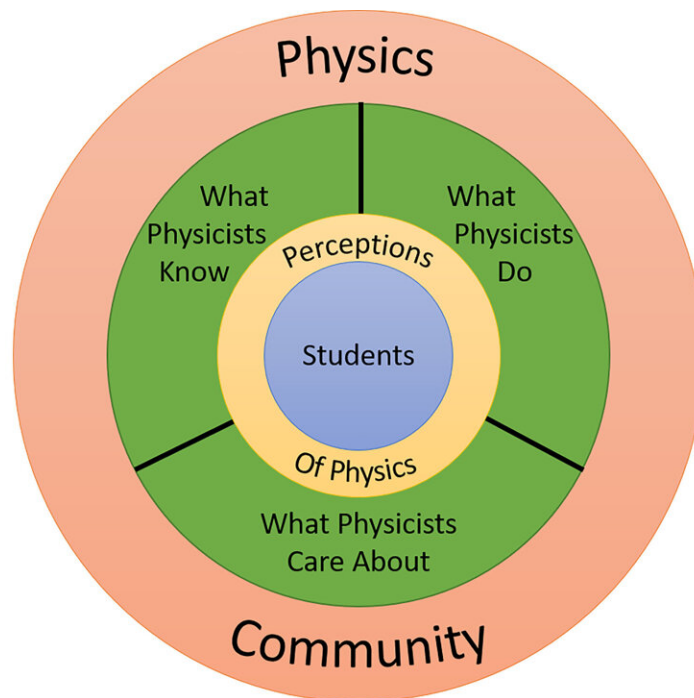


Making diversity, equity, inclusion integral parts of physics education

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The practicing professionalism framework and its focus on diversity, equity, and inclusion infuse the human component of science into the physics classroom.

Credit: Martha-Elizabeth Baylor

While many physics instructors are beginning to incorporate lessons on diversity, equity, and inclusion (DEI) in the classroom, it can often feel like an add-on rather than an integral component of becoming a physicist.

In *The Physics Teacher*, by AIP Publishing, scientists from Carleton College and the University of Colorado Boulder are helping to change this narrative by presenting discussions and activities on DEI as a fundamental and essential part of [physics](#) training beyond the introductory physics level.

"Diversity, equity, and inclusion are a part of being a physicist, just as much as knowing about quantum mechanics or using an oscilloscope," said author Martha-Elizabeth Baylor.

The team created two separate approaches for DEI curriculum at the intermediate level in 30-person and 75- to 120-person classrooms. The former replaced one question on a weekly homework assignment with a reflection essay on a topic important to [physicists](#). The latter included activities and discussions during a two-day unit on representation.

"On the whole, students respond positively to covering this material in a [physics class](#)," said author Jessica Hoehn. "They are eager for these conversations."

The reflection essays in the first approach were a small component of a larger "Practicing Professionalism" framework, which explored what physicists know, do, and care about. Meanwhile, the second approach tested students on the ideas within their DEI activities and discussions, just as it would with other course content.

Baylor said students began the term by writing themselves out of the definition of a physicist. However, that changed by the end of the class.

"Many students come to see that the physics community thinks about the things that they think about, the things they care about," said Baylor.

"They find that anybody can be a physicist. They just have to care about physics, choose to do physics, and choose that as part of their identity."

For women in these classes in particular, a large theme emerged: Their feelings about being in physics were particular to the cultural environment in the U.S.

The authors believe instructors can look at each curriculum and design their own lessons that they are comfortable enacting. The individual reflection activities in the first approach may be an easier start for instructors who want to engage with students on an individual basis, rather than lead a class discussion.

The researchers recommend looking at their resources for ideas, then gathering feedback and iteratively improving the curriculum. They hope to help other instructors frame physics as a human endeavor.

"We're doing this, because if you enter the physics community, you need to be able to engage intelligently and respectfully in these conversations," said Baylor.

The article appeared in *The Physics Teacher*.

More information: Martha-Elizabeth Baylor et al, Infusing Equity, Diversity, and Inclusion Throughout Our Physics Curriculum: (Re)defining What It Means to Be a Physicist, *The Physics Teacher* (2022). [DOI: 10.1119/5.0032998](https://doi.org/10.1119/5.0032998)

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